

Form **990**

**Return of Organization Exempt From Income Tax**

OMB No. 1545-0047

**2020**

Department of the Treasury  
Internal Revenue Service

Under section 501(c), 527, or 4947(a)(1) of the Internal Revenue Code (except private foundations)

Do not enter social security numbers on this form as it may be made public.

Go to [www.irs.gov/Form990](http://www.irs.gov/Form990) for instructions and the latest information.

Open to Public Inspection

**A** For the 2020 calendar year, or tax year beginning **APR 1, 2020** and ending **MAR 31, 2021**

<b>B</b> Check if applicable: <input type="checkbox"/> Address change <input type="checkbox"/> Name change <input type="checkbox"/> Initial return <input type="checkbox"/> Final return/terminated <input type="checkbox"/> Amended return <input type="checkbox"/> Application pending	<b>C</b> Name of organization <b>BRIGHTFOCUS FOUNDATION</b>		<b>D</b> Employer identification number <b>23-7337229</b>
	Doing business as		<b>E</b> Telephone number <b>(301) 948-3244</b>
	Number and street (or P.O. box if mail is not delivered to street address) Room/suite <b>22512 GATEWAY CENTER DRIVE</b>	<b>G</b> Gross receipts \$ <b>65,908,648.</b>	
	City or town, state or province, country, and ZIP or foreign postal code <b>CLARKSBURG, MD 20871</b>		<b>H(a)</b> Is this a group return for subordinates? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>H(b)</b> Are all subordinates included? <input type="checkbox"/> Yes <input type="checkbox"/> No If "No," attach a list. See instructions
<b>F</b> Name and address of principal officer: <b>STACY PAGOS HALLER</b> <b>SAME AS C ABOVE</b>		<b>H(c)</b> Group exemption number	
<b>I</b> Tax-exempt status: <input checked="" type="checkbox"/> 501(c)(3) <input type="checkbox"/> 501(c)( ) (insert no.) <input type="checkbox"/> 4947(a)(1) or <input type="checkbox"/> 527			
<b>J</b> Website: <b>WWW.BRIGHTFOCUS.ORG</b>			
<b>K</b> Form of organization: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Trust <input type="checkbox"/> Association <input type="checkbox"/> Other		<b>L</b> Year of formation: <b>1973</b>	<b>M</b> State of legal domicile: <b>DC</b>

**Part I Summary**

<b>Activities &amp; Governance</b>	<b>1</b> Briefly describe the organization's mission or most significant activities: <b>BRIGHTFOCUS FOUNDATION (BRIGHTFOCUS) SEEKS A WORLD FREE FROM DISEASES OF MIND AND SIGHT.</b>
	<b>2</b> Check this box <input type="checkbox"/> if the organization discontinued its operations or disposed of more than 25% of its net assets.
	<b>3</b> Number of voting members of the governing body (Part VI, line 1a) <b>3</b> <b>11</b>
	<b>4</b> Number of independent voting members of the governing body (Part VI, line 1b) <b>4</b> <b>11</b>
	<b>5</b> Total number of individuals employed in calendar year 2020 (Part V, line 2a) <b>5</b> <b>61</b>
	<b>6</b> Total number of volunteers (estimate if necessary) <b>6</b> <b>71</b>
	<b>7 a</b> Total unrelated business revenue from Part VIII, column (C), line 12 <b>7a</b> <b>0.</b> <b>b</b> Net unrelated business taxable income from Form 990-T, Part I, line 11 <b>7b</b> <b>0.</b>
<b>Revenue</b>	<b>8</b> Contributions and grants (Part VIII, line 1h) <b>Prior Year 35,740,875. Current Year 48,502,473.</b>
	<b>9</b> Program service revenue (Part VIII, line 2g) <b>0. 0.</b>
	<b>10</b> Investment income (Part VIII, column (A), lines 3, 4, and 7d) <b>840,873. 1,768,676.</b>
	<b>11</b> Other revenue (Part VIII, column (A), lines 5, 6d, 8c, 9c, 10c, and 11e) <b>815,078. 975,243.</b>
	<b>12</b> Total revenue - add lines 8 through 11 (must equal Part VIII, column (A), line 12) <b>37,396,826. 51,246,392.</b>
	<b>13</b> Grants and similar amounts paid (Part IX, column (A), lines 1-3) <b>17,853,862. 25,256,371.</b>
<b>Expenses</b>	<b>14</b> Benefits paid to or for members (Part IX, column (A), line 4) <b>0. 0.</b>
	<b>15</b> Salaries, other compensation, employee benefits (Part IX, column (A), lines 5-10) <b>5,386,724. 5,801,548.</b>
	<b>16 a</b> Professional fundraising fees (Part IX, column (A), line 11e) <b>743,582. 738,435.</b> <b>b</b> Total fundraising expenses (Part IX, column (D), line 25) <b>8,392,585.</b>
	<b>17</b> Other expenses (Part IX, column (A), lines 11a-11d, 11f-24e) <b>18,867,346. 20,436,021.</b>
	<b>18</b> Total expenses. Add lines 13-17 (must equal Part IX, column (A), line 25) <b>42,851,514. 52,232,375.</b>
	<b>19</b> Revenue less expenses. Subtract line 18 from line 12 <b>-5,454,688. -985,983.</b>
<b>Net Assets or Fund Balances</b>	<b>20</b> Total assets (Part X, line 16) <b>Beginning of Current Year 53,987,981. End of Year 66,476,749.</b>
	<b>21</b> Total liabilities (Part X, line 26) <b>28,594,817. 33,442,032.</b>
	<b>22</b> Net assets or fund balances. Subtract line 21 from line 20 <b>25,393,164. 33,034,717.</b>

**Part II Signature Block**

Under penalties of perjury, I declare that I have examined this return, including accompanying schedules and statements, and to the best of my knowledge and belief, it is true, correct, and complete. Declaration of preparer (other than officer) is based on all information of which preparer has any knowledge.

<b>Sign Here</b>	Signature of officer: <i>Stacy Pagos Haller</i>	Date: <b>8-2-21</b>		
	STACY PAGOS HALLER, PRESIDENT/CEO Type or print name and title			
<b>Paid Preparer Use Only</b>	Print/Type preparer's name: <b>FRANK H. SMITH</b>	Preparer's signature: <i>Frank H. Smith</i>	Date: <b>08/02/21</b>	Check <input type="checkbox"/> PTIN if self-employed: <b>P00639053</b>
	Firm's name: <b>MARCUM, LLP</b>	Firm's EIN: <b>11-1986323</b>	Firm's address: <b>1899 L STREET, NW, SUITE 850 WASHINGTON, DC 20036</b>	
			Phone no. (202) 227-4000	

May the IRS discuss this return with the preparer shown above? See instructions  Yes  No

SEE SCHEDULE O FOR ORGANIZATION MISSION STATEMENT CONTINUATION

**COPY**

Part III Statement of Program Service Accomplishments

Check if Schedule O contains a response or note to any line in this Part III [X]

1 Briefly describe the organization's mission: BRIGHTFOCUS FUNDS EXCEPTIONAL SCIENTIFIC RESEARCH WORLDWIDE TO DEFEAT ALZHEIMER'S DISEASE, MACULAR DEGENERATION, AND GLAUCOMA AND PROVIDES EXPERT INFORMATION ON THESE HEARTBREAKING DISEASES. PLEASE REFER TO SCHEDULE O FOR A COMPLETE OVERVIEW OF OUR MISSION.

2 Did the organization undertake any significant program services during the year which were not listed on the prior Form 990 or 990-EZ? [ ] Yes [X] No If "Yes," describe these new services on Schedule O.

3 Did the organization cease conducting, or make significant changes in how it conducts, any program services? [ ] Yes [X] No If "Yes," describe these changes on Schedule O.

4 Describe the organization's program service accomplishments for each of its three largest program services, as measured by expenses. Section 501(c)(3) and 501(c)(4) organizations are required to report the amount of grants and allocations to others, the total expenses, and revenue, if any, for each program service reported.

4a (Code: ) (Expenses \$ 22,947,911. including grants of \$ 14,187,968. ) (Revenue \$ ) ALZHEIMER'S DISEASE RESEARCH (ADR)

PLEASE REFER TO SCHEDULE O FOR A COMPLETE DESCRIPTION OF THE ACCOMPLISHMENTS FOR ALZHEIMER'S DISEASE RESEARCH.

4b (Code: ) (Expenses \$ 11,284,353. including grants of \$ 6,175,716. ) (Revenue \$ ) MACULAR DEGENERATION RESEARCH (MDR)

PLEASE REFER TO SCHEDULE O FOR A COMPLETE DESCRIPTION OF THE ACCOMPLISHMENTS FOR MACULAR DEGENERATION RESEARCH.

4c (Code: ) (Expenses \$ 5,765,950. including grants of \$ 4,892,687. ) (Revenue \$ ) NATIONAL GLAUCOMA RESEARCH (NGR)

PLEASE REFER TO SCHEDULE O FOR A COMPLETE DESCRIPTION OF THE ACCOMPLISHMENTS FOR NATIONAL GLAUCOMA RESEARCH.

4d Other program services (Describe on Schedule O.) (Expenses \$ including grants of \$ ) (Revenue \$ )

4e Total program service expenses 39,998,214.

Part IV Checklist of Required Schedules

Table with 3 columns: Question ID, Yes, No. Rows include questions 1 through 21 regarding organizational requirements and reporting.

Part IV Checklist of Required Schedules (continued)

Table with 3 columns: Question, Yes, No. Rows 22-38 covering various organizational requirements.

Part V Statements Regarding Other IRS Filings and Tax Compliance

Check if Schedule O contains a response or note to any line in this Part V

Table with 3 columns: Question, Yes, No. Rows 1a-1c regarding Form 1096, W-2G forms, and backup withholding rules.



Part V Statements Regarding Other IRS Filings and Tax Compliance (continued)

Table with 3 columns: Question, Yes, No. Rows include questions 2a through 16 regarding employee counts, tax returns, gross income, foreign accounts, prohibited transactions, and charitable contributions.

Part VI Governance, Management, and Disclosure For each "Yes" response to lines 2 through 7b below, and for a "No" response to line 8a, 8b, or 10b below, describe the circumstances, processes, or changes on Schedule O. See instructions.

Check if Schedule O contains a response or note to any line in this Part VI [X]

Section A. Governing Body and Management

Table with 3 columns: Question, Yes, No. Rows include: 1a Enter the number of voting members of the governing body at the end of the tax year (11); 1b Enter the number of voting members included on line 1a, above, who are independent (11); 2 Did any officer, director, trustee, or key employee have a family relationship or a business relationship with any other officer, director, trustee, or key employee? (X); 3 Did the organization delegate control over management duties customarily performed by or under the direct supervision of officers, directors, trustees, or key employees to a management company or other person? (X); 4 Did the organization make any significant changes to its governing documents since the prior Form 990 was filed? (X); 5 Did the organization become aware during the year of a significant diversion of the organization's assets? (X); 6 Did the organization have members or stockholders? (X); 7a Did the organization have members, stockholders, or other persons who had the power to elect or appoint one or more members of the governing body? (X); 7b Are any governance decisions of the organization reserved to (or subject to approval by) members, stockholders, or persons other than the governing body? (X); 8 Did the organization contemporaneously document the meetings held or written actions undertaken during the year by the following: a The governing body? (X); b Each committee with authority to act on behalf of the governing body? (X); 9 Is there any officer, director, trustee, or key employee listed in Part VII, Section A, who cannot be reached at the organization's mailing address? If "Yes," provide the names and addresses on Schedule O (X).

Section B. Policies (This Section B requests information about policies not required by the Internal Revenue Code.)

Table with 3 columns: Question, Yes, No. Rows include: 10a Did the organization have local chapters, branches, or affiliates? (X); 10b If "Yes," did the organization have written policies and procedures governing the activities of such chapters, affiliates, and branches to ensure their operations are consistent with the organization's exempt purposes?; 11a Has the organization provided a complete copy of this Form 990 to all members of its governing body before filing the form? (X); 11b Describe in Schedule O the process, if any, used by the organization to review this Form 990.; 12a Did the organization have a written conflict of interest policy? If "No," go to line 13 (X); 12b Were officers, directors, or trustees, and key employees required to disclose annually interests that could give rise to conflicts? (X); 12c Did the organization regularly and consistently monitor and enforce compliance with the policy? If "Yes," describe in Schedule O how this was done (X); 13 Did the organization have a written whistleblower policy? (X); 14 Did the organization have a written document retention and destruction policy? (X); 15 Did the process for determining compensation of the following persons include a review and approval by independent persons, comparability data, and contemporaneous substantiation of the deliberation and decision? a The organization's CEO, Executive Director, or top management official (X); b Other officers or key employees of the organization (X); If "Yes" to line 15a or 15b, describe the process in Schedule O (see instructions).; 16a Did the organization invest in, contribute assets to, or participate in a joint venture or similar arrangement with a taxable entity during the year? (X); 16b If "Yes," did the organization follow a written policy or procedure requiring the organization to evaluate its participation in joint venture arrangements under applicable federal tax law, and take steps to safeguard the organization's exempt status with respect to such arrangements?;

Section C. Disclosure

- 17 List the states with which a copy of this Form 990 is required to be filed AK, AL, AR, CA, CT, FL, GA, HI, IL, KS, KY, ME
18 Section 6104 requires an organization to make its Forms 1023 (1024 or 1024-A, if applicable), 990, and 990-T (Section 501(c)(3)s only) available for public inspection. Indicate how you made these available. Check all that apply. [X] Own website [X] Another's website [X] Upon request [ ] Other (explain on Schedule O)
19 Describe on Schedule O whether (and if so, how) the organization made its governing documents, conflict of interest policy, and financial statements available to the public during the tax year.
20 State the name, address, and telephone number of the person who possesses the organization's books and records DAVID F. MARKS, CPA, CMA - (301) 948-3244 22512 GATEWAY CENTER DRIVE, CLARKSBURG, MD 20871

**Part VII Compensation of Officers, Directors, Trustees, Key Employees, Highest Compensated Employees, and Independent Contractors**

Check if Schedule O contains a response or note to any line in this Part VII

**Section A. Officers, Directors, Trustees, Key Employees, and Highest Compensated Employees**

**1a** Complete this table for all persons required to be listed. Report compensation for the calendar year ending with or within the organization's tax year.

- List all of the organization's **current** officers, directors, trustees (whether individuals or organizations), regardless of amount of compensation. Enter -0- in columns (D), (E), and (F) if no compensation was paid.
- List all of the organization's **current** key employees, if any. See instructions for definition of "key employee."
- List the organization's five **current** highest compensated employees (other than an officer, director, trustee, or key employee) who received reportable compensation (Box 5 of Form W-2 and/or Box 7 of Form 1099-MISC) of more than \$100,000 from the organization and any related organizations.
- List all of the organization's **former** officers, key employees, and highest compensated employees who received more than \$100,000 of reportable compensation from the organization and any related organizations.
- List all of the organization's **former directors or trustees** that received, in the capacity as a former director or trustee of the organization, more than \$10,000 of reportable compensation from the organization and any related organizations. See instructions for the order in which to list the persons above.

Check this box if neither the organization nor any related organization compensated any current officer, director, or trustee.

(A) Name and title	(B) Average hours per week (list any hours for related organizations below line)	(C) Position (do not check more than one box, unless person is both an officer and a director/trustee)						(D) Reportable compensation from the organization (W-2/1099-MISC)	(E) Reportable compensation from related organizations (W-2/1099-MISC)	(F) Estimated amount of other compensation from the organization and related organizations
		Individual trustee or director	Institutional trustee	Officer	Key employee	Highest compensated employee	Former			
(1) STACY PAGOS HALLER PRESIDENT/CEO	55.00			X				371,573.	0.	54,629.
(2) NANCY LYNN SR. VP STRATEGIC PARTNERSHIPS	45.00				X			239,870.	0.	51,826.
(3) R. BRIAN ELDETON SR. VP, DEVELOPMENT	45.00				X			233,289.	0.	44,438.
(4) DAVID F. MARKS, CPA, CMA VP, FINANCE & ADMINISTRATION	45.00				X			160,472.	0.	53,670.
(5) DIANE BOVENKAMP, PHD VP, SCIENTIFIC AFFAIRS	45.00				X			174,542.	0.	20,192.
(6) MICHAEL BUCKLEY VP, PUBLIC AFFAIRS	45.00				X			158,154.	0.	18,310.
(7) AYO ABRAHAM, CPA CONTROLLER	40.00					X		135,592.	0.	4,528.
(8) JEFFREY HONAKER SR. MANAGER OPERATIONS & BUILDING	40.00					X		100,665.	0.	37,493.
(9) EDWARD BERGER MANAGER OF ONLINE OPERATIONS	40.00					X		101,633.	0.	28,471.
(10) PREETI SUBRAMANIAN, DIR. OF SCIENT. PROGRAMS, VISION SCIENCE	40.00					X		107,340.	0.	7,035.
(11) PATRICIA M. STEWART CHAIR	10.00	X		X				0.	0.	0.
(12) CECILIA ARRADAZA VICE CHAIR	5.00	X		X				0.	0.	0.
(13) MADDY DYCHT WALD SECRETARY	5.00	X		X				0.	0.	0.
(14) JUDITH F. LEE SECRETARY - UNTIL 06/20	5.00	X		X				0.	0.	0.
(15) ETHAN TREESE TREASURER	5.00	X		X				0.	0.	0.
(16) NICHOLAS W. RAYMOND TREASURER - UNTIL 06/2020	5.00	X		X				0.	0.	0.
(17) MICHAEL H. BARNETT, ESQ. DIRECTOR - UNTIL 06/2020	5.00	X						0.	0.	0.

**Part VII** Section A. Officers, Directors, Trustees, Key Employees, and Highest Compensated Employees (continued)

(A) Name and title	(B) Average hours per week (list any hours for related organizations below line)	(C) Position (do not check more than one box, unless person is both an officer and a director/trustee)						(D) Reportable compensation from the organization (W-2/1099-MISC)	(E) Reportable compensation from related organizations (W-2/1099-MISC)	(F) Estimated amount of other compensation from the organization and related organizations
		Individual trustee or director	Institutional trustee	Officer	Key employee	Highest compensated employee	Former			
(18) GRACE FRISONE DIRECTOR - UNTIL 06/2020	5.00	X						0.	0.	0.
(19) SHAWA GOTTLIEB DIRECTOR	5.00	X						0.	0.	0.
(20) SCOTT KAISER, MD DIRECTOR	5.00	X						0.	0.	0.
(21) JUNE KINOSHITA DIRECTOR - UNTIL 06/2020	5.00	X						0.	0.	0.
(22) TONYA MATTHEWS, PHD DIRECTOR	5.00	X						0.	0.	0.
(23) BRIAN K. REGAN, PHD DIRECTOR	5.00	X						0.	0.	0.
(24) SCOTT RODGVILLE, CPA DIRECTOR	5.00	X						0.	0.	0.
(25) ERIC SIEMERS, MD DIRECTOR	5.00	X						0.	0.	0.
(26) JAN M. STOUFFER, PHD DIRECTOR	5.00	X						0.	0.	0.
<b>1b Subtotal</b>								1,783,130.	0.	320,592.
<b>c Total from continuation sheets to Part VII, Section A</b>								0.	0.	0.
<b>d Total (add lines 1b and 1c)</b>								1,783,130.	0.	320,592.

2 Total number of individuals (including but not limited to those listed above) who received more than \$100,000 of reportable compensation from the organization **10**

	Yes	No
3 Did the organization list any former officer, director, trustee, key employee, or highest compensated employee on line 1a? If "Yes," complete Schedule J for such individual		X
4 For any individual listed on line 1a, is the sum of reportable compensation and other compensation from the organization and related organizations greater than \$150,000? If "Yes," complete Schedule J for such individual	X	
5 Did any person listed on line 1a receive or accrue compensation from any unrelated organization or individual for services rendered to the organization? If "Yes," complete Schedule J for such person		X

**Section B. Independent Contractors**

1 Complete this table for your five highest compensated independent contractors that received more than \$100,000 of compensation from the organization. Report compensation for the calendar year ending with or within the organization's tax year.

(A) Name and business address	(B) Description of services	(C) Compensation
RKD GROUP, 35 PARKWOOD DRIVE, SUITE 160, HOPKINTON, MA 01748	PUBLIC AWARENESS CONSUL. & MATERIALS	8,331,499.
BEACONFIRE RED ENGINE, 2300 CLARENDON BLVD., SUITE 925, ARLINGTON, VA 22201	ONLINE PUBLIC AWARENESS CONSULTING	616,698.
DIGITAL PULP, 220 E. 23RD ST., SUITE 900, NEW YORK, NY 10010	WEBSITE DEVELOPMENT	269,684.
DATA MANAGEMENT, INC. 160 STONE STREET, STONEVILLE, NC 27048	DATABASE MANAGEMENT	232,099.
GOOGLE, 1600 AMPHITHEATRE PARKWAY, MOUNTAIN VIEW, CA 94043	PUBLIC AWARENESS ADVERTISING	225,273.

2 Total number of independent contractors (including but not limited to those listed above) who received more than \$100,000 of compensation from the organization **15**

**Part VIII Statement of Revenue**

Check if Schedule O contains a response or note to any line in this Part VIII

			(A)	(B)	(C)	(D)	
			Total revenue	Related or exempt function revenue	Unrelated business revenue	Revenue excluded from tax under sections 512 - 514	
Contributions, Gifts, Grants and Other Similar Amounts	<b>1 a</b> Federated campaigns	<b>1a</b>	180,519.				
	<b>b</b> Membership dues	<b>1b</b>					
	<b>c</b> Fundraising events	<b>1c</b>					
	<b>d</b> Related organizations	<b>1d</b>					
	<b>e</b> Government grants (contributions)	<b>1e</b>	982,990.				
	<b>f</b> All other contributions, gifts, grants, and similar amounts not included above	<b>1f</b>	47338964.				
	<b>g</b> Noncash contributions included in lines 1a-1f	<b>1g</b>	\$ 411,261.				
	<b>h Total.</b> Add lines 1a-1f			48502473.			
Program Service Revenue			<b>Business Code</b>				
	<b>2 a</b>						
	<b>b</b>						
	<b>c</b>						
	<b>d</b>						
	<b>e</b>						
	<b>f</b> All other program service revenue						
<b>g Total.</b> Add lines 2a-2f							
Other Revenue	<b>3</b> Investment income (including dividends, interest, and other similar amounts)		864,218.			864,218.	
	<b>4</b> Income from investment of tax-exempt bond proceeds						
	<b>5</b> Royalties		426,005.			426,005.	
	<b>6 a</b> Gross rents		(i) Real				
			(ii) Personal				
		<b>6a</b>		597,410.			
	<b>b</b> Less: rental expenses	<b>6b</b>		48,172.			
	<b>c</b> Rental income or (loss)	<b>6c</b>		549,238.			
	<b>d</b> Net rental income or (loss)			549,238.		549,238.	
	<b>7 a</b> Gross amount from sales of assets other than inventory		(i) Securities				
			(ii) Other				
		<b>7a</b>		15518542			
	<b>b</b> Less: cost or other basis and sales expenses	<b>7b</b>		14614084			
<b>c</b> Gain or (loss)	<b>7c</b>		904,458.				
<b>d</b> Net gain or (loss)			904,458.		904,458.		
<b>8 a</b> Gross income from fundraising events (not including \$ _____ of contributions reported on line 1c). See Part IV, line 18							
	<b>8a</b>						
<b>b</b> Less: direct expenses	<b>8b</b>						
<b>c</b> Net income or (loss) from fundraising events							
<b>9 a</b> Gross income from gaming activities. See Part IV, line 19							
	<b>9a</b>						
<b>b</b> Less: direct expenses	<b>9b</b>						
<b>c</b> Net income or (loss) from gaming activities							
<b>10 a</b> Gross sales of inventory, less returns and allowances							
	<b>10a</b>						
	<b>b</b> Less: cost of goods sold	<b>10b</b>					
<b>c</b> Net income or (loss) from sales of inventory							
Miscellaneous Revenue			<b>Business Code</b>				
	<b>11 a</b>						
	<b>b</b>						
	<b>c</b>						
	<b>d</b> All other revenue						
<b>e Total.</b> Add lines 11a-11d							
<b>12 Total revenue.</b> See instructions			51246392.	0.	0.	2743919.	

**Part IX Statement of Functional Expenses**

Section 501(c)(3) and 501(c)(4) organizations must complete all columns. All other organizations must complete column (A).

Check if Schedule O contains a response or note to any line in this Part IX

Do not include amounts reported on lines 6b, 7b, 8b, 9b, and 10b of Part VIII.	(A) Total expenses	(B) Program service expenses	(C) Management and general expenses	(D) Fundraising expenses
1 Grants and other assistance to domestic organizations and domestic governments. See Part IV, line 21	19,052,047.	19,052,047.		
2 Grants and other assistance to domestic individuals. See Part IV, line 22				
3 Grants and other assistance to foreign organizations, foreign governments, and foreign individuals. See Part IV, lines 15 and 16	6,204,324.	6,204,324.		
4 Benefits paid to or for members				
5 Compensation of current officers, directors, trustees, and key employees	1,573,474.	1,010,636.	314,938.	247,900.
6 Compensation not included above to disqualified persons (as defined under section 4958(f)(1)) and persons described in section 4958(c)(3)(B)				
7 Other salaries and wages	3,144,579.	1,695,968.	1,009,978.	438,633.
8 Pension plan accruals and contributions (include section 401(k) and 403(b) employer contributions)	182,444.	98,398.	58,597.	25,449.
9 Other employee benefits	616,041.	332,250.	197,860.	85,931.
10 Payroll taxes	285,010.	153,715.	91,540.	39,755.
11 Fees for services (nonemployees):				
a Management				
b Legal	145,246.	113,992.	31,254.	
c Accounting	92,755.	52,452.	26,352.	13,951.
d Lobbying				
e Professional fundraising services. See Part IV, line 17	738,435.			738,435.
f Investment management fees	293,916.		293,916.	
g Other. (If line 11g amount exceeds 10% of line 25, column (A) amount, list line 11g expenses on Sch. O.)	2,232,333.	2,043,561.	147,873.	40,899.
12 Advertising and promotion	491,712.	239,870.		251,842.
13 Office expenses	965,494.	442,423.	292,310.	230,761.
14 Information technology	891,189.	618,392.	194,717.	78,080.
15 Royalties				
16 Occupancy	433,695.	256,408.	136,295.	40,992.
17 Travel	699.	30.	436.	233.
18 Payments of travel or entertainment expenses for any federal, state, or local public officials				
19 Conferences, conventions, and meetings	227,306.	173,946.	2,444.	50,916.
20 Interest	13,456.	7,515.	4,288.	1,653.
21 Payments to affiliates				
22 Depreciation, depletion, and amortization	314,379.	183,065.	95,689.	35,625.
23 Insurance	92,448.	34,086.	50,986.	7,376.
24 Other expenses. Itemize expenses not covered above (List miscellaneous expenses on line 24e. If line 24e amount exceeds 10% of line 25, column (A) amount, list line 24e expenses on Schedule O.)				
a <b>PUB. AWARENESS POSTAGE</b>	6,655,623.	3,386,707.	451,565.	2,817,351.
b <b>PUB. AWARENESS PRINTING</b>	4,390,366.	2,260,721.	269,895.	1,859,750.
c <b>PUB. AWARENESS COMP.</b>	1,786,224.	922,966.	96,217.	767,041.
d <b>LIST RENTAL</b>	1,409,180.	714,742.	74,426.	620,012.
e All other expenses				
25 <b>Total functional expenses.</b> Add lines 1 through 24e	52,232,375.	39,998,214.	3,841,576.	8,392,585.
26 <b>Joint costs.</b> Complete this line only if the organization reported in column (B) joint costs from a combined educational campaign and fundraising solicitation. Check here <input checked="" type="checkbox"/> if following SOP 98-2 (ASC 958-720)	14,155,229.	6,674,273.	950,694.	6,530,262.

**Part X Balance Sheet**

Check if Schedule O contains a response or note to any line in this Part X

		(A)		(B)	
		Beginning of year		End of year	
Assets	<b>1</b> Cash - non-interest-bearing .....	2,907,293.	<b>1</b>	3,829,911.	
	<b>2</b> Savings and temporary cash investments .....	269,981.	<b>2</b>	621,981.	
	<b>3</b> Pledges and grants receivable, net .....	8,906,997.	<b>3</b>	10,272,457.	
	<b>4</b> Accounts receivable, net .....		<b>4</b>		
	<b>5</b> Loans and other receivables from any current or former officer, director, trustee, key employee, creator or founder, substantial contributor, or 35% controlled entity or family member of any of these persons .....		<b>5</b>		
	<b>6</b> Loans and other receivables from other disqualified persons (as defined under section 4958(f)(1)), and persons described in section 4958(c)(3)(B) .....		<b>6</b>		
	<b>7</b> Notes and loans receivable, net .....		<b>7</b>		
	<b>8</b> Inventories for sale or use .....	15,836.	<b>8</b>	44,354.	
	<b>9</b> Prepaid expenses and deferred charges .....	89,282.	<b>9</b>	204,913.	
	<b>10a</b> Land, buildings, and equipment: cost or other basis. Complete Part VI of Schedule D .....	<b>10a</b> 12,715,158.			
	<b>b</b> Less: accumulated depreciation .....	<b>10b</b> 4,884,179.	7,596,856.	<b>10c</b>	7,830,979.
	<b>11</b> Investments - publicly traded securities .....	33,795,346.	<b>11</b>	43,404,279.	
	<b>12</b> Investments - other securities. See Part IV, line 11 .....		<b>12</b>		
	<b>13</b> Investments - program-related. See Part IV, line 11 .....		<b>13</b>		
	<b>14</b> Intangible assets .....		<b>14</b>		
	<b>15</b> Other assets. See Part IV, line 11 .....	406,390.	<b>15</b>	267,875.	
<b>16 Total assets.</b> Add lines 1 through 15 (must equal line 33) .....	53,987,981.	<b>16</b>	66,476,749.		
Liabilities	<b>17</b> Accounts payable and accrued expenses .....	635,145.	<b>17</b>	871,196.	
	<b>18</b> Grants payable .....	26,847,392.	<b>18</b>	31,618,962.	
	<b>19</b> Deferred revenue .....	39,675.	<b>19</b>	0.	
	<b>20</b> Tax-exempt bond liabilities .....		<b>20</b>		
	<b>21</b> Escrow or custodial account liability. Complete Part IV of Schedule D .....		<b>21</b>		
	<b>22</b> Loans and other payables to any current or former officer, director, trustee, key employee, creator or founder, substantial contributor, or 35% controlled entity or family member of any of these persons .....		<b>22</b>		
	<b>23</b> Secured mortgages and notes payable to unrelated third parties .....		<b>23</b>		
	<b>24</b> Unsecured notes and loans payable to unrelated third parties .....		<b>24</b>		
	<b>25</b> Other liabilities (including federal income tax, payables to related third parties, and other liabilities not included on lines 17-24). Complete Part X of Schedule D .....	1,072,605.	<b>25</b>	951,874.	
	<b>26 Total liabilities.</b> Add lines 17 through 25 .....	28,594,817.	<b>26</b>	33,442,032.	
Net Assets or Fund Balances	<b>Organizations that follow FASB ASC 958, check here</b> <input checked="" type="checkbox"/> <b>and complete lines 27, 28, 32, and 33.</b>				
	<b>27</b> Net assets without donor restrictions .....	8,878,593.	<b>27</b>	15,708,243.	
	<b>28</b> Net assets with donor restrictions .....	16,514,571.	<b>28</b>	17,326,474.	
	<b>Organizations that do not follow FASB ASC 958, check here</b> <input type="checkbox"/> <b>and complete lines 29 through 33.</b>				
	<b>29</b> Capital stock or trust principal, or current funds .....		<b>29</b>		
	<b>30</b> Paid-in or capital surplus, or land, building, or equipment fund .....		<b>30</b>		
	<b>31</b> Retained earnings, endowment, accumulated income, or other funds .....		<b>31</b>		
	<b>32</b> Total net assets or fund balances .....	25,393,164.	<b>32</b>	33,034,717.	
<b>33</b> Total liabilities and net assets/fund balances .....	53,987,981.	<b>33</b>	66,476,749.		

**Part XI Reconciliation of Net Assets**

Check if Schedule O contains a response or note to any line in this Part XI

1	Total revenue (must equal Part VIII, column (A), line 12)	1	51,246,392.
2	Total expenses (must equal Part IX, column (A), line 25)	2	52,232,375.
3	Revenue less expenses. Subtract line 2 from line 1	3	-985,983.
4	Net assets or fund balances at beginning of year (must equal Part X, line 32, column (A))	4	25,393,164.
5	Net unrealized gains (losses) on investments	5	8,115,799.
6	Donated services and use of facilities	6	
7	Investment expenses	7	
8	Prior period adjustments	8	
9	Other changes in net assets or fund balances (explain on Schedule O)	9	511,737.
10	Net assets or fund balances at end of year. Combine lines 3 through 9 (must equal Part X, line 32, column (B))	10	33,034,717.

**Part XII Financial Statements and Reporting**

Check if Schedule O contains a response or note to any line in this Part XII

	Yes	No
1 Accounting method used to prepare the Form 990: <input type="checkbox"/> Cash <input checked="" type="checkbox"/> Accrual <input type="checkbox"/> Other		
If the organization changed its method of accounting from a prior year or checked "Other," explain in Schedule O.		
2a Were the organization's financial statements compiled or reviewed by an independent accountant?		X
If "Yes," check a box below to indicate whether the financial statements for the year were compiled or reviewed on a separate basis, consolidated basis, or both:		
<input type="checkbox"/> Separate basis <input type="checkbox"/> Consolidated basis <input type="checkbox"/> Both consolidated and separate basis		
b Were the organization's financial statements audited by an independent accountant?	X	
If "Yes," check a box below to indicate whether the financial statements for the year were audited on a separate basis, consolidated basis, or both:		
<input type="checkbox"/> Separate basis <input checked="" type="checkbox"/> Consolidated basis <input type="checkbox"/> Both consolidated and separate basis		
c If "Yes" to line 2a or 2b, does the organization have a committee that assumes responsibility for oversight of the audit, review, or compilation of its financial statements and selection of an independent accountant?	X	
If the organization changed either its oversight process or selection process during the tax year, explain on Schedule O.		
3a As a result of a federal award, was the organization required to undergo an audit or audits as set forth in the Single Audit Act and OMB Circular A-133?		X
b If "Yes," did the organization undergo the required audit or audits? If the organization did not undergo the required audit or audits, explain why on Schedule O and describe any steps taken to undergo such audits		

Form 990 (2020)



**SCHEDULE A**  
**(Form 990 or 990-EZ)**

Department of the Treasury  
Internal Revenue Service

**Public Charity Status and Public Support**

Complete if the organization is a section 501(c)(3) organization or a section 4947(a)(1) nonexempt charitable trust.

▶ Attach to Form 990 or Form 990-EZ.

▶ Go to [www.irs.gov/Form990](http://www.irs.gov/Form990) for instructions and the latest information.

OMB No. 1545-0047

**2020**

Open to Public Inspection

<b>Name of the organization</b> <p style="text-align: center;">BRIGHTFOCUS FOUNDATION</p>	<b>Employer identification number</b> <p style="text-align: center;">23-7337229</p>
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**Part I Reason for Public Charity Status.** (All organizations must complete this part.) See instructions.

The organization is not a private foundation because it is: (For lines 1 through 12, check only one box.)

- 1  A church, convention of churches, or association of churches described in **section 170(b)(1)(A)(i).**
- 2  A school described in **section 170(b)(1)(A)(ii).** (Attach Schedule E (Form 990 or 990-EZ).)
- 3  A hospital or a cooperative hospital service organization described in **section 170(b)(1)(A)(iii).**
- 4  A medical research organization operated in conjunction with a hospital described in **section 170(b)(1)(A)(iii).** Enter the hospital's name, city, and state: \_\_\_\_\_
- 5  An organization operated for the benefit of a college or university owned or operated by a governmental unit described in **section 170(b)(1)(A)(iv).** (Complete Part II.)
- 6  A federal, state, or local government or governmental unit described in **section 170(b)(1)(A)(v).**
- 7  An organization that normally receives a substantial part of its support from a governmental unit or from the general public described in **section 170(b)(1)(A)(vi).** (Complete Part II.)
- 8  A community trust described in **section 170(b)(1)(A)(vi).** (Complete Part II.)
- 9  An agricultural research organization described in **section 170(b)(1)(A)(ix)** operated in conjunction with a land-grant college or university or a non-land-grant college of agriculture (see instructions). Enter the name, city, and state of the college or university: \_\_\_\_\_
- 10  An organization that normally receives (1) more than 33 1/3% of its support from contributions, membership fees, and gross receipts from activities related to its exempt functions, subject to certain exceptions; and (2) no more than 33 1/3% of its support from gross investment income and unrelated business taxable income (less section 511 tax) from businesses acquired by the organization after June 30, 1975. See **section 509(a)(2).** (Complete Part III.)
- 11  An organization organized and operated exclusively to test for public safety. See **section 509(a)(4).**
- 12  An organization organized and operated exclusively for the benefit of, to perform the functions of, or to carry out the purposes of one or more publicly supported organizations described in **section 509(a)(1)** or **section 509(a)(2).** See **section 509(a)(3).** Check the box in lines 12a through 12d that describes the type of supporting organization and complete lines 12e, 12f, and 12g.
  - a  **Type I.** A supporting organization operated, supervised, or controlled by its supported organization(s), typically by giving the supported organization(s) the power to regularly appoint or elect a majority of the directors or trustees of the supporting organization. **You must complete Part IV, Sections A and B.**
  - b  **Type II.** A supporting organization supervised or controlled in connection with its supported organization(s), by having control or management of the supporting organization vested in the same persons that control or manage the supported organization(s). **You must complete Part IV, Sections A and C.**
  - c  **Type III functionally integrated.** A supporting organization operated in connection with, and functionally integrated with, its supported organization(s) (see instructions). **You must complete Part IV, Sections A, D, and E.**
  - d  **Type III non-functionally integrated.** A supporting organization operated in connection with its supported organization(s) that is not functionally integrated. The organization generally must satisfy a distribution requirement and an attentiveness requirement (see instructions). **You must complete Part IV, Sections A and D, and Part V.**
  - e  Check this box if the organization received a written determination from the IRS that it is a Type I, Type II, Type III functionally integrated, or Type III non-functionally integrated supporting organization.
  - f Enter the number of supported organizations \_\_\_\_\_
  - g Provide the following information about the supported organization(s).

(i) Name of supported organization	(ii) EIN	(iii) Type of organization (described on lines 1-10 above (see instructions))	(iv) Is the organization listed in your governing document?		(v) Amount of monetary support (see instructions)	(vi) Amount of other support (see instructions)
			Yes	No		
<b>Total</b>						

**Part II Support Schedule for Organizations Described in Sections 170(b)(1)(A)(iv) and 170(b)(1)(A)(vi)**

(Complete only if you checked the box on line 5, 7, or 8 of Part I or if the organization failed to qualify under Part III. If the organization fails to qualify under the tests listed below, please complete Part III.)

**Section A. Public Support**

Calendar year (or fiscal year beginning in) ▶	(a) 2016	(b) 2017	(c) 2018	(d) 2019	(e) 2020	(f) Total
<b>1</b> Gifts, grants, contributions, and membership fees received. (Do not include any "unusual grants.") .....	30692507.	32362197.	39635190.	35740875.	48502473.	186933242
<b>2</b> Tax revenues levied for the organization's benefit and either paid to or expended on its behalf .....						
<b>3</b> The value of services or facilities furnished by a governmental unit to the organization without charge .....						
<b>4 Total.</b> Add lines 1 through 3 .....	30692507.	32362197.	39635190.	35740875.	48502473.	186933242
<b>5</b> The portion of total contributions by each person (other than a governmental unit or publicly supported organization) included on line 1 that exceeds 2% of the amount shown on line 11, column (f) .....						76,243.
<b>6 Public support.</b> Subtract line 5 from line 4.						186856999

**Section B. Total Support**

Calendar year (or fiscal year beginning in) ▶	(a) 2016	(b) 2017	(c) 2018	(d) 2019	(e) 2020	(f) Total
<b>7</b> Amounts from line 4 .....	30692507.	32362197.	39635190.	35740875.	48502473.	186933242
<b>8</b> Gross income from interest, dividends, payments received on securities loans, rents, royalties, and income from similar sources .....	1622675.	1641767.	1925519.	2176998.	1887633.	9254592.
<b>9</b> Net income from unrelated business activities, whether or not the business is regularly carried on .....						
<b>10</b> Other income. Do not include gain or loss from the sale of capital assets (Explain in Part VI.) .....						
<b>11 Total support.</b> Add lines 7 through 10						196187834
<b>12</b> Gross receipts from related activities, etc. (see instructions) .....					12	133,900.
<b>13 First 5 years.</b> If the Form 990 is for the organization's first, second, third, fourth, or fifth tax year as a section 501(c)(3) organization, check this box and <b>stop here</b> .....						<input type="checkbox"/>

**Section C. Computation of Public Support Percentage**

<b>14</b> Public support percentage for 2020 (line 6, column (f), divided by line 11, column (f)) .....	<b>14</b>	95.24 %
<b>15</b> Public support percentage from 2019 Schedule A, Part II, line 14 .....	<b>15</b>	94.93 %
<b>16a 33 1/3% support test - 2020.</b> If the organization did not check the box on line 13, and line 14 is 33 1/3% or more, check this box and <b>stop here.</b> The organization qualifies as a publicly supported organization .....		<input checked="" type="checkbox"/>
<b>b 33 1/3% support test - 2019.</b> If the organization did not check a box on line 13 or 16a, and line 15 is 33 1/3% or more, check this box and <b>stop here.</b> The organization qualifies as a publicly supported organization .....		<input type="checkbox"/>
<b>17a 10% -facts-and-circumstances test - 2020.</b> If the organization did not check a box on line 13, 16a, or 16b, and line 14 is 10% or more, and if the organization meets the facts-and-circumstances test, check this box and <b>stop here.</b> Explain in Part VI how the organization meets the facts-and-circumstances test. The organization qualifies as a publicly supported organization .....		<input type="checkbox"/>
<b>b 10% -facts-and-circumstances test - 2019.</b> If the organization did not check a box on line 13, 16a, 16b, or 17a, and line 15 is 10% or more, and if the organization meets the facts-and-circumstances test, check this box and <b>stop here.</b> Explain in Part VI how the organization meets the facts-and-circumstances test. The organization qualifies as a publicly supported organization .....		<input type="checkbox"/>
<b>18 Private foundation.</b> If the organization did not check a box on line 13, 16a, 16b, 17a, or 17b, check this box and see instructions .....		<input type="checkbox"/>

**Part III Support Schedule for Organizations Described in Section 509(a)(2)**

(Complete only if you checked the box on line 10 of Part I or if the organization failed to qualify under Part II. If the organization fails to qualify under the tests listed below, please complete Part II.)

**Section A. Public Support**

Calendar year (or fiscal year beginning in) ►	(a) 2016	(b) 2017	(c) 2018	(d) 2019	(e) 2020	(f) Total
<b>1</b> Gifts, grants, contributions, and membership fees received. (Do not include any "unusual grants.") .....						
<b>2</b> Gross receipts from admissions, merchandise sold or services performed, or facilities furnished in any activity that is related to the organization's tax-exempt purpose .....						
<b>3</b> Gross receipts from activities that are not an unrelated trade or business under section 513 .....						
<b>4</b> Tax revenues levied for the organization's benefit and either paid to or expended on its behalf .....						
<b>5</b> The value of services or facilities furnished by a governmental unit to the organization without charge .....						
<b>6 Total.</b> Add lines 1 through 5 .....						
<b>7a</b> Amounts included on lines 1, 2, and 3 received from disqualified persons .....						
<b>b</b> Amounts included on lines 2 and 3 received from other than disqualified persons that exceed the greater of \$5,000 or 1% of the amount on line 13 for the year .....						
<b>c</b> Add lines 7a and 7b .....						
<b>8 Public support.</b> (Subtract line 7c from line 6.)						

**Section B. Total Support**

Calendar year (or fiscal year beginning in) ►	(a) 2016	(b) 2017	(c) 2018	(d) 2019	(e) 2020	(f) Total
<b>9</b> Amounts from line 6 .....						
<b>10a</b> Gross income from interest, dividends, payments received on securities loans, rents, royalties, and income from similar sources .....						
<b>b</b> Unrelated business taxable income (less section 511 taxes) from businesses acquired after June 30, 1975 .....						
<b>c</b> Add lines 10a and 10b .....						
<b>11</b> Net income from unrelated business activities not included in line 10b, whether or not the business is regularly carried on .....						
<b>12</b> Other income. Do not include gain or loss from the sale of capital assets (Explain in Part VI.) .....						
<b>13 Total support.</b> (Add lines 9, 10c, 11, and 12.)						

**14 First 5 years.** If the Form 990 is for the organization's first, second, third, fourth, or fifth tax year as a section 501(c)(3) organization, check this box and **stop here** .....

**Section C. Computation of Public Support Percentage**

<b>15</b> Public support percentage for 2020 (line 8, column (f), divided by line 13, column (f)) .....	<b>15</b>	%
<b>16</b> Public support percentage from 2019 Schedule A, Part III, line 15 .....	<b>16</b>	%

**Section D. Computation of Investment Income Percentage**

<b>17</b> Investment income percentage for 2020 (line 10c, column (f), divided by line 13, column (f)) .....	<b>17</b>	%
<b>18</b> Investment income percentage from 2019 Schedule A, Part III, line 17 .....	<b>18</b>	%

**19a 33 1/3% support tests - 2020.** If the organization did not check the box on line 14, and line 15 is more than 33 1/3%, and line 17 is not more than 33 1/3%, check this box and **stop here**. The organization qualifies as a publicly supported organization .....

**b 33 1/3% support tests - 2019.** If the organization did not check a box on line 14 or line 19a, and line 16 is more than 33 1/3%, and line 18 is not more than 33 1/3%, check this box and **stop here**. The organization qualifies as a publicly supported organization .....

**20 Private foundation.** If the organization did not check a box on line 14, 19a, or 19b, check this box and see instructions .....

**Part IV Supporting Organizations**

(Complete only if you checked a box in line 12 on Part I. If you checked box 12a, Part I, complete Sections A and B. If you checked box 12b, Part I, complete Sections A and C. If you checked box 12c, Part I, complete Sections A, D, and E. If you checked box 12d, Part I, complete Sections A and D, and complete Part V.)

**Section A. All Supporting Organizations**

	Yes	No
<b>1</b> Are all of the organization's supported organizations listed by name in the organization's governing documents? <i>If "No," describe in Part VI how the supported organizations are designated. If designated by class or purpose, describe the designation. If historic and continuing relationship, explain.</i>		
<b>2</b> Did the organization have any supported organization that does not have an IRS determination of status under section 509(a)(1) or (2)? <i>If "Yes," explain in Part VI how the organization determined that the supported organization was described in section 509(a)(1) or (2).</i>		
<b>3a</b> Did the organization have a supported organization described in section 501(c)(4), (5), or (6)? <i>If "Yes," answer lines 3b and 3c below.</i>		
<b>b</b> Did the organization confirm that each supported organization qualified under section 501(c)(4), (5), or (6) and satisfied the public support tests under section 509(a)(2)? <i>If "Yes," describe in Part VI when and how the organization made the determination.</i>		
<b>c</b> Did the organization ensure that all support to such organizations was used exclusively for section 170(c)(2)(B) purposes? <i>If "Yes," explain in Part VI what controls the organization put in place to ensure such use.</i>		
<b>4a</b> Was any supported organization not organized in the United States ("foreign supported organization")? <i>If "Yes," and if you checked box 12a or 12b in Part I, answer lines 4b and 4c below.</i>		
<b>b</b> Did the organization have ultimate control and discretion in deciding whether to make grants to the foreign supported organization? <i>If "Yes," describe in Part VI how the organization had such control and discretion despite being controlled or supervised by or in connection with its supported organizations.</i>		
<b>c</b> Did the organization support any foreign supported organization that does not have an IRS determination under sections 501(c)(3) and 509(a)(1) or (2)? <i>If "Yes," explain in Part VI what controls the organization used to ensure that all support to the foreign supported organization was used exclusively for section 170(c)(2)(B) purposes.</i>		
<b>5a</b> Did the organization add, substitute, or remove any supported organizations during the tax year? <i>If "Yes," answer lines 5b and 5c below (if applicable). Also, provide detail in Part VI, including (i) the names and EIN numbers of the supported organizations added, substituted, or removed; (ii) the reasons for each such action; (iii) the authority under the organization's organizing document authorizing such action; and (iv) how the action was accomplished (such as by amendment to the organizing document).</i>		
<b>b Type I or Type II only.</b> Was any added or substituted supported organization part of a class already designated in the organization's organizing document?		
<b>c Substitutions only.</b> Was the substitution the result of an event beyond the organization's control?		
<b>6</b> Did the organization provide support (whether in the form of grants or the provision of services or facilities) to anyone other than (i) its supported organizations, (ii) individuals that are part of the charitable class benefited by one or more of its supported organizations, or (iii) other supporting organizations that also support or benefit one or more of the filing organization's supported organizations? <i>If "Yes," provide detail in Part VI.</i>		
<b>7</b> Did the organization provide a grant, loan, compensation, or other similar payment to a substantial contributor (as defined in section 4958(c)(3)(C)), a family member of a substantial contributor, or a 35% controlled entity with regard to a substantial contributor? <i>If "Yes," complete Part I of Schedule L (Form 990 or 990-EZ).</i>		
<b>8</b> Did the organization make a loan to a disqualified person (as defined in section 4958) not described in line 7? <i>If "Yes," complete Part I of Schedule L (Form 990 or 990-EZ).</i>		
<b>9a</b> Was the organization controlled directly or indirectly at any time during the tax year by one or more disqualified persons, as defined in section 4946 (other than foundation managers and organizations described in section 509(a)(1) or (2))? <i>If "Yes," provide detail in Part VI.</i>		
<b>b</b> Did one or more disqualified persons (as defined in line 9a) hold a controlling interest in any entity in which the supporting organization had an interest? <i>If "Yes," provide detail in Part VI.</i>		
<b>c</b> Did a disqualified person (as defined in line 9a) have an ownership interest in, or derive any personal benefit from, assets in which the supporting organization also had an interest? <i>If "Yes," provide detail in Part VI.</i>		
<b>10a</b> Was the organization subject to the excess business holdings rules of section 4943 because of section 4943(f) (regarding certain Type II supporting organizations, and all Type III non-functionally integrated supporting organizations)? <i>If "Yes," answer line 10b below.</i>		
<b>b</b> Did the organization have any excess business holdings in the tax year? <i>(Use Schedule C, Form 4720, to determine whether the organization had excess business holdings.)</i>		

**Part IV Supporting Organizations** (continued)

	Yes	No
<b>11</b> Has the organization accepted a gift or contribution from any of the following persons?		
<b>a</b> A person who directly or indirectly controls, either alone or together with persons described in lines 11b and 11c below, the governing body of a supported organization?		
<b>b</b> A family member of a person described in line 11a above?		
<b>c</b> A 35% controlled entity of a person described in line 11a or 11b above? <i>If "Yes" to line 11a, 11b, or 11c, provide detail in Part VI.</i>		
<b>11a</b>		
<b>11b</b>		
<b>11c</b>		

**Section B. Type I Supporting Organizations**

	Yes	No
<b>1</b> Did the governing body, members of the governing body, officers acting in their official capacity, or membership of one or more supported organizations have the power to regularly appoint or elect at least a majority of the organization's officers, directors, or trustees at all times during the tax year? <i>If "No," describe in Part VI how the supported organization(s) effectively operated, supervised, or controlled the organization's activities. If the organization had more than one supported organization, describe how the powers to appoint and/or remove officers, directors, or trustees were allocated among the supported organizations and what conditions or restrictions, if any, applied to such powers during the tax year.</i>		
<b>2</b> Did the organization operate for the benefit of any supported organization other than the supported organization(s) that operated, supervised, or controlled the supporting organization? <i>If "Yes," explain in Part VI how providing such benefit carried out the purposes of the supported organization(s) that operated, supervised, or controlled the supporting organization.</i>		
<b>1</b>		
<b>2</b>		

**Section C. Type II Supporting Organizations**

	Yes	No
<b>1</b> Were a majority of the organization's directors or trustees during the tax year also a majority of the directors or trustees of each of the organization's supported organization(s)? <i>If "No," describe in Part VI how control or management of the supporting organization was vested in the same persons that controlled or managed the supported organization(s).</i>		
<b>1</b>		

**Section D. All Type III Supporting Organizations**

	Yes	No
<b>1</b> Did the organization provide to each of its supported organizations, by the last day of the fifth month of the organization's tax year, (i) a written notice describing the type and amount of support provided during the prior tax year, (ii) a copy of the Form 990 that was most recently filed as of the date of notification, and (iii) copies of the organization's governing documents in effect on the date of notification, to the extent not previously provided?		
<b>2</b> Were any of the organization's officers, directors, or trustees either (i) appointed or elected by the supported organization(s) or (ii) serving on the governing body of a supported organization? <i>If "No," explain in Part VI how the organization maintained a close and continuous working relationship with the supported organization(s).</i>		
<b>3</b> By reason of the relationship described in line 2, above, did the organization's supported organizations have a significant voice in the organization's investment policies and in directing the use of the organization's income or assets at all times during the tax year? <i>If "Yes," describe in Part VI the role the organization's supported organizations played in this regard.</i>		
<b>1</b>		
<b>2</b>		
<b>3</b>		

**Section E. Type III Functionally Integrated Supporting Organizations**

<b>1</b> Check the box next to the method that the organization used to satisfy the Integral Part Test during the year (see instructions).		
<b>a</b> <input type="checkbox"/> The organization satisfied the Activities Test. Complete line 2 below.		
<b>b</b> <input type="checkbox"/> The organization is the parent of each of its supported organizations. Complete line 3 below.		
<b>c</b> <input type="checkbox"/> The organization supported a governmental entity. Describe in Part VI how you supported a governmental entity (see instructions).		
<b>2</b> Activities Test. Answer lines 2a and 2b below.		
<b>a</b> Did substantially all of the organization's activities during the tax year directly further the exempt purposes of the supported organization(s) to which the organization was responsive? <i>If "Yes," then in Part VI identify those supported organizations and explain how these activities directly furthered their exempt purposes, how the organization was responsive to those supported organizations, and how the organization determined that these activities constituted substantially all of its activities.</i>		
<b>b</b> Did the activities described in line 2a, above, constitute activities that, but for the organization's involvement, one or more of the organization's supported organization(s) would have been engaged in? <i>If "Yes," explain in Part VI the reasons for the organization's position that its supported organization(s) would have engaged in these activities but for the organization's involvement.</i>		
<b>3</b> Parent of Supported Organizations. Answer lines 3a and 3b below.		
<b>a</b> Did the organization have the power to regularly appoint or elect a majority of the officers, directors, or trustees of each of the supported organizations? <i>If "Yes" or "No" provide details in Part VI.</i>		
<b>b</b> Did the organization exercise a substantial degree of direction over the policies, programs, and activities of each of its supported organizations? <i>If "Yes," describe in Part VI the role played by the organization in this regard.</i>		
<b>2a</b>		
<b>2b</b>		
<b>3a</b>		
<b>3b</b>		

**Part V Type III Non-Functionally Integrated 509(a)(3) Supporting Organizations**

1  Check here if the organization satisfied the Integral Part Test as a qualifying trust on Nov. 20, 1970 ( explain in Part VI). See instructions.  
All other Type III non-functionally integrated supporting organizations must complete Sections A through E.

Section A - Adjusted Net Income		(A) Prior Year	(B) Current Year (optional)
1	Net short-term capital gain	1	
2	Recoveries of prior-year distributions	2	
3	Other gross income (see instructions)	3	
4	Add lines 1 through 3.	4	
5	Depreciation and depletion	5	
6	Portion of operating expenses paid or incurred for production or collection of gross income or for management, conservation, or maintenance of property held for production of income (see instructions)	6	
7	Other expenses (see instructions)	7	
8	<b>Adjusted Net Income</b> (subtract lines 5, 6, and 7 from line 4)	8	

Section B - Minimum Asset Amount		(A) Prior Year	(B) Current Year (optional)
1	Aggregate fair market value of all non-exempt-use assets (see instructions for short tax year or assets held for part of year):		
a	Average monthly value of securities	1a	
b	Average monthly cash balances	1b	
c	Fair market value of other non-exempt-use assets	1c	
d	<b>Total</b> (add lines 1a, 1b, and 1c)	1d	
e	<b>Discount</b> claimed for blockage or other factors (explain in detail in Part VI):		
2	Acquisition indebtedness applicable to non-exempt-use assets	2	
3	Subtract line 2 from line 1d.	3	
4	Cash deemed held for exempt use. Enter 0.015 of line 3 (for greater amount, see instructions).	4	
5	Net value of non-exempt-use assets (subtract line 4 from line 3)	5	
6	Multiply line 5 by 0.035.	6	
7	Recoveries of prior-year distributions	7	
8	<b>Minimum Asset Amount</b> (add line 7 to line 6)	8	

Section C - Distributable Amount			Current Year
1	Adjusted net income for prior year (from Section A, line 8, column A)	1	
2	Enter 0.85 of line 1.	2	
3	Minimum asset amount for prior year (from Section B, line 8, column A)	3	
4	Enter greater of line 2 or line 3.	4	
5	Income tax imposed in prior year	5	
6	<b>Distributable Amount.</b> Subtract line 5 from line 4, unless subject to emergency temporary reduction (see instructions).	6	
7	<input type="checkbox"/> Check here if the current year is the organization's first as a non-functionally integrated Type III supporting organization (see instructions).		

Schedule A (Form 990 or 990-EZ) 2020

**Part V Type III Non-Functionally Integrated 509(a)(3) Supporting Organizations** (continued)

<b>Section D - Distributions</b>		<b>Current Year</b>
<b>1</b>	Amounts paid to supported organizations to accomplish exempt purposes	<b>1</b>
<b>2</b>	Amounts paid to perform activity that directly furthers exempt purposes of supported organizations, in excess of income from activity	<b>2</b>
<b>3</b>	Administrative expenses paid to accomplish exempt purposes of supported organizations	<b>3</b>
<b>4</b>	Amounts paid to acquire exempt-use assets	<b>4</b>
<b>5</b>	Qualified set-aside amounts (prior IRS approval required - <i>provide details in Part VI</i> )	<b>5</b>
<b>6</b>	Other distributions ( <i>describe in Part VI</i> ). See instructions.	<b>6</b>
<b>7</b>	<b>Total annual distributions.</b> Add lines 1 through 6.	<b>7</b>
<b>8</b>	Distributions to attentive supported organizations to which the organization is responsive ( <i>provide details in Part VI</i> ). See instructions.	<b>8</b>
<b>9</b>	Distributable amount for 2020 from Section C, line 6	<b>9</b>
<b>10</b>	Line 8 amount divided by line 9 amount	<b>10</b>

<b>Section E - Distribution Allocations</b> (see instructions)	<b>(i) Excess Distributions</b>	<b>(ii) Underdistributions Pre-2020</b>	<b>(iii) Distributable Amount for 2020</b>
<b>1</b> Distributable amount for 2020 from Section C, line 6			
<b>2</b> Underdistributions, if any, for years prior to 2020 (reasonable cause required - <i>explain in Part VI</i> ). See instructions.			
<b>3</b> Excess distributions carryover, if any, to 2020			
<b>a</b> From 2015			
<b>b</b> From 2016			
<b>c</b> From 2017			
<b>d</b> From 2018			
<b>e</b> From 2019			
<b>f</b> <b>Total</b> of lines 3a through 3e			
<b>g</b> Applied to underdistributions of prior years			
<b>h</b> Applied to 2020 distributable amount			
<b>i</b> Carryover from 2015 not applied (see instructions)			
<b>j</b> Remainder. Subtract lines 3g, 3h, and 3i from line 3f.			
<b>4</b> Distributions for 2020 from Section D, line 7: \$			
<b>a</b> Applied to underdistributions of prior years			
<b>b</b> Applied to 2020 distributable amount			
<b>c</b> Remainder. Subtract lines 4a and 4b from line 4.			
<b>5</b> Remaining underdistributions for years prior to 2020, if any. Subtract lines 3g and 4a from line 2. For result greater than zero, <i>explain in Part VI</i> . See instructions.			
<b>6</b> Remaining underdistributions for 2020. Subtract lines 3h and 4b from line 1. For result greater than zero, <i>explain in Part VI</i> . See instructions.			
<b>7</b> <b>Excess distributions carryover to 2021.</b> Add lines 3j and 4c.			
<b>8</b> Breakdown of line 7:			
<b>a</b> Excess from 2016			
<b>b</b> Excess from 2017			
<b>c</b> Excess from 2018			
<b>d</b> Excess from 2019			
<b>e</b> Excess from 2020			

Schedule A (Form 990 or 990-EZ) 2020

**Part VI**

**Supplemental Information.** Provide the explanations required by Part II, line 10; Part II, line 17a or 17b; Part III, line 12; Part IV, Section A, lines 1, 2, 3b, 3c, 4b, 4c, 5a, 6, 9a, 9b, 9c, 11a, 11b, and 11c; Part IV, Section B, lines 1 and 2; Part IV, Section C, line 1; Part IV, Section D, lines 2 and 3; Part IV, Section E, lines 1c, 2a, 2b, 3a, and 3b; Part V, line 1; Part V, Section B, line 1e; Part V, Section D, lines 5, 6, and 8; and Part V, Section E, lines 2, 5, and 6. Also complete this part for any additional information. (See instructions.)

Horizontal lines for supplemental information.

**COPY**



Schedule B

(Form 990, 990-EZ, or 990-PF)

Department of the Treasury Internal Revenue Service

Schedule of Contributors

Attach to Form 990, Form 990-EZ, or Form 990-PF. Go to www.irs.gov/Form990 for the latest information.

OMB No. 1545-0047

2020

Name of the organization

BRIGHTFOCUS FOUNDATION

Employer identification number

23-7337229

Organization type (check one):

Filers of:

Section:

Form 990 or 990-EZ

[X] 501(c)( 3 ) (enter number) organization

[ ] 4947(a)(1) nonexempt charitable trust not treated as a private foundation

[ ] 527 political organization

Form 990-PF

[ ] 501(c)(3) exempt private foundation

[ ] 4947(a)(1) nonexempt charitable trust treated as a private foundation

[ ] 501(c)(3) taxable private foundation

Check if your organization is covered by the General Rule or a Special Rule.

Note: Only a section 501(c)(7), (8), or (10) organization can check boxes for both the General Rule and a Special Rule. See instructions.

General Rule

[ ] For an organization filing Form 990, 990-EZ, or 990-PF that received, during the year, contributions totaling \$5,000 or more (in money or property) from any one contributor. Complete Parts I and II. See instructions for determining a contributor's total contributions.

Special Rules

[X] For an organization described in section 501(c)(3) filing Form 990 or 990-EZ that met the 33 1/3% support test of the regulations under sections 509(a)(1) and 170(b)(1)(A)(vi), that checked Schedule A (Form 990 or 990-EZ), Part II, line 13, 16a, or 16b, and that received from any one contributor, during the year, total contributions of the greater of (1) \$5,000; or (2) 2% of the amount on (i) Form 990, Part VIII, line 1h; or (ii) Form 990-EZ, line 1. Complete Parts I and II.

[ ] For an organization described in section 501(c)(7), (8), or (10) filing Form 990 or 990-EZ that received from any one contributor, during the year, total contributions of more than \$1,000 exclusively for religious, charitable, scientific, literary, or educational purposes, or for the prevention of cruelty to children or animals. Complete Parts I (entering "N/A" in column (b) instead of the contributor name and address), II, and III.

[ ] For an organization described in section 501(c)(7), (8), or (10) filing Form 990 or 990-EZ that received from any one contributor, during the year, contributions exclusively for religious, charitable, etc., purposes, but no such contributions totaled more than \$1,000. If this box is checked, enter here the total contributions that were received during the year for an exclusively religious, charitable, etc., purpose. Don't complete any of the parts unless the General Rule applies to this organization because it received nonexclusively religious, charitable, etc., contributions totaling \$5,000 or more during the year ... \$

Caution: An organization that isn't covered by the General Rule and/or the Special Rules doesn't file Schedule B (Form 990, 990-EZ, or 990-PF), but it must answer "No" on Part IV, line 2, of its Form 990; or check the box on line H of its Form 990-EZ or on its Form 990-PF, Part I, line 2, to certify that it doesn't meet the filing requirements of Schedule B (Form 990, 990-EZ, or 990-PF).

Name of organization  <b>BRIGHTFOCUS FOUNDATION</b>	Employer identification number  <b>23-7337229</b>
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**Part I Contributors** (see instructions). Use duplicate copies of Part I if additional space is needed.

(a) No.	(b) Name, address, and ZIP + 4	(c) Total contributions	(d) Type of contribution
1	<hr/> <hr/> <hr/>	\$ <u>4,000,000.</u>	Person <input checked="" type="checkbox"/> Payroll <input type="checkbox"/> Noncash <input type="checkbox"/> (Complete Part II for noncash contributions.)
2	<hr/> <hr/> <hr/>	\$ <u>1,914,408.</u>	Person <input checked="" type="checkbox"/> Payroll <input type="checkbox"/> Noncash <input type="checkbox"/> (Complete Part II for noncash contributions.)
3	<hr/> <hr/> <hr/>	\$ <u>982,990.</u>	Person <input checked="" type="checkbox"/> Payroll <input type="checkbox"/> Noncash <input type="checkbox"/> (Complete Part II for noncash contributions.)
<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>	\$ _____	Person <input type="checkbox"/> Payroll <input type="checkbox"/> Noncash <input type="checkbox"/> (Complete Part II for noncash contributions.)
<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>	\$ _____	Person <input type="checkbox"/> Payroll <input type="checkbox"/> Noncash <input type="checkbox"/> (Complete Part II for noncash contributions.)
<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>	\$ _____	Person <input type="checkbox"/> Payroll <input type="checkbox"/> Noncash <input type="checkbox"/> (Complete Part II for noncash contributions.)

Name of organization  <b>BRIGHTFOCUS FOUNDATION</b>	Employer identification number  <b>23-7337229</b>
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**Part II Noncash Property** (see instructions). Use duplicate copies of Part II if additional space is needed.

(a) No. from Part I	(b) Description of noncash property given	(c) FMV (or estimate) (See instructions.)	(d) Date received
		\$ _____	_____
		\$ _____	_____
		\$ _____	_____
		\$ _____	_____
		\$ _____	_____
		\$ _____	_____
		\$ _____	_____

Name of organization <b>BRIGHTFOCUS FOUNDATION</b>	Employer identification number <b>23-7337229</b>
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**Part III** Exclusively religious, charitable, etc., contributions to organizations described in section 501(c)(7), (8), or (10) that total more than \$1,000 for the year from any one contributor. Complete columns (a) through (e) and the following line entry. For organizations completing Part III, enter the total of exclusively religious, charitable, etc., contributions of \$1,000 or less for the year. (Enter this info. once.) ▶ \$ \_\_\_\_\_  
Use duplicate copies of Part III if additional space is needed.

(a) No. from Part I	(b) Purpose of gift	(c) Use of gift	(d) Description of how gift is held
(e) Transfer of gift			
Transferee's name, address, and ZIP + 4		Relationship of transferor to transferee	
(e) Transfer of gift			
Transferee's name, address, and ZIP + 4		Relationship of transferor to transferee	
(e) Transfer of gift			
Transferee's name, address, and ZIP + 4		Relationship of transferor to transferee	
(e) Transfer of gift			
Transferee's name, address, and ZIP + 4		Relationship of transferor to transferee	
(e) Transfer of gift			
Transferee's name, address, and ZIP + 4		Relationship of transferor to transferee	

SCHEDULE C  
(Form 990 or 990-EZ)

Political Campaign and Lobbying Activities

OMB No. 1545-0047

2020

Open to Public Inspection

Department of the Treasury  
Internal Revenue Service

For Organizations Exempt From Income Tax Under section 501(c) and section 527  
▶ Complete if the organization is described below. ▶ Attach to Form 990 or Form 990-EZ.  
▶ Go to www.irs.gov/Form990 for instructions and the latest information.

If the organization answered "Yes," on Form 990, Part IV, line 3, or Form 990-EZ, Part V, line 46 (Political Campaign Activities), then

- Section 501(c)(3) organizations: Complete Parts I-A and B. Do not complete Part I-C.
- Section 501(c) (other than section 501(c)(3)) organizations: Complete Parts I-A and C below. Do not complete Part I-B.
- Section 527 organizations: Complete Part I-A only.

If the organization answered "Yes," on Form 990, Part IV, line 4, or Form 990-EZ, Part VI, line 47 (Lobbying Activities), then

- Section 501(c)(3) organizations that have filed Form 5768 (election under section 501(h)): Complete Part II-A. Do not complete Part II-B.
- Section 501(c)(3) organizations that have NOT filed Form 5768 (election under section 501(h)): Complete Part II-B. Do not complete Part II-A.

If the organization answered "Yes," on Form 990, Part IV, line 5 (Proxy Tax) (See separate instructions) or Form 990-EZ, Part V, line 35c (Proxy Tax) (See separate instructions), then

- Section 501(c)(4), (5), or (6) organizations: Complete Part III.

Name of organization **BRIGHTFOCUS FOUNDATION** Employer identification number **23-7337229**

Part I-A Complete if the organization is exempt under section 501(c) or is a section 527 organization.

1 Provide a description of the organization's direct and indirect political campaign activities in Part IV.

2 Political campaign activity expenditures ▶ \$ \_\_\_\_\_  
3 Volunteer hours for political campaign activities \_\_\_\_\_

Part I-B Complete if the organization is exempt under section 501(c)(3).

1 Enter the amount of any excise tax incurred by the organization under section 4955 ▶ \$ \_\_\_\_\_  
2 Enter the amount of any excise tax incurred by organization managers under section 4955 ▶ \$ \_\_\_\_\_  
3 If the organization incurred a section 4955 tax, did it file Form 4720 for this year?  Yes  No  
4a Was a correction made?  Yes  No  
b If "Yes," describe in Part IV.

Part I-C Complete if the organization is exempt under section 501(c), except section 501(c)(3).

1 Enter the amount directly expended by the filing organization for section 527 exempt function activities ▶ \$ \_\_\_\_\_  
2 Enter the amount of the filing organization's funds contributed to other organizations for section 527 exempt function activities ▶ \$ \_\_\_\_\_  
3 Total exempt function expenditures. Add lines 1 and 2. Enter here and on Form 1120-POL, line 17b ▶ \$ \_\_\_\_\_  
4 Did the filing organization file Form 1120-POL for this year?  Yes  No  
5 Enter the names, addresses and employer identification number (EIN) of all section 527 political organizations to which the filing organization made payments. For each organization listed, enter the amount paid from the filing organization's funds. Also enter the amount of political contributions received that were promptly and directly delivered to a separate political organization, such as a separate segregated fund or a political action committee (PAC). If additional space is needed, provide information in Part IV.

(a) Name	(b) Address	(c) EIN	(d) Amount paid from filing organization's funds. If none, enter -0-.	(e) Amount of political contributions received and promptly and directly delivered to a separate political organization. If none, enter -0-.

For Paperwork Reduction Act Notice, see the Instructions for Form 990 or 990-EZ. Schedule C (Form 990 or 990-EZ) 2020

**Part II-A Complete if the organization is exempt under section 501(c)(3) and filed Form 5768 (election under section 501(h)).**

- A** Check  if the filing organization belongs to an affiliated group (and list in Part IV each affiliated group member's name, address, EIN, expenses, and share of excess lobbying expenditures).
- B** Check  if the filing organization checked box A and "limited control" provisions apply.

<b>Limits on Lobbying Expenditures</b> (The term "expenditures" means amounts paid or incurred.)		(a) Filing organization's totals	(b) Affiliated group totals												
<b>1a</b>	Total lobbying expenditures to influence public opinion (grassroots lobbying) .....	0.													
<b>b</b>	Total lobbying expenditures to influence a legislative body (direct lobbying) .....	0.													
<b>c</b>	Total lobbying expenditures (add lines 1a and 1b) .....	0.													
<b>d</b>	Other exempt purpose expenditures .....	51,200,024.													
<b>e</b>	Total exempt purpose expenditures (add lines 1c and 1d) .....	51,200,024.													
<b>f</b>	Lobbying nontaxable amount. Enter the amount from the following table in both columns.	1,000,000.													
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">If the amount on line 1e, column (a) or (b) is:</th> <th style="width: 50%;">The lobbying nontaxable amount is:</th> </tr> </thead> <tbody> <tr> <td>Not over \$500,000</td> <td>20% of the amount on line 1e.</td> </tr> <tr> <td>Over \$500,000 but not over \$1,000,000</td> <td>\$100,000 plus 15% of the excess over \$500,000.</td> </tr> <tr> <td>Over \$1,000,000 but not over \$1,500,000</td> <td>\$175,000 plus 10% of the excess over \$1,000,000.</td> </tr> <tr> <td>Over \$1,500,000 but not over \$17,000,000</td> <td>\$225,000 plus 5% of the excess over \$1,500,000.</td> </tr> <tr> <td>Over \$17,000,000</td> <td>\$1,000,000.</td> </tr> </tbody> </table>		If the amount on line 1e, column (a) or (b) is:	The lobbying nontaxable amount is:	Not over \$500,000	20% of the amount on line 1e.	Over \$500,000 but not over \$1,000,000	\$100,000 plus 15% of the excess over \$500,000.	Over \$1,000,000 but not over \$1,500,000	\$175,000 plus 10% of the excess over \$1,000,000.	Over \$1,500,000 but not over \$17,000,000	\$225,000 plus 5% of the excess over \$1,500,000.	Over \$17,000,000	\$1,000,000.		
If the amount on line 1e, column (a) or (b) is:	The lobbying nontaxable amount is:														
Not over \$500,000	20% of the amount on line 1e.														
Over \$500,000 but not over \$1,000,000	\$100,000 plus 15% of the excess over \$500,000.														
Over \$1,000,000 but not over \$1,500,000	\$175,000 plus 10% of the excess over \$1,000,000.														
Over \$1,500,000 but not over \$17,000,000	\$225,000 plus 5% of the excess over \$1,500,000.														
Over \$17,000,000	\$1,000,000.														
<b>g</b>	Grassroots nontaxable amount (enter 25% of line 1f) .....	250,000.													
<b>h</b>	Subtract line 1g from line 1a. If zero or less, enter -0- .....	0.													
<b>i</b>	Subtract line 1f from line 1c. If zero or less, enter -0- .....	0.													
<b>j</b>	If there is an amount other than zero on either line 1h or line 1i, did the organization file Form 4720 reporting section 4911 tax for this year? .....		<input type="checkbox"/> Yes <input type="checkbox"/> No												

**4-Year Averaging Period Under Section 501(h)**  
(Some organizations that made a section 501(h) election do not have to complete all of the five columns below. See the separate instructions for lines 2a through 2f.)

<b>Lobbying Expenditures During 4-Year Averaging Period</b>					
Calendar year (or fiscal year beginning in)	(a) 2017	(b) 2018	(c) 2019	(d) 2020	(e) Total
<b>2a</b> Lobbying nontaxable amount	1,000,000.	1,000,000.	1,000,000.	1,000,000.	4,000,000.
<b>b</b> Lobbying ceiling amount (150% of line 2a, column(e))					6,000,000.
<b>c</b> Total lobbying expenditures					
<b>d</b> Grassroots nontaxable amount	250,000.	250,000.	250,000.	250,000.	1,000,000.
<b>e</b> Grassroots ceiling amount (150% of line 2d, column (e))					1,500,000.
<b>f</b> Grassroots lobbying expenditures					

Schedule C (Form 990 or 990-EZ) 2020

**Part II-B Complete if the organization is exempt under section 501(c)(3) and has NOT filed Form 5768 (election under section 501(h)).**

	(a)		(b)
	Yes	No	Amount
<i>For each "Yes" response on lines 1a through 1i below, provide in Part IV a detailed description of the lobbying activity.</i>			
<b>1</b> During the year, did the filing organization attempt to influence foreign, national, state, or local legislation, including any attempt to influence public opinion on a legislative matter or referendum, through the use of:			
<b>a</b> Volunteers? .....			
<b>b</b> Paid staff or management (include compensation in expenses reported on lines 1c through 1i)? ..			
<b>c</b> Media advertisements? .....			
<b>d</b> Mailings to members, legislators, or the public? .....			
<b>e</b> Publications, or published or broadcast statements? .....			
<b>f</b> Grants to other organizations for lobbying purposes? .....			
<b>g</b> Direct contact with legislators, their staffs, government officials, or a legislative body? .....			
<b>h</b> Rallies, demonstrations, seminars, conventions, speeches, lectures, or any similar means? .....			
<b>i</b> Other activities? .....			
<b>j</b> Total. Add lines 1c through 1i .....			
<b>2a</b> Did the activities in line 1 cause the organization to be not described in section 501(c)(3)? .....			
<b>b</b> If "Yes," enter the amount of any tax incurred under section 4912 .....			
<b>c</b> If "Yes," enter the amount of any tax incurred by organization managers under section 4912 .....			
<b>d</b> If the filing organization incurred a section 4912 tax, did it file Form 4720 for this year? .....			

**Part III-A Complete if the organization is exempt under section 501(c)(4), section 501(c)(5), or section 501(c)(6).**

	Yes	No
<b>1</b> Were substantially all (90% or more) dues received nondeductible by members? .....	<b>1</b>	
<b>2</b> Did the organization make only in-house lobbying expenditures of \$2,000 or less? .....	<b>2</b>	
<b>3</b> Did the organization agree to carry over lobbying and political campaign activity expenditures from the prior year? .....	<b>3</b>	

**Part III-B Complete if the organization is exempt under section 501(c)(4), section 501(c)(5), or section 501(c)(6) and if either (a) BOTH Part III-A, lines 1 and 2, are answered "No" OR (b) Part III-A, line 3, is answered "Yes."**

<b>1</b> Dues, assessments and similar amounts from members .....	<b>1</b>	
<b>2</b> Section 162(e) nondeductible lobbying and political expenditures (do not include amounts of political expenses for which the section 527(f) tax was paid).		
<b>a</b> Current year .....	<b>2a</b>	
<b>b</b> Carryover from last year .....	<b>2b</b>	
<b>c</b> Total .....	<b>2c</b>	
<b>3</b> Aggregate amount reported in section 6033(e)(1)(A) notices of nondeductible section 162(e) dues .....	<b>3</b>	
<b>4</b> If notices were sent and the amount on line 2c exceeds the amount on line 3, what portion of the excess does the organization agree to carryover to the reasonable estimate of nondeductible lobbying and political expenditure next year? .....	<b>4</b>	
<b>5</b> Taxable amount of lobbying and political expenditures (See instructions) .....	<b>5</b>	

**Part IV Supplemental Information**

Provide the descriptions required for Part I-A, line 1; Part I-B, line 4; Part I-C, line 5; Part II-A (affiliated group list); Part II-A, lines 1 and 2 (See instructions); and Part II-B, line 1. Also, complete this part for any additional information.

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SCHEDULE D (Form 990)

Department of the Treasury Internal Revenue Service

Supplemental Financial Statements

Complete if the organization answered "Yes" on Form 990, Part IV, line 6, 7, 8, 9, 10, 11a, 11b, 11c, 11d, 11e, 11f, 12a, or 12b. Attach to Form 990.

Go to www.irs.gov/Form990 for instructions and the latest information.

OMB No. 1545-0047

2020 Open to Public Inspection

Name of the organization: BRIGHTFOCUS FOUNDATION; Employer identification number: 23-7337229

Part I Organizations Maintaining Donor Advised Funds or Other Similar Funds or Accounts. Complete if the organization answered "Yes" on Form 990, Part IV, line 6.

Table with 3 columns: Question, (a) Donor advised funds, (b) Funds and other accounts. Rows include total number at end of year, aggregate value of contributions, grants, and end of year, and two yes/no questions about donor property and grant fund usage.

Part II Conservation Easements. Complete if the organization answered "Yes" on Form 990, Part IV, line 7.

Table with 3 columns: Question, (a) Donor advised funds, (b) Funds and other accounts. Rows include purpose(s) of conservation easements, a table for lines 2a-2d (Total number, acreage, certified historic structures, acquired after 7/25/06), and questions about monitoring, expenses, and reporting.

Part III Organizations Maintaining Collections of Art, Historical Treasures, or Other Similar Assets. Complete if the organization answered "Yes" on Form 990, Part IV, line 8.

Table with 3 columns: Question, (a) Donor advised funds, (b) Funds and other accounts. Rows include questions about reporting art, historical treasures, or other similar assets held for public exhibition, education, or research.

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**Part III Organizations Maintaining Collections of Art, Historical Treasures, or Other Similar Assets** (continued)

- 3 Using the organization's acquisition, accession, and other records, check any of the following that make significant use of its collection items (check all that apply):
- a  Public exhibition
  - b  Scholarly research
  - c  Preservation for future generations
  - d  Loan or exchange program
  - e  Other \_\_\_\_\_
- 4 Provide a description of the organization's collections and explain how they further the organization's exempt purpose in Part XIII.
- 5 During the year, did the organization solicit or receive donations of art, historical treasures, or other similar assets to be sold to raise funds rather than to be maintained as part of the organization's collection?  Yes  No

**Part IV Escrow and Custodial Arrangements.** Complete if the organization answered "Yes" on Form 990, Part IV, line 9, or reported an amount on Form 990, Part X, line 21.

- 1a Is the organization an agent, trustee, custodian or other intermediary for contributions or other assets not included on Form 990, Part X?  Yes  No
- b If "Yes," explain the arrangement in Part XIII and complete the following table:
- |                                 | Amount |
|---------------------------------|--------|
| c Beginning balance             | 1c     |
| d Additions during the year     | 1d     |
| e Distributions during the year | 1e     |
| f Ending balance                | 1f     |
- 2a Did the organization include an amount on Form 990, Part X, line 21, for escrow or custodial account liability?  Yes  No
- b If "Yes," explain the arrangement in Part XIII. Check here if the explanation has been provided on Part XIII

**Part V Endowment Funds.** Complete if the organization answered "Yes" on Form 990, Part IV, line 10.

	(a) Current year	(b) Prior year	(c) Two years back	(d) Three years back	(e) Four years back
1a Beginning of year balance	302,000.	302,000.	320,000.	90,000.	90,000.
b Contributions	14,744.	14,778.	14,385.	234,806.	4,332.
c Net investment earnings, gains, and losses			-18,000.	10,000.	
d Grants or scholarships					
e Other expenditures for facilities and programs	14,744.	14,778.	14,385.	14,806.	4,332.
f Administrative expenses					
g End of year balance	302,000.	302,000.	302,000.	320,000.	90,000.

- 2 Provide the estimated percentage of the current year end balance (line 1g, column (a)) held as:
- a Board designated or quasi-endowment  0.0000 %
  - b Permanent endowment  100 %
  - c Term endowment  0.0000 %
- The percentages on lines 2a, 2b, and 2c should equal 100%.
- 3a Are there endowment funds not in the possession of the organization that are held and administered for the organization by:
- |  | Yes | No |
|--|-----|----|
| (i) Unrelated organizations  | X   |    |
| (ii) Related organizations   |     | X  |
| b If "Yes" on line 3a(ii), are the related organizations listed as required on Schedule R? |     |    |
- 4 Describe in Part XIII the intended uses of the organization's endowment funds.

**Part VI Land, Buildings, and Equipment.**

Complete if the organization answered "Yes" on Form 990, Part IV, line 11a. See Form 990, Part X, line 10.

Description of property	(a) Cost or other basis (investment)	(b) Cost or other basis (other)	(c) Accumulated depreciation	(d) Book value
1a Land	2,800,000.	1,147,363.		3,947,363.
b Buildings	1,629,400.	5,240,525.	3,634,307.	3,235,618.
c Leasehold improvements				
d Equipment		1,668,672.	1,053,285.	615,387.
e Other		229,198.	196,587.	32,611.
<b>Total.</b> Add lines 1a through 1e. (Column (d) must equal Form 990, Part X, column (B), line 10c.)				7,830,979.

**Part VII Investments - Other Securities.**

Complete if the organization answered "Yes" on Form 990, Part IV, line 11b. See Form 990, Part X, line 12.

(a) Description of security or category (including name of security)	(b) Book value	(c) Method of valuation: Cost or end-of-year market value
(1) Financial derivatives .....		
(2) Closely held equity interests .....		
(3) Other .....		
(A)		
(B)		
(C)		
(D)		
(E)		
(F)		
(G)		
(H)		
<b>Total.</b> (Col. (b) must equal Form 990, Part X, col. (B) line 12.) ▶		

**Part VIII Investments - Program Related.**

Complete if the organization answered "Yes" on Form 990, Part IV, line 11c. See Form 990, Part X, line 13.

(a) Description of investment	(b) Book value	(c) Method of valuation: Cost or end-of-year market value
(1)		
(2)		
(3)		
(4)		
(5)		
(6)		
(7)		
(8)		
(9)		
<b>Total.</b> (Col. (b) must equal Form 990, Part X, col. (B) line 13.) ▶		

**Part IX Other Assets.**

Complete if the organization answered "Yes" on Form 990, Part IV, line 11d. See Form 990, Part X, line 15.

(a) Description	(b) Book value
(1)	
(2)	
(3)	
(4)	
(5)	
(6)	
(7)	
(8)	
(9)	
<b>Total.</b> (Column (b) must equal Form 990, Part X, col. (B) line 15.) ▶	

**Part X Other Liabilities.**

Complete if the organization answered "Yes" on Form 990, Part IV, line 11e or 11f. See Form 990, Part X, line 25.

1. (a) Description of liability	(b) Book value
(1) Federal income taxes	
(2) CHARITABLE GIFT ANNUITIES	874,569.
(3) RENTAL DEPOSITS	25,000.
(4) CAPITAL LEASE OBLIGATIONS	52,305.
(5)	
(6)	
(7)	
(8)	
(9)	
<b>Total.</b> (Column (b) must equal Form 990, Part X, col. (B) line 25.) ▶	951,874.

2. Liability for uncertain tax positions. In Part XIII, provide the text of the footnote to the organization's financial statements that reports the organization's liability for uncertain tax positions under FASB ASC 740. Check here if the text of the footnote has been provided in Part XIII ...

**Part XI Reconciliation of Revenue per Audited Financial Statements With Revenue per Return.**

Complete if the organization answered "Yes" on Form 990, Part IV, line 12a.

<b>1</b>	Total revenue, gains, and other support per audited financial statements		<b>1</b>	69,909,311.
<b>2</b>	Amounts included on line 1 but not on Form 990, Part VIII, line 12:			
<b>a</b>	Net unrealized gains (losses) on investments	<b>2a</b>	8,115,799.	
<b>b</b>	Donated services and use of facilities	<b>2b</b>	10,280,294.	
<b>c</b>	Recoveries of prior year grants	<b>2c</b>	518,962.	
<b>d</b>	Other (Describe in Part XIII.)	<b>2d</b>		
<b>e</b>	Add lines <b>2a</b> through <b>2d</b>		<b>2e</b>	18,915,055.
<b>3</b>	Subtract line <b>2e</b> from line <b>1</b>		<b>3</b>	50,994,256.
<b>4</b>	Amounts included on Form 990, Part VIII, line 12, but not on line 1:			
<b>a</b>	Investment expenses not included on Form 990, Part VIII, line 7b	<b>4a</b>	293,916.	
<b>b</b>	Other (Describe in Part XIII.)	<b>4b</b>	-41,780.	
<b>c</b>	Add lines <b>4a</b> and <b>4b</b>		<b>4c</b>	252,136.
<b>5</b>	Total revenue. Add lines <b>3</b> and <b>4c</b> . (This must equal Form 990, Part I, line 12.)		<b>5</b>	51,246,392.

**Part XII Reconciliation of Expenses per Audited Financial Statements With Expenses per Return.**

Complete if the organization answered "Yes" on Form 990, Part IV, line 12a.

<b>1</b>	Total expenses and losses per audited financial statements		<b>1</b>	62,267,758.
<b>2</b>	Amounts included on line 1 but not on Form 990, Part IX, line 25:			
<b>a</b>	Donated services and use of facilities	<b>2a</b>	10,280,294.	
<b>b</b>	Prior year adjustments	<b>2b</b>		
<b>c</b>	Other losses	<b>2c</b>		
<b>d</b>	Other (Describe in Part XIII.)	<b>2d</b>		
<b>e</b>	Add lines <b>2a</b> through <b>2d</b>		<b>2e</b>	10,280,294.
<b>3</b>	Subtract line <b>2e</b> from line <b>1</b>		<b>3</b>	51,987,464.
<b>4</b>	Amounts included on Form 990, Part IX, line 25, but not on line 1:			
<b>a</b>	Investment expenses not included on Form 990, Part VIII, line 7b	<b>4a</b>	293,916.	
<b>b</b>	Other (Describe in Part XIII.)	<b>4b</b>	-49,005.	
<b>c</b>	Add lines <b>4a</b> and <b>4b</b>		<b>4c</b>	244,911.
<b>5</b>	Total expenses. Add lines <b>3</b> and <b>4c</b> . (This must equal Form 990, Part I, line 18.)		<b>5</b>	52,232,375.

**Part XIII Supplemental Information.**

Provide the descriptions required for Part II, lines 3, 5, and 9; Part III, lines 1a and 4; Part IV, lines 1b and 2b; Part V, line 4; Part X, line 2; Part XI, lines 2d and 4b; and Part XII, lines 2d and 4b. Also complete this part to provide any additional information.

**PART V, LINE 4:**

THE EARNINGS ON THIS ENDOWMENT ARE AVAILABLE FOR THE ALZHEIMER'S DISEASE RESEARCH PROGRAM, ARE RECORDED AS TEMPORARILY RESTRICTED INVESTMENT INCOME, AND ARE RELEASED AS SPENT.

**PART X, LINE 2:**

BRIGHTFOCUS PERFORMED AN EVALUATION OF UNCERTAINTY IN INCOME TAXES FOR THE YEAR ENDED MARCH 31, 2021, AND DETERMINED THAT THERE WERE NO MATTERS THAT WOULD REQUIRE RECOGNITION IN THE CONSOLIDATED FINANCIAL STATEMENTS OR THAT MAY HAVE ANY EFFECT ON ITS TAX-EXEMPT STATUS.

**PART XI, LINE 4B - OTHER ADJUSTMENTS:**

**Part XIII** Supplemental Information (continued)

DEPRECIATION ON RENTAL PROPERTY -41,780.

PART XII, LINE 4B - OTHER ADJUSTMENTS:

DEPRECIATION ON RENTAL PROPERTY -41,780.

CHANGE IN PRESENT VALUE OF GRANTS -7,225.

TOTAL TO SCHEDULE D, PART XII, LINE 4B -49,005.

**SCHEDULE F  
(Form 990)**

Department of the Treasury  
Internal Revenue Service

**Statement of Activities Outside the United States**

▶ Complete if the organization answered "Yes" on Form 990, Part IV, line 14b, 15, or 16.

▶ Attach to Form 990.

▶ Go to [www.irs.gov/Form990](http://www.irs.gov/Form990) for instructions and the latest information.

OMB No. 1545-0047

**2020**

Open to Public  
Inspection

Name of the organization **BRIGHTFOCUS FOUNDATION** Employer identification number **23-7337229**

**Part I General Information on Activities Outside the United States.** Complete if the organization answered "Yes" on Form 990, Part IV, line 14b.

**1 For grantmakers.** Does the organization maintain records to substantiate the amount of its grants and other assistance, the grantees' eligibility for the grants or assistance, and the selection criteria used to award the grants or assistance? .....  **Yes**  **No**

**2 For grantmakers.** Describe in Part V the organization's procedures for monitoring the use of its grants and other assistance outside the United States.

**3 Activities per Region.** (The following Part I, line 3 table can be duplicated if additional space is needed.)

(a) Region	(b) Number of offices in the region	(c) Number of employees, agents, and independent contractors in the region	(d) Activities conducted in the region (by type) (such as, fundraising, program services, investments, grants to recipients located in the region)	(e) If activity listed in (d) is a program service, describe specific type of service(s) in the region	(f) Total expenditures for and investments in the region
EUROPE	0	0	GRANTMAKING		3,663,284.
EAST ASIA AND THE PACIFIC	0	0	GRANTMAKING		1,394,634.
NORTH AMERICA - CANADA AND MEXICO, BUT NOT THE UNITED STATES	0	0	GRANTMAKING		946,406.
MIDDLE EAST AND NORTH AFRICA	0	0	GRANTMAKING		200,000.
<b>3 a</b> Subtotal .....	0	0			6,204,324.
<b>b</b> Total from continuation sheets to Part I .....	0	0			0.
<b>c Totals</b> (add lines 3a and 3b) .....	0	0			6,204,324.

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Schedule F (Form 990) 2020

**Part II** Grants and Other Assistance to Organizations or Entities Outside the United States. Complete if the organization answered "Yes" on Form 990, Part IV, line 15, for any recipient who received more than \$5,000. Part II can be duplicated if additional space is needed.

1 (a) Name of organization	(b) IRS code section and EIN (if applicable)	(c) Region	(d) Purpose of grant	(e) Amount of cash grant	(f) Manner of cash disbursement	(g) Amount of noncash assistance	(h) Description of noncash assistance	(i) Method of valuation (book, FMV, appraisal, other)
		EUROPE	ALZHEIMER'S DISEASE RESEARCH BY WHITNEY FREEZE, PHD, ENTITLED: (A2021007F)	200,000.	WIRE TRANSFER	0.		
		EUROPE	ALZHEIMER'S DISEASE RESEARCH BY EMIL GUSTAVSSON, PHD, ENTITLED: (A2021009F)	199,575.	WIRE TRANSFER	0.		
		EUROPE	ALZHEIMER'S DISEASE RESEARCH BY ALEXA PICHET BINETTE, PHD, ENTITLED: (A2021013F)	200,000.	WIRE TRANSFER	0.		
		EUROPE	ALZHEIMER'S DISEASE RESEARCH BY MAXIME VAN EGROO, PHD, ENTITLED: (A2021016F)	200,000.	WIRE TRANSFER	0.		
		EAST ASIA & PACIFIC	ALZHEIMER'S DISEASE RESEARCH BY XIAOPEN CHEN, PHD, ENTITLED: (A2021023S)	300,000.	WIRE TRANSFER	0.		
		EUROPE	ALZHEIMER'S DISEASE RESEARCH BY NICOLAI FRANZMEIER, PHD, ENTITLED: (A2021026S)	297,300.	WIRE TRANSFER	0.		
		EUROPE	ALZHEIMER'S DISEASE RESEARCH BY HENNE HOLSTEGE, PHD, ENTITLED: (A2021031S)	299,707.	WIRE TRANSFER	0.		
		EUROPE	ALZHEIMER'S DISEASE RESEARCH BY SOYON HONG, PHD, ENTITLED: (A2021032S)	300,000.	WIRE TRANSFER	0.		

2 Enter total number of recipient organizations listed above that are recognized as charities by the foreign country, recognized as a tax exempt 501(c)(3) organization by the IRS, or for which the grantee or counsel has provided a section 501(c)(3) equivalency letter 28

3 Enter total number of other organizations or entities 0

**Part II** Continuation of Grants and Other Assistance to Organizations or Entities Outside the United States. (Schedule F (Form 990), Part II, line 1)

1 (a) Name of organization	(b) IRS code section and EIN (if applicable)	(c) Region	(d) Purpose of grant	(e) Amount of cash grant	(f) Manner of cash disbursement	(g) Amount of non-cash assistance	(h) Description of non-cash assistance	(i) Method of valuation (book, FMV, appraisal, other)
		EUROPE	ALZHEIMER'S DISEASE RESEARCH BY RENZO MANCUSO, PHD, ENTITLED: (A2021034S)	199,568.	WIRE TRANSFER	0.		
		EUROPE	ALZHEIMER'S DISEASE RESEARCH BY JONAS NEHER, PHD, ENTITLED: (A2021035S)	289,650.	WIRE TRANSFER	0.		
		EUROPE	ALZHEIMER'S DISEASE RESEARCH BY JEROME ROBERT, PHD, ENTITLED: (A2021037S)	300,000.	WIRE TRANSFER	0.		
		EAST ASIA & PACIFIC	ALZHEIMER'S DISEASE RESEARCH BY TIMOTHY SARGEANT, PHD, ENTITLED: (A2021040S)	297,266.	WIRE TRANSFER	0.		
		EUROPE	ALZHEIMER'S DISEASE RESEARCH BY SUSANNE WEGMANN, PHD, ENTITLED: (A2021044S)	299,800.	WIRE TRANSFER	0.		
		NORTH AMERICA	ALZHEIMER'S DISEASE RESEARCH BY CHERYL WELLINGTON, PHD, ENTITLED: (A2021045S)	300,000.	WIRE TRANSFER	0.		
		NORTH AMERICA	ALZHEIMER'S DISEASE RESEARCH BY SANJEEV KUMAR, MD, ENTITLED: (A2018667S)	56,836.	WIRE TRANSFER	0.		
		EUROPE	ALZHEIMER'S DISEASE RESEARCH BY DR. MARIANNE LEGER ENTITLED: (CA2021013)	72,046.	WIRE TRANSFER	0.		
		EUROPE	NATIONAL GLAUCOMA RESEARCH BY ESTER REINA-TORRES, PHD, ENTITLED: (G2021004F)	149,999.	WIRE TRANSFER	0.		

SEE SCHEDULE O FOR CONTINUATION OF GRANT PURPOSE, ITEM (D)

Part II		Continuation of Grants and Other Assistance to Organizations or Entities Outside the United States. (Schedule F (Form 990), Part II, line 1)							
1	(a) Name of organization	(b) IRS code section and EIN (if applicable)	(c) Region	(d) Purpose of grant	(e) Amount of cash grant	(f) Manner of cash disbursement	(g) Amount of non-cash assistance	(h) Description of non-cash assistance	(i) Method of valuation (book, FMV, appraisal, other)
			EAST ASIA & PACIFIC	NATIONAL GLAUCOMA RESEARCH BY PUYA GHARAKHANI, PHD, ENTITLED: (G2021009S)	199,802.	WIRE TRANSFER	0.		
			EAST ASIA & PACIFIC	NATIONAL GLAUCOMA RESEARCH BY MICHAEL GIRARD, PHD, ENTITLED: (G2021010S)	200,000.	WIRE TRANSFER	0.		
			EUROPE	NATIONAL GLAUCOMA RESEARCH BY PIRRO HYSI, MD, PHD, ENTITLED: (G2021011S)	198,873.	WIRE TRANSFER	0.		
			NORTH AMERICA	NATIONAL GLAUCOMA RESEARCH BY MICHAEL REBER, PHD, ENTITLED: (G2021014S)	200,000.	WIRE TRANSFER	0.		
			EAST ASIA & PACIFIC	NATIONAL GLAUCOMA RESEARCH BY ZHICHAO WU, PHD, ENTITLED: (G2021016S)	199,504.	WIRE TRANSFER	0.		
			EUROPE	NATIONAL GLAUCOMA RESEARCH BY DARRYL OVERBY, PHD, ENTITLED: (CG2020003)	391,901.	WIRE TRANSFER	0.		
			EUROPE	NATIONAL GLAUCOMA RESEARCH BY DARRYL OVERBY, PHD, ENTITLED: (CG2020003A)	62,148.	WIRE TRANSFER	0.		
			NORTH AMERICA	MACULAR DEGENERATION RESEARCH BY BRITTANY CARR, PHD, ENTITLED: (M2021001F)	189,570.	WIRE TRANSFER	0.		
			NORTH AMERICA	MACULAR DEGENERATION RESEARCH BY RONY CHIDIAC, PHD, ENTITLED: (M2021003F)	200,000.	WIRE TRANSFER	0.		

SEE SCHEDULE O FOR CONTINUATION OF GRANT PURPOSE, ITEM (D)



Part II Continuation of Grants and Other Assistance to Organizations or Entities Outside the United States. (Schedule F (Form 990), Part II, line 1)									
1	(a) Name of organization	(b) IRS code section and EIN (if applicable)	(c) Region	(d) Purpose of grant	(e) Amount of cash grant	(f) Manner of cash disbursement	(g) Amount of non-cash assistance	(h) Description of non-cash assistance	(i) Method of valuation (book, FMV, appraisal, other)
			MIDDLE EAST	MACULAR DEGENERATION RESEARCH BY MICHELLE GRUNIN, PHD, ENTITLED: (M2021006F)	200,000.	WIRE TRANSFER	0.		
			EAST ASIA & PACIFIC	MACULAR DEGENERATION RESEARCH BY YVETTE WOOFF, PHD, ENTITLED: (M2021012F)	198,062.	WIRE TRANSFER	0.		

SEE SCHEDULE O FOR CONTINUATION OF GRANT PURPOSE, ITEM (D)

**Part III Grants and Other Assistance to Individuals Outside the United States.** Complete if the organization answered "Yes" on Form 990, Part IV, line 16.

Part III can be duplicated if additional space is needed.

<b>(a)</b> Type of grant or assistance	<b>(b)</b> Region	<b>(c)</b> Number of recipients	<b>(d)</b> Amount of cash grant	<b>(e)</b> Manner of cash disbursement	<b>(f)</b> Amount of noncash assistance	<b>(g)</b> Description of noncash assistance	<b>(h)</b> Method of valuation (book, FMV, appraisal, other)

Part IV Foreign Forms

- 1 Was the organization a U.S. transferor of property to a foreign corporation during the tax year? *If "Yes," the organization may be required to file Form 926, Return by a U.S. Transferor of Property to a Foreign Corporation (see Instructions for Form 926)* ..... Yes  No
- 2 Did the organization have an interest in a foreign trust during the tax year? *If "Yes," the organization may be required to separately file Form 3520, Annual Return To Report Transactions With Foreign Trusts and Receipt of Certain Foreign Gifts, and/or Form 3520-A, Annual Information Return of Foreign Trust With a U.S. Owner (see Instructions for Forms 3520 and 3520-A; don't file with Form 990)* ..... Yes  No
- 3 Did the organization have an ownership interest in a foreign corporation during the tax year? *If "Yes," the organization may be required to file Form 5471, Information Return of U.S. Persons With Respect to Certain Foreign Corporations (see Instructions for Form 5471)* ..... Yes  No
- 4 Was the organization a direct or indirect shareholder of a passive foreign investment company or a qualified electing fund during the tax year? *If "Yes," the organization may be required to file Form 8621, Information Return by a Shareholder of a Passive Foreign Investment Company or Qualified Electing Fund (see Instructions for Form 8621)* ..... Yes  No
- 5 Did the organization have an ownership interest in a foreign partnership during the tax year? *If "Yes," the organization may be required to file Form 8865, Return of U.S. Persons With Respect to Certain Foreign Partnerships (see Instructions for Form 8865)* ..... Yes  No
- 6 Did the organization have any operations in or related to any boycotting countries during the tax year? *If "Yes," the organization may be required to separately file Form 5713, International Boycott Report (see Instructions for Form 5713; don't file with Form 990)* ..... Yes  No

Schedule F (Form 990) 2020

**Part V Supplemental Information**

Provide the information required by Part I, line 2 (monitoring of funds); Part I, line 3, column (f) (accounting method; amounts of investments vs. expenditures per region); Part II, line 1 (accounting method); Part III (accounting method); and Part III, column (c) (estimated number of recipients), as applicable. Also complete this part to provide any additional information. See instructions.

**PART I, LINE 2:**

BRIGHTFOCUS INTERACTS WITH ALL GRANTEES AT LEAST QUARTERLY BY E-MAIL OR AT SCIENTIFIC MEETINGS. IN ADDITION TO THESE INTERACTIONS, EACH GRANT RECIPIENT IS REQUIRED TO SUBMIT SEPARATE DETAILED ANNUAL SCIENTIFIC PROGRESS AND FINANCIAL REPORTS TO BRIGHTFOCUS. THESE ARE RECEIVED BY THE BRIGHTFOCUS SCIENTIFIC AFFAIRS DEPARTMENT, AND REVIEWED BY SCIENTIFIC STAFF WITH BROAD EXPERTISE, INCLUDING IMAGING, MOLECULAR BIOLOGY AND SIGNALING PATHWAYS, CELL BIOLOGY, ANGIOGENESIS, BIOCHEMISTRY, NEUROSCIENCE, AND GENETICS. SENIOR STAFF REVIEWS EACH PROGRESS REPORT AND EVALUATES THE PROJECT FOR SUFFICIENT PROGRESS TOWARDS THE SPECIFIC AIMS PROPOSED IN THE ORIGINAL APPLICATION OR ANY BUDGETARY CONCERNS. THIS EFFORT IS SUPPORTED BY ADDITIONAL SCIENTIFIC COUNSEL FROM MEMBERS OF THE BRIGHTFOCUS SCIENTIFIC REVIEW COMMITTEES, WHEN REQUIRED. IN ADDITION TO STATEMENTS OF EXPERIMENTAL PROGRESS, ALL GRANTEES ARE ASKED TO REPORT ANY TECHNICAL PUBLICATIONS, MEDIA REPORTS, OR PATENT APPLICATIONS IN WHICH BRIGHTFOCUS-SPONSORED RESEARCH IS DESCRIBED. IF SIGNIFICANT CONCERNS RELATED TO PROGRESS ON THE AWARDS ARE DISCOVERED, AND NOT RESOLVED AFTER INTERACTION WITH THE AWARD GRANTEE, THE BRIGHTFOCUS STAFF RECOMMENDS APPROPRIATE ACTIONS TO THE CHAIR OF THE SCIENTIFIC AFFAIRS COMMITTEE OF THE BOARD OF DIRECTORS. IN ACCORDANCE WITH THE GRANT AGREEMENT TERMS AND CONDITIONS, BRIGHTFOCUS MAY WITHHOLD FUNDING, OR DISCONTINUE AN AWARD, FOR ANY GRANTEE THAT FAILS TO ACHIEVE SUFFICIENT PROGRESS OR SUBMIT REQUIRED REPORTS.

AT THE CONCLUSION OF THE GRANT AWARD PERIOD, EACH GRANTEE MUST COMPLETE AND SUBMIT A FINAL REPORT THAT IS ALSO REVIEWED BY THE BRIGHTFOCUS SENIOR SCIENTIFIC STAFF. EVALUATION OF THE WORK OF EACH GRANTEE IS QUALITATIVELY

**Part V Supplemental Information**

Provide the information required by Part I, line 2 (monitoring of funds); Part I, line 3, column (f) (accounting method; amounts of investments vs. expenditures per region); Part II, line 1 (accounting method); Part III (accounting method); and Part III, column (c) (estimated number of recipients), as applicable. Also complete this part to provide any additional information. See instructions.

AND QUANTITATIVELY ASSESSED THROUGH VARIOUS METRICS RELATED TO THE IMPACT OF THE GRANT ON ITS TARGETED DISEASE FIELD. SUCH IMPACT METRICS HAVE REVEALED THAT 95% OF BRIGHTFOCUS-SUPPORTED RESEARCH RESULTS IN RESEARCH PUBLICATIONS THAT ADVANCE THE FIELDS SERVED BY BRIGHTFOCUS. THIS IMPACT IS FURTHER SUPPORTED BY ANNUAL CATEGORY NORMALIZED CITATION IMPACT ANALYSIS THAT COMPARES BRIGHTFOCUS-SUPPORTED WORKS TO AN UNBIASED COMPARISON OF IMPACT PERFORMANCE VERSUS THE WORLD AVERAGE. BRIGHTFOCUS-SUPPORTED PUBLICATIONS WERE RECENTLY CITED AT 2 TIMES THE FREQUENCY OF THE WORLD AVERAGE. A FINAL EXAMPLE OF IMPACT ASSESSMENT REVEALED THAT THE SUCCESSES OF BRIGHTFOCUS GRANTEES CONTINUE LONG AFTER THE GRANT EXPIRES. ON AVERAGE, EACH GRANTEE RECEIVES ADDITIONAL GRANTS FOR FOLLOW-ON PROJECTS SPAWNED BY THE BRIGHTFOCUS GRANT, WITH VALUES UP TO 10 TIMES THE LEVEL OF THE INITIAL BRIGHTFOCUS INVESTMENT.

BRIGHTFOCUS SOLICITS FEEDBACK FROM ITS GRANTEES, AND PROVIDES AN ANONYMOUS FORUM FOR COLLECTING SUCH INFORMATION. THROUGH THE BRIGHTFOCUS FOUNDATION WEBSITE AND WITHIN THE SCIENTIFIC PROGRESS REPORTS, THERE ARE DESIGNATED SECTIONS WHERE AWARDEES ARE ASKED TO PROVIDE FEEDBACK TO THE FOUNDATION. THROUGH THIS MECHANISM, THEY ARE GIVEN THE ABILITY TO ANONYMOUSLY PROVIDE FEEDBACK OR COMMUNICATE THEIR CONCERNS TO PROGRAM STAFF OR THE BRIGHTFOCUS' COMPLIANCE OFFICE. ANY SUGGESTIONS, CONCERNS, COMPLAINTS, OR POSITIVE EXPERIENCES CAN BE OUTLINED AND BROUGHT TO THE ATTENTION OF BRIGHTFOCUS IN THIS MANNER, SO THAT BRIGHTFOCUS CAN ADDRESS ANY AREAS NEEDING IMPROVEMENT, REAFFIRM PRAISE-WORTHY POLICIES, OR OTHERWISE ASSESS NEEDS FOR PROGRAMMATIC CHANGE. THE SENIOR LEADERSHIP PRESENTS AND SUMMARIZES THE STATUS AND PROGRESS ON GRANTS TO THE BRIGHTFOCUS BOARD OF DIRECTORS AT EACH OF THEIR QUARTERLY BOARD MEETINGS.

**Part V Supplemental Information**

Provide the information required by Part I, line 2 (monitoring of funds); Part I, line 3, column (f) (accounting method; amounts of investments vs. expenditures per region); Part II, line 1 (accounting method); Part III (accounting method); and Part III, column (c) (estimated number of recipients), as applicable. Also complete this part to provide any additional information. See instructions.

PART I, LINE 3:

BRIGHTFOCUS REPORTED THE EXPENDITURES BASED ON THE ACCOUNTING METHOD USED IN ITS AUDITED FINANCIAL STATEMENTS WHICH IS ON AN ACCRUAL BASIS.

PART II, LINE 1

BRIGHTFOCUS REPORTED THE EXPENDITURES BASED ON THE ACCOUNTING METHOD USED IN ITS AUDITED FINANCIAL STATEMENTS WHICH IS ON AN ACCRUAL BASIS.

**SCHEDULE G**  
**(Form 990 or 990-EZ)**

**Supplemental Information Regarding Fundraising or Gaming Activities**

OMB No. 1545-0047

Complete if the organization answered "Yes" on Form 990, Part IV, line 17, 18, or 19, or if the organization entered more than \$15,000 on Form 990-EZ, line 6a.

**2020**

Department of the Treasury  
Internal Revenue Service

▶ Attach to Form 990 or Form 990-EZ.

Open to Public Inspection

▶ Go to [www.irs.gov/Form990](http://www.irs.gov/Form990) for instructions and the latest information.

Name of the organization  
**BRIGHTFOCUS FOUNDATION**

Employer identification number  
**23-7337229**

**Part I Fundraising Activities.** Complete if the organization answered "Yes" on Form 990, Part IV, line 17. Form 990-EZ filers are not required to complete this part.

1 Indicate whether the organization raised funds through any of the following activities. Check all that apply.

- a  Mail solicitations
- b  Internet and email solicitations
- c  Phone solicitations
- d  In-person solicitations
- e  Solicitation of non-government grants
- f  Solicitation of government grants
- g  Special fundraising events

2 a Did the organization have a written or oral agreement with any individual (including officers, directors, trustees, or key employees listed in Form 990, Part VII) or entity in connection with professional fundraising services?  Yes  No

b If "Yes," list the 10 highest paid individuals or entities (fundraisers) pursuant to agreements under which the fundraiser is to be compensated at least \$5,000 by the organization.

(i) Name and address of individual or entity (fundraiser)	(ii) Activity	(iii) Did fundraiser have custody or control of contributions?		(iv) Gross receipts from activity	(v) Amount paid to (or retained by) fundraiser listed in col. (i)	(vi) Amount paid to (or retained by) organization
		Yes	No			
RKD GROUP - 35 PARKWOOD DRIVE, STE. 160, HOPKINTON, BEACONFIRE REDENGINE - 2300 CLARENDON BLVD., STE. 925,	FUNDRAISING AND COMMUNICATIONS CONSULTANT		X	28,394,494.	466,105.	27,928,389.
	FUNDRAISING AND COMMUNICATIONS CONSULTANT		X	1,768,472.	272,330.	1,496,142.
<b>Total</b>				30,162,966.	738,435.	29,424,531.

3 List all states in which the organization is registered or licensed to solicit contributions or has been notified it is exempt from registration or licensing.

AK, AL, AR, AZ, CA, CO, CT, DC, FL, GA, HI, IL, KS, KY, LA, MA, MD, ME, MI, MN, MO, MS, NC, ND, NH  
NJ, NM, NV, NY, OH, OK, OR, PA, RI, SC, TN, UT, VA, WA, WI, WV

**Part II Fundraising Events.** Complete if the organization answered "Yes" on Form 990, Part IV, line 18, or reported more than \$15,000 of fundraising event contributions and gross income on Form 990-EZ, lines 1 and 6b. List events with gross receipts greater than \$5,000.

		(a) Event #1	(b) Event #2	(c) Other events	(d) Total events
		(event type)	(event type)	(total number)	(add col. (a) through col. (c))
Revenue	<b>1</b> Gross receipts .....				
	<b>2</b> Less: Contributions .....				
	<b>3</b> Gross income (line 1 minus line 2) .....				
Direct Expenses	<b>4</b> Cash prizes .....				
	<b>5</b> Noncash prizes .....				
	<b>6</b> Rent/facility costs .....				
	<b>7</b> Food and beverages .....				
	<b>8</b> Entertainment .....				
	<b>9</b> Other direct expenses .....				
	<b>10</b> Direct expense summary. Add lines 4 through 9 in column (d) .....				
<b>11</b> Net income summary. Subtract line 10 from line 3, column (d) .....					

**Part III Gaming.** Complete if the organization answered "Yes" on Form 990, Part IV, line 19, or reported more than \$15,000 on Form 990-EZ, line 6a.

		(a) Bingo	(b) Pull tabs/instant bingo/progressive bingo	(c) Other gaming	(d) Total gaming (add col. (a) through col. (c))
		<b>1</b> Gross revenue .....			
Direct Expenses	<b>2</b> Cash prizes .....				
	<b>3</b> Noncash prizes .....				
	<b>4</b> Rent/facility costs .....				
	<b>5</b> Other direct expenses .....				
<b>6</b> Volunteer labor .....	Yes _____ % No	Yes _____ % No	Yes _____ % No		
<b>7</b> Direct expense summary. Add lines 2 through 5 in column (d) .....					
<b>8</b> Net gaming income summary. Subtract line 7 from line 1, column (d) .....					

**9** Enter the state(s) in which the organization conducts gaming activities: \_\_\_\_\_  
**a** Is the organization licensed to conduct gaming activities in each of these states? Yes No  
**b** If "No," explain: \_\_\_\_\_

**10a** Were any of the organization's gaming licenses revoked, suspended, or terminated during the tax year? Yes No  
**b** If "Yes," explain: \_\_\_\_\_



- 11 Does the organization conduct gaming activities with nonmembers? Yes No
- 12 Is the organization a grantor, beneficiary or trustee of a trust, or a member of a partnership or other entity formed to administer charitable gaming? Yes No

- 13 Indicate the percentage of gaming activity conducted in:
 

a The organization's facility	13a	%
b An outside facility	13b	%

14 Enter the name and address of the person who prepares the organization's gaming/special events books and records:

Name ▶ \_\_\_\_\_

Address ▶ \_\_\_\_\_

- 15a Does the organization have a contract with a third party from whom the organization receives gaming revenue? Yes No
- b If "Yes," enter the amount of gaming revenue received by the organization ▶ \$ \_\_\_\_\_ and the amount of gaming revenue retained by the third party ▶ \$ \_\_\_\_\_
- c If "Yes," enter name and address of the third party:

Name ▶ \_\_\_\_\_

Address ▶ \_\_\_\_\_

16 Gaming manager information:

Name ▶ \_\_\_\_\_

Gaming manager compensation ▶ \$ \_\_\_\_\_

Description of services provided ▶ \_\_\_\_\_

\_\_\_\_\_

Director/officer                      Employee                      Independent contractor

- 17 Mandatory distributions:
  - a Is the organization required under state law to make charitable distributions from the gaming proceeds to retain the state gaming license? Yes No
  - b Enter the amount of distributions required under state law to be distributed to other exempt organizations or spent in the organization's own exempt activities during the tax year ▶ \$ \_\_\_\_\_

**Part IV Supplemental Information.** Provide the explanations required by Part I, line 2b, columns (iii) and (v); and Part III, lines 9, 9b, 10b, 15b, 15c, 16, and 17b, as applicable. Also provide any additional information. See instructions.

**SCHEDULE G, PART I, LINE 2B, LIST OF TEN HIGHEST PAID FUNDRAISERS:**

(I) NAME OF FUNDRAISER: RKD GROUP

(I) ADDRESS OF FUNDRAISER:

35 PARKWOOD DRIVE, STE. 160, HOPKINTON, MA 01748

(I) NAME OF FUNDRAISER: BEACONFIRE REDENGINE

(I) ADDRESS OF FUNDRAISER:

2300 CLARENDON BLVD., STE. 925, ARLINGTON, VA 22201

**Part IV** Supplemental Information (continued)

PART I, LINE 2B, COLUMN (V):

IN THE CONTRACT WITH RKD GROUP, THE MANAGEMENT FEES ARE FIXED AMOUNTS PER MONTH FOR IN-SCOPE SERVICES THAT TOTALS \$1,084,800 PER YEAR OF WHICH \$618,695 HAS BEEN ALLOCATED UNDER PART XI, LINE 11(G) TO PROGRAM AND MANAGEMENT AND ARE NOT CONSIDERED TO BE THE PROFESSIONAL FUNDRAISING CONSULTANT FEE.

**SCHEDULE I  
(Form 990)**

Department of the Treasury  
Internal Revenue Service

**Grants and Other Assistance to Organizations,  
Governments, and Individuals in the United States**  
Complete if the organization answered "Yes" on Form 990, Part IV, line 21 or 22.

▶ Attach to Form 990.  
▶ Go to [www.irs.gov/Form990](http://www.irs.gov/Form990) for the latest information.

OMB No. 1545-0047

**2020**

Open to Public  
Inspection

Name of the organization

**BRIGHTFOCUS FOUNDATION**

**Part I General Information on Grants and Assistance**

- 1** Does the organization maintain records to substantiate the amount of the grants or assistance, the grantees' eligibility for the grants or assistance, and the selection criteria used to award the grants or assistance?  Yes  No
- 2** Describe in Part IV the organization's procedures for monitoring the use of grant funds in the United States.

**Part II Grants and Other Assistance to Domestic Organizations and Domestic Governments.** Complete if the organization answered "Yes" on Form 990, Part IV, line 21, for any recipient that received more than \$5,000. Part II can be duplicated if additional space is needed.

1 (a) Name and address of organization or government	(b) EIN	(c) IRC section (if applicable)	(d) Amount of cash grant	(e) Amount of non-cash assistance	(f) Method of valuation (book, FMV, appraisal, other)	(g) Description of non-cash assistance	(h) Purpose of grant or assistance
MASSACHUSETTS GENERAL HOSPITAL 55 FRUIT STREET BOSTON, MA 02114	04-2697983	501(C)(3)	200,000.	0.			ALZHEIMER'S DISEASE RESEARCH BY MOUSTAFA ALGAMAL, PHD, ENTITLED: (A2021001F)
BROWN UNIVERSITY 350 EDDY STREET, BOX 1929 PROVIDENCE, RI 02912	05-0258809	501(C)(3)	200,000.	0.			ALZHEIMER'S DISEASE RESEARCH BY BENEDETTA ASSETTA, PHD, ENTITLED: (A2021002F)
YALE UNIVERSITY 300 GEORGE STREET, SUITE 8201 NEW HAVEN, CT 06511	06-0646973	501(C)(3)	200,000.	0.			ALZHEIMER'S DISEASE RESEARCH BY YIFEI CAI, PHD, ENTITLED: (A2021003F)
UNIVERSITY OF CALIFORNIA, BERKELEY 1608 FOURTH STREET, SUITE 220 BERKELEY, CA 94710	94-6002123	501(C)(3)	200,000.	0.			ALZHEIMER'S DISEASE RESEARCH BY XI CHEN, PHD, ENTITLED: (A2021004F)
UNIVERSITY OF PENNSYLVANIA 3451 WALNUT STREET, 5TH FLOOR PHILADELPHIA, PA 19104	23-1352685	501(C)(3)	200,000.	0.			ALZHEIMER'S DISEASE RESEARCH BY APRIL DARLING, PHD, ENTITLED: (A2021005F)
MAYO CLINIC ARIZONA 13400 EAST SHEA BOULEVARD SCOTTSDALE, AZ 85259	86-08000150	501(C)(3)	169,856.	0.			ALZHEIMER'S DISEASE RESEARCH BY CAMILA DE AVILA DAL BO, PHD, ENTITLED: (A2021006F)

**2** Enter total number of section 501(c)(3) and government organizations listed in the line 1 table **82.**

**3** Enter total number of other organizations listed in the line 1 table **0.**

LHA For Paperwork Reduction Act Notice, see the Instructions for Form 990.

Schedule I (Form 990) 2020

SEE SCHEDULE O FOR CONTINUATION OF GRANT PURPOSE, ITEM (H)

<b>Part II</b> Continuation of Grants and Other Assistance to Domestic Organizations and Domestic Governments (Schedule I (Form 990), Part II.)							
(a) Name and address of organization or government	(b) EIN	(c) IRC section if applicable	(d) Amount of cash grant	(e) Amount of non-cash assistance	(f) Method of valuation (book, FMV, appraisal, other)	(g) Description of non-cash assistance	(h) Purpose of grant or assistance
BAYLOR COLLEGE OF MEDICINE ONE BAYLOR PLAZA MS: BCM 310 HOUSTON, TX 77030	74-1613878	501(C)(3)	200,000.	0.			ALZHEIMER'S DISEASE RESEARCH BY LINDSEY GOODMAN, PHD, ENTITLED: (A2021008F)
THE JACKSON LABORATORY 600 MAIN STREET BAR HARBOR, ME 04609	01-0211513	501(C)(3)	200,000.	0.			ALZHEIMER'S DISEASE RESEARCH BY NIRAN HADAD, PHD, ENTITLED: (A2021010F)
STANFORD UNIVERSITY 455 BROADWAY, DISCOVERY HALL REDWOOD CITY, CA 94063	94-1156365	501(C)(3)	200,000.	0.			ALZHEIMER'S DISEASE RESEARCH BY HARINI IYER, PHD, ENTITLED: (A2021011F)
WASHINGTON UNIVERSITY SCHOOL OF MEDICINE - ONE BROOKING DRIVE, BOX 1054 - ST. LOUIS, MO 63110	43-0653611	501(C)(3)	200,000.	0.			ALZHEIMER'S DISEASE RESEARCH BY KARIN MEEKER, PHD, ENTITLED: (A2021012F)
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI - ONE GUSTAVE L. LEVY PLACE, BOX 1075 - NEW YORK, NY 10029	13-6171197	501(C)(3)	200,000.	0.			ALZHEIMER'S DISEASE RESEARCH BY ANNA PODLESNY-DRABINIOK, PHD, ENTITLED: (A2021014F)
MAYO CLINIC JACKSONVILLE 4500 SAN PABLO ROAD JACKSONVILLE, FL 32224	59-3337028	501(C)(3)	200,000.	0.			ALZHEIMER'S DISEASE RESEARCH BY ANA-CAROLINE RAULIN, PHD, ENTITLED: (A2021015F)
UNIVERSITY OF FLORIDA 207 GRINTER HALL GAINESVILLE, FL 32611	59-6002052	501(C)(3)	200,000.	0.			ALZHEIMER'S DISEASE RESEARCH BY REBECCA WALLINGS, D.PHIL, ENTITLED: (A2021017F)
UNIVERSITY OF CALIFORNIA, SAN FRANCISCO - 490 ILLINOIS STREET, 4TH FLOOR - SAN FRANCISCO, CA 94143	94-6036493	501(C)(3)	199,998.	0.			ALZHEIMER'S DISEASE RESEARCH BY XIAOWEI WANG, PHD, ENTITLED: (A2021018F)
J. DAVID GLADSTONE INSTITUTES 1650 OWENS STREET SAN FRANCISCO, CA 94158	23-7203666	501(C)(3)	200,000.	0.			ALZHEIMER'S DISEASE RESEARCH BY ZHAOQI YAN, PHD, ENTITLED: (A2021019F)

Schedule I (Form 990)

SEE SCHEDULE O FOR CONTINUATION OF GRANT PURPOSE, ITEM (H)

**Part II** Continuation of Grants and Other Assistance to Domestic Organizations and Domestic Governments (Schedule I (Form 990), Part II).

(a) Name and address of organization or government	(b) EIN	(c) IRC section if applicable	(d) Amount of cash grant	(e) Amount of non-cash assistance	(f) Method of valuation (book, FMV, appraisal, other)	(g) Description of non-cash assistance	(h) Purpose of grant or assistance
UNIVERSITY OF CALIFORNIA, SAN FRANCISCO - 490 ILLINOIS STREET, 4TH FLOOR - SAN FRANCISCO, CA 94143	94-6036493	501(C)(3)	200,000.	0.			ALZHEIMER'S DISEASE RESEARCH BY BEIKA ZHU, PHD, ENTITLED: (A2021020F)
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI - ONE GUSTAVE L. LEVY PLACE, BOX 1075 - NEW YORK, NY 10029	13-6171197	501(C)(3)	300,000.	0.			ALZHEIMER'S DISEASE RESEARCH BY KATHRYN BOWLES, PHD, ENTITLED: (A2021021S)
BRIGHAM AND WOMEN'S HOSPITAL, INC. 75 FRANCIS STREET BOSTON, MA 02115	04-2312909	501(C)(3)	300,000.	0.			ALZHEIMER'S DISEASE RESEARCH BY OLEG BUTOVSKY, PHD, ENTITLED: (A2021022S)
BRIGHAM AND WOMEN'S HOSPITAL, INC. 75 FRANCIS STREET BOSTON, MA 02115	04-2312909	501(C)(3)	300,000.	0.			ALZHEIMER'S DISEASE RESEARCH BY LAURA COX, PHD, ENTITLED: (A2021024S)
MAYO CLINIC JACKSONVILLE 4500 SAN PABLO ROAD JACKSONVILLE, FL 32224	59-3337028	501(C)(3)	300,000.	0.			ALZHEIMER'S DISEASE RESEARCH BY SANDRO DA MESQUITA, PHD, ENTITLED: (A2021025S)
OHIO STATE UNIVERSITY 1960 KENNY ROAD COLUMBUS, OH 43210	31-6025986	501(C)(3)	300,000.	0.			ALZHEIMER'S DISEASE RESEARCH BY HONGJUN FU, PHD, ENTITLED: (A2021027S)
OHIO STATE UNIVERSITY 1960 KENNY ROAD COLUMBUS, OH 43210	31-6025986	501(C)(3)	300,000.	0.			ALZHEIMER'S DISEASE RESEARCH BY JIE GAO, PHD, ENTITLED: (A2021028S)
UNIVERSITY OF CALIFORNIA, SAN FRANCISCO - 490 ILLINOIS STREET, 4TH FLOOR - SAN FRANCISCO, CA 94143	94-6036493	501(C)(3)	300,000.	0.			ALZHEIMER'S DISEASE RESEARCH BY JASON GESTWICKI, PHD, ENTITLED: (A2021029S)
COLUMBIA UNIVERSITY 630 WEST 168TH STREET NEW YORK, NY 10032	13-5598093	501(C)(3)	300,000.	0.			ALZHEIMER'S DISEASE RESEARCH BY ULRICH HENGST, PHD, ENTITLED: (A2021030S)

Schedule I (Form 990)

SEE SCHEDULE O FOR CONTINUATION OF GRANT PURPOSE, ITEM (H)

**Part II** Continuation of Grants and Other Assistance to Domestic Organizations and Domestic Governments (Schedule I (Form 990), Part II).

(a) Name and address of organization or government	(b) EIN	(c) IRC section if applicable	(d) Amount of cash grant	(e) Amount of non-cash assistance	(f) Method of valuation (book, FMV, appraisal, other)	(g) Description of non-cash assistance	(h) Purpose of grant or assistance
WASHINGTON UNIVERSITY ONE BROOKINGS DRIVE ST. LOUIS, MO 63130	43-0653611	501(C)(3)	299,181.	0.			ALZHEIMER'S DISEASE RESEARCH BY LAURA IBANEZ, PHD, ENTITLED: (A2021033S)
NORTHEAST OHIO MEDICAL UNIVERSITY 4209 STATE ROUTE 44, PO BOX 95 ROOTSTOWN, OH 44272	34-1131512	501(C)(3)	300,000.	0.			ALZHEIMER'S DISEASE RESEARCH BY ERIN REED-GEAGHAN, PHD, ENTITLED: (A2021036S)
MAYO CLINIC JACKSONVILLE 4500 SAN PABLO ROAD JACKSONVILLE, FL 32224	59-3337028	501(C)(3)	300,000.	0.			ALZHEIMER'S DISEASE RESEARCH BY WILFRIED ROSSOLL, PHD, ENTITLED: (A2021038S)
BAYLOR COLLEGE OF MEDICINE ONE BAYLOR PLAZA MS: BCM 310 HOUSTON, TX 77030	74-1613878	501(C)(3)	300,000.	0.			ALZHEIMER'S DISEASE RESEARCH BY MELANIE SAMUEL, PHD, ENTITLED: (A2021039S)
MEDICAL UNIVERSITY OF SOUTH CAROLINA - 179 ASHLEY AVE - CHARLESTON, SC 29425	57-6000722	501(C)(3)	300,000.	0.			ALZHEIMER'S DISEASE RESEARCH BY TAKASHI SATO, PHD, ENTITLED: (A2021041S)
WASHINGTON UNIVERSITY ONE BROOKINGS DRIVE ST. LOUIS, MO 63130	43-0653611	501(C)(3)	298,845.	0.			ALZHEIMER'S DISEASE RESEARCH BY ARISTEIDIS SOTIRAS, PHD, ENTITLED: (A2021042S)
CASE WESTERN RESERVE UNIVERSITY - SCHOOL OF MEDICINE - 10900 EUCLID AVENUE - CLEVELAND, OH 44106	34-1018992	501(C)(3)	300,000.	0.			ALZHEIMER'S DISEASE RESEARCH BY MASASHI TABUCHI, PHD, ENTITLED: (A2021043S)
MAYO CLINIC, JACKSONVILLE 4500 SAN PABLO ROAD JACKSONVILLE, FL 32224	59-3337028	501(C)(3)	300,000.	0.			ALZHEIMER'S DISEASE RESEARCH BY NA ZHAO, PHD, ENTITLED: (A2021046S)
MAYO CLINIC, JACKSONVILLE 4500 SAN PABLO ROAD JACKSONVILLE, FL 32224	59-3337028	501(C)(3)	155,716.	0.			ALZHEIMER'S DISEASE RESEARCH ENTITLED: (CA2017563)

Schedule I (Form 990)

SEE SCHEDULE O FOR CONTINUATION OF GRANT PURPOSE, ITEM (H)

<b>Part II</b> Continuation of Grants and Other Assistance to Domestic Organizations and Domestic Governments (Schedule I (Form 990), Part II).							
(a) Name and address of organization or government	(b) EIN	(c) IRC section if applicable	(d) Amount of cash grant	(e) Amount of non-cash assistance	(f) Method of valuation (book, FMV, appraisal, other)	(g) Description of non-cash assistance	(h) Purpose of grant or assistance
MAYO CLINIC, JACKSONVILLE 4500 SAN PABLO ROAD JACKSONVILLE, FL 32224	59-3337028	501(C)(3)	235,163.	0.			ALZHEIMER'S DISEASE RESEARCH ENTITLED: (CA2021010)
INTERNATIONAL SOCIETY FOR MOLECULAR NEUROGENERATION - 1001 MAYPORT RD - ATLANTIC BEACH, FL 32233	86-2907045	501(C)(3)	115,000.	0.			ALZHEIMER'S DISEASE RESEARCH ENTITLED: (CA2021011)
TUFTS UNIVERSITY - BOSTON 136 HARRISON AVE. BOSTON, MA 02111	04-2103634	501(C)(3)	85,544.	0.			ALZHEIMER'S DISEASE RESEARCH BY WONHEE KIM, PHD, ENTITLED: (A2019021F)
MASSACHUSETTS GENERAL HOSPITAL 55 FRUIT STREET CHARLESTOWN, MA 02114	04-1564655	501(C)(3)	60,934.	0.			ALZHEIMER'S DISEASE RESEARCH BY MASATO MAESAKO, PHD, ENTITLED: (A2019056F)
EMORY UNIVERSITY 1510 CLIFTON ROAD, NE ATLANTA, GA 30322	58-0566256	501(C)(3)	71,428.	0.			ALZHEIMER'S DISEASE RESEARCH BY THOMAS KUKAR, PHD, ENTITLED: (A2019355S)
MASSACHUSETTS GENERAL HOSPITAL 55 FRUIT STREET BOSTON, MA 02114	04-1564655	501(C)(3)	156,624.	0.			ALZHEIMER'S DISEASE RESEARCH BY JILL GOLDSTEIN, PHD, ENTITLED: (CA2018607)
JOHNS HOPKINS UNIVERSITY 400 N. BROADWAY BALTIMORE, MD 21211	52-0595110	501(C)(3)	264,816.	0.			ALZHEIMER'S DISEASE RESEARCH BY QUINCY SAMUS, PHD, ENTITLED: (CA2021001)
MEDICAL TECHNOLOGY ENTERPRISE CONSORTIUM - 315 SIGMA DRIVE - SUMMERVILLE, SC 29486	47-4960128	501(C)(3)	250,000.	0.			ALZHEIMER'S DISEASE RESEARCH ENTITLED: (CA2021014)
MEDICAL TECHNOLOGY ENTERPRISE CONSORTIUM - 315 SIGMA DRIVE - SUMMERVILLE, SC 29486	47-4960128	501(C)(3)	250,000.	0.			ALZHEIMER'S DISEASE RESEARCH ENTITLED: (CA2021015)

Schedule I (Form 990)

SEE SCHEDULE O FOR CONTINUATION OF GRANT PURPOSE, ITEM (H)

<b>Part II</b> Continuation of Grants and Other Assistance to Domestic Organizations and Domestic Governments (Schedule I (Form 990), Part II).							
(a) Name and address of organization or government	(b) EIN	(c) IRC section if applicable	(d) Amount of cash grant	(e) Amount of non-cash assistance	(f) Method of valuation (book, FMV, appraisal, other)	(g) Description of non-cash assistance	(h) Purpose of grant or assistance
FOUNDATION FOR THE NATIONAL INSTITUTES OF HEALTH - 11400 ROCKVILLE PIKE, SUITE 600 - NORTH BETHESDA, MD 20852	52-1986675	501(C)(3)	100,000.	0.			ALZHEIMER'S DISEASE RESEARCH ENTITLED: (CA2021012)
BOSTON UNIVERSITY SCHOOL OF MEDICINE - 72 EAST CONCORD STREET - BOSTON, MA 02215	04-2103547	501(C)(3)	379,188.	0.			ALZHEIMER'S DISEASE RESEARCH BY BENJAMIN WOLOZIN, MD, PHD ENTITLED: (CA2020002)
UNIVERSITY OF DENVER 2155 E. WESLEY AVENUE DENVER, CO 80208	84-0404231	501(C)(3)	81,210.	0.			ALZHEIMER'S DISEASE RESEARCH BY ANN CHARLOTTE GRANHOLM-BENTLEY, PHD, ENTITLED: (CA2018010)
ACCESS CIRCLES, INC. 19 EAST ELM STREET GREENWICH, CT 06830	82-2117628	501(C)(3)	100,000.	0.			PROJECT SUPPORT FOR WOMEN'S HEALTH ACCESS MATTERS REPORT
THE MILKEN INSTITUTE 1250 4TH STREET SANTA MONICA, CA 90401	95-4240775	501(C)(3)	100,000.	0.			PROJECT SUPPORT FOR STUDY ON NEUROTECHNOLOGY RESEARCH
NEW YORK UNIVERSITY SCHOOL OF MEDICINE - ONE PARK AVENUE, 6TH FLOOR - NEW YORK, NY 10016	13-5562308	501(C)(3)	150,000.	0.			NATIONAL GLAUCOMA RESEARCH BY JI WON BANG, PHD, ENTITLED: (G2021001F)
BOSTON CHILDREN'S HOSPITAL 300 LONGWOOD AVENUE BOSTON, MA 02115	04-2774441	501(C)(3)	149,989.	0.			NATIONAL GLAUCOMA RESEARCH BY NICHOLAS HANOVICE, PHD, ENTITLED: (G2021002F)
UNIVERSITY OF PITTSBURGH 3420 FORBES AVENUE PITTSBURGH, PA 15260	25-0965591	501(C)(3)	149,586.	0.			NATIONAL GLAUCOMA RESEARCH BY YI HUA, PHD, ENTITLED: (G2021003F)
GEORGIA TECH RESEARCH CORPORATION 926 DALNEY STREET NW ATLANTA, GA 30332	58-0603146	501(C)(3)	150,000.	0.			NATIONAL GLAUCOMA RESEARCH BY BABAK SAFA, PHD, ENTITLED: (G2021005F)

Schedule I (Form 990)

SEE SCHEDULE O FOR CONTINUATION OF GRANT PURPOSE, ITEM (H)



**Part II** Continuation of Grants and Other Assistance to Domestic Organizations and Domestic Governments (Schedule I (Form 990), Part II).

(a) Name and address of organization or government	(b) EIN	(c) IRC section if applicable	(d) Amount of cash grant	(e) Amount of non-cash assistance	(f) Method of valuation (book, FMV, appraisal, other)	(g) Description of non-cash assistance	(h) Purpose of grant or assistance
BOSTON CHILDREN'S HOSPITAL 300 LONGWOOD AVENUE BOSTON, MA 02115	04-2774441	501(C)(3)	149,889.	0.			NATIONAL GLAUCOMA RESEARCH BY KIMBERLY WONG, PHD, ENTITLED: (G2021006F)
COLUMBIA UNIVERSITY 630 WEST 168TH STREET NEW YORK, NY 10032	13-5598093	501(C)(3)	200,000.	0.			NATIONAL GLAUCOMA RESEARCH BY REVATHI BALASUBRAMANIAN, PHD, ENTITLED: (G2021007S)
DUKE UNIVERSITY SCHOOL OF MEDICINE SUITE 820, ERWIN SQUARE, DURHAM, NC 27705	56-0532129	501(C)(3)	200,000.	0.			NATIONAL GLAUCOMA RESEARCH BY ROMAIN CARTONI, PHD, ENTITLED: (G2021008S)
JOHNS HOPKINS UNIVERSITY 1101 E 33RD STREET BALTIMORE, MD 21218	52-0595110	501(C)(3)	200,000.	0.			NATIONAL GLAUCOMA RESEARCH BY THAO NGUYEN, PHD, ENTITLED: (G2021012S)
JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE - 733 NORTH BROADWAY, SUITE 117 - BALTIMORE, MD 21205	52-0595110	501(C)(3)	200,000.	0.			NATIONAL GLAUCOMA RESEARCH BY IAN PITHA, PHD, ENTITLED: (G2021013S)
THE MEDICAL COLLEGE OF WISCONSIN 8701 WATERTOWN PLANK RD. MILWAUKEE, WI 53226	39-0806261	501(C)(3)	200,000.	0.			NATIONAL GLAUCOMA RESEARCH BY MATTHEW VELDMAN, PHD, ENTITLED: (G2021015S)
UNIVERSITY OF CALIFORNIA, DAVIS 1850 RESEARCH PARK DRIVE, SUITE 300 DAVIS, CA 95618	94-6036494	501(C)(3)	200,000.	0.			NATIONAL GLAUCOMA RESEARCH BY ROBERT ZAWADZKI, PHD, ENTITLED: (G2021017S)
UNIVERSITY OF WISCONSIN-MADISON 21 N. PARK ST, SUITE 6401 MADISON, WI 53715	39-6006492	501(C)(3)	50,000.	0.			NATIONAL GLAUCOMA RESEARCH BY ROBERT W. NICKELLS, PHD, ENTITLED: (G2018166)
UNIVERSITY OF ILLINOIS AT CHICAGO 845 WEST TAYLOR STREET CHICAGO, IL 60607	37-6000511	501(C)(3)	50,000.	0.			NATIONAL GLAUCOMA RESEARCH BY JOHN HETTLING, PHD, ENTITLED: (G2019356)

Schedule I (Form 990)

SEE SCHEDULE O FOR CONTINUATION OF GRANT PURPOSE, ITEM (H)

**Part II** Continuation of Grants and Other Assistance to Domestic Organizations and Domestic Governments (Schedule I (Form 990), Part II).

(a) Name and address of organization or government	(b) EIN	(c) IRC section if applicable	(d) Amount of cash grant	(e) Amount of non-cash assistance	(f) Method of valuation (book, FMV, appraisal, other)	(g) Description of non-cash assistance	(h) Purpose of grant or assistance
GEORGIA INSTITUTE OF TECHNOLOGY FERST DRIVE, ROOM 230 ATLANTA, GA 30332	58-6002023	501(C)(3)	342,244.	0.			NATIONAL GLAUCOMA RESEARCH BY C. ROSS ETHIER, PHD, ENTITLED: (CG2020001)
DUKE UNIVERSITY 2200 WEST MAIN STREET, SUITE 820 DURHAM, NC 27705	56-0532129	501(C)(3)	231,985.	0.			NATIONAL GLAUCOMA RESEARCH BY W. DANIEL STAMER, PHD, ENTITLED: (CG2020002)
COLUMBIA UNIVERSITY 535 W 116TH STREET NEW YORK, NY 10027	13-5598093	501(C)(3)	666,667.	0.			NATIONAL GLAUCOMA RESEARCH BY SIMON JOHN, PHD, ENTITLED: (CG2020004)
COLUMBIA UNIVERSITY 630 WEST 168TH STREET NEW YORK, NY 10032	13-5598093	501(C)(3)	200,000.	0.			MACULAR DEGENERATION RESEARCH BY YA-JU CHANG, PHD, ENTITLED: (M2021002F)
UNIVERSITY OF CALIFORNIA, LOS ANGELES - 10889 WILSHIRE BOULEVARD, SUITE 700 - LOS ANGELES, CA 90095	95-6006143	501(C)(3)	200,000.	0.			MACULAR DEGENERATION RESEARCH BY ANTONIO ESCUDERO PANIAGUA, PHD, ENTITLED: (M2021004F)
UNIVERSITY OF PITTSBURGH 3420 FORBES AVENUE PITTSBURGH, PA 15260	25-0965591	501(C)(3)	200,000.	0.			MACULAR DEGENERATION RESEARCH BY SAYAN GHOSH, PHD, ENTITLED: (M2021005F)
UNIVERSITY OF PENNSYLVANIA 3451 WALNUT STREET PHILADELPHIA, PA 19104	23-1352685	501(C)(3)	200,000.	0.			MACULAR DEGENERATION RESEARCH BY ROHINI M NAIR, PHD, ENTITLED: (M2021007F)
STANFORD UNIVERSITY 485 BROADWAY REDWOOD CITY, CA 94063	94-1156365	501(C)(3)	200,000.	0.			MACULAR DEGENERATION RESEARCH BY KE NING, MD, ENTITLED: (M2021008F)
NATIONAL EYE INSTITUTE, NIH 31 CENTER DRIVE, MSC2510 BETHESDA, MD 20892	52-0858115	501(C)(3)	200,000.	0.			MACULAR DEGENERATION RESEARCH BY DAVIDE ORTOLAN, PHD, ENTITLED: (M2021009F)

Schedule I (Form 990)

SEE SCHEDULE O FOR CONTINUATION OF GRANT PURPOSE, ITEM (H)

**Part II** Continuation of Grants and Other Assistance to Domestic Organizations and Domestic Governments (Schedule I (Form 990), Part II).

(a) Name and address of organization or government	(b) EIN	(c) IRC section if applicable	(d) Amount of cash grant	(e) Amount of non-cash assistance	(f) Method of valuation (book, FMV, appraisal, other)	(g) Description of non-cash assistance	(h) Purpose of grant or assistance
THE SCHEPENS EYE RESEARCH INSTITUTE - 20 STANIFORD STREET - BOSTON, MA 02114	04-2129889	501(C)(3)	200,000.	0.			MACULAR DEGENERATION RESEARCH BY DAISY SHU, PHD, ENTITLED: (M2021010F)
STANFORD UNIVERSITY 455 BROADWAY, DISCOVERY HALL REDWOOD CITY, CA 94063	94-1156365	501(C)(3)	200,000.	0.			MACULAR DEGENERATION RESEARCH BY YOUNG JOO SUN, PHD, ENTITLED: (M2021011F)
UNIVERSITY OF CALIFORNIA, IRVINE 160 ALDRICH HALL IRVINE, CA 92697	95-2226406	501(C)(3)	450,000.	0.			MACULAR DEGENERATION RESEARCH BY ANDREW BROWNE, MD, PHD, ENTITLED: (M2021013N)
MASSACHUSETTS EYE AND EAR INFIRMARY - 243 CHARLES STREET - BOSTON, MA 02114	04-2103591	501(C)(3)	449,951.	0.			MACULAR DEGENERATION RESEARCH BY ROSARIO FERNANDEZ GODINO, PHD, ENTITLED: (M2021014N)
UNIVERSITY OF CALIFORNIA, SAN FRANCISCO - 490 ILLINOIS STREET, 4TH FLOOR - SAN FRANCISCO, CA 94143	94-6036493	501(C)(3)	450,000.	0.			MACULAR DEGENERATION RESEARCH BY TYSON KIM, PHD, ENTITLED: (M2021015N)
NORTHWESTERN UNIVERSITY 750 NORTH LAKE SHORE DRIVE CHICAGO, IL 60611	36-2167817	501(C)(3)	450,000.	0.			MACULAR DEGENERATION RESEARCH BY JEREMY LAVINE, MD, PHD, ENTITLED: (M2021016N)
BAYLOR COLLEGE OF MEDICINE ONE BAYLOR PLAZA MS: BCM 310 HOUSTON, TX 77030	74-1613878	501(C)(3)	448,734.	0.			MACULAR DEGENERATION RESEARCH BY RINKI RATNAPRIYA, PHD, ENTITLED: (M2021017N)
NORTHWESTERN UNIVERSITY 750 NORTH LAKE SHORE DRIVE CHICAGO, IL 60611	36-2167817	501(C)(3)	450,000.	0.			MACULAR DEGENERATION RESEARCH BY BENJAMIN THOMSON, PHD, ENTITLED: (M2021018N)
INDIANA UNIVERSITY 509 E 3RD STREET BLOOMINGTON, IN 47401	35-6001673	501(C)(3)	450,000.	0.			MACULAR DEGENERATION RESEARCH BY MALLIKA VALAPALA, PHD, ENTITLED: (M2021019N)

Schedule I (Form 990)

SEE SCHEDULE O FOR CONTINUATION OF GRANT PURPOSE, ITEM (H)

<b>Part II</b> Continuation of Grants and Other Assistance to Domestic Organizations and Domestic Governments (Schedule I (Form 990), Part II.)							
(a) Name and address of organization or government	(b) EIN	(c) IRC section if applicable	(d) Amount of cash grant	(e) Amount of non-cash assistance	(f) Method of valuation (book, FMV, appraisal, other)	(g) Description of non-cash assistance	(h) Purpose of grant or assistance
UNIVERSITY OF CALIFORNIA, SAN FRANCISCO - 490 ILLINOIS STREET, 4TH FLOOR - SAN FRANCISCO, CA 94143	94-6036493	501(C)(3)	599,399.	0.			MACULAR DEGENERATION RESEARCH BY APARNA. LAKKARAJU, PHD, ENTITLED: (M2021020I)
UNIVERSITY OF CALIFORNIA, IRVINE 120 THEORY STREET #200 IRVINE, CA 92617	95-2226406	501(C)(3)	20,000.	0.			MACULAR DEGENERATION RESEARCH BY DOROTA SKOWRONSKA-KRAWCZYK, PHD, ENTITLED: (M2020271)
ASSOCIATION FOR OCULAR PHARMACOLOGY AND THERAPEUTICS - 38 CLOVER RIDGE ROAD - MEREDITH, NH 03253	38-3169020	501(C)(3)	10,000.	0.			TRAVEL GRANTS FOR CONFERENCE ATTENDANCE.
ARVO FOUNDATION FOR EYE RESEARCH 1801 ROCKVILLE PIKE, SUITE 400 ROCKVILLE, MD 20852	52-2322462	501(C)(3)	10,000.	0.			2021 TRAVEL GRANTS FOR CONFERENCE ATTENDEES

**Part III**

**Grants and Other Assistance to Domestic Individuals.** Complete if the organization answered "Yes" on Form 990, Part IV, line 22. Part III can be duplicated if additional space is needed.

(a) Type of grant or assistance	(b) Number of recipients	(c) Amount of cash grant	(d) Amount of non-cash assistance	(e) Method of valuation (book, FMV, appraisal, other)	(f) Description of noncash assistance

**Part IV**

**Supplemental Information.** Provide the information required in Part I, line 2; Part III, column (b); and any other additional information.

**PART I, LINE 2:**

BRIGHTFOCUS INTERACTS WITH ALL GRANTEES AT LEAST QUARTERLY BY E-MAIL OR AT SCIENTIFIC MEETINGS. IN ADDITION TO THESE INTERACTIONS, EACH GRANT RECIPIENT IS REQUIRED TO SUBMIT SEPARATE DETAILED ANNUAL SCIENTIFIC PROGRESS AND FINANCIAL REPORTS TO BRIGHTFOCUS. THESE ARE RECEIVED BY THE BRIGHTFOCUS SCIENTIFIC AFFAIRS DEPARTMENT, AND REVIEWED BY SCIENTIFIC STAFF WITH BROAD EXPERTISE, INCLUDING IMAGING, MOLECULAR BIOLOGY AND SIGNALING PATHWAYS, CELL BIOLOGY, ANGIOGENESIS, BIOCHEMISTRY, NEUROSCIENCE, AND GENETICS. SENIOR STAFF REVIEWS EACH PROGRESS REPORT AND EVALUATES THE

**Part IV** Supplemental Information

PROJECT FOR SUFFICIENT PROGRESS TOWARDS THE SPECIFIC AIMS PROPOSED IN THE ORIGINAL APPLICATION OR ANY BUDGETARY CONCERNS. THIS EFFORT IS SUPPORTED BY ADDITIONAL SCIENTIFIC COUNSEL FROM MEMBERS OF THE BRIGHTFOCUS SCIENTIFIC REVIEW COMMITTEES, WHEN REQUIRED. IN ADDITION TO STATEMENTS OF EXPERIMENTAL PROGRESS, ALL GRANTEEES ARE ASKED TO REPORT ANY TECHNICAL PUBLICATIONS, MEDIA REPORTS, OR PATENT APPLICATIONS IN WHICH BRIGHTFOCUS-SPONSORED RESEARCH IS DESCRIBED. IF SIGNIFICANT CONCERNS RELATED TO PROGRESS ON THE AWARDS ARE DISCOVERED, AND NOT RESOLVED AFTER INTERACTION WITH THE AWARD GRANTEE, THE BRIGHTFOCUS STAFF RECOMMENDS APPROPRIATE ACTIONS TO THE CHAIR OF THE SCIENTIFIC AFFAIRS COMMITTEE OF THE BOARD OF DIRECTORS. IN ACCORDANCE WITH THE GRANT AGREEMENT TERMS AND CONDITIONS, BRIGHTFOCUS MAY WITHHOLD FUNDING, OR DISCONTINUE AN AWARD, FOR ANY GRANTEE THAT FAILS TO ACHIEVE SUFFICIENT PROGRESS OR SUBMIT REQUIRED REPORTS.

AT THE CONCLUSION OF THE GRANT AWARD PERIOD, EACH GRANTEE MUST COMPLETE AND SUBMIT A FINAL REPORT THAT IS ALSO REVIEWED BY THE BRIGHTFOCUS SENIOR SCIENTIFIC STAFF. EVALUATION OF THE WORK OF EACH GRANTEE IS QUALITATIVELY AND QUANTITATIVELY ASSESSED THROUGH VARIOUS METRICS RELATED TO THE IMPACT OF THE GRANT ON ITS TARGETED DISEASE FIELD. SUCH IMPACT METRICS HAVE REVEALED THAT 95% OF BRIGHTFOCUS-SUPPORTED RESEARCH RESULTS IN RESEARCH PUBLICATIONS THAT ADVANCE THE FIELDS SERVED BY BRIGHTFOCUS. THIS IMPACT IS FURTHER SUPPORTED BY ANNUAL CATEGORY NORMALIZED CITATION IMPACT ANALYSIS THAT COMPARES BRIGHTFOCUS-SUPPORTED WORKS TO AN UNBIASED COMPARISON OF IMPACT PERFORMANCE VERSUS THE WORLD AVERAGE. BRIGHTFOCUS-SUPPORTED PUBLICATIONS WERE RECENTLY CITED AT 2 TIMES THE FREQUENCY OF THE WORLD AVERAGE. A FINAL EXAMPLE OF IMPACT ASSESSMENT REVEALED THAT THE SUCCESSES OF BRIGHTFOCUS GRANTEEES CONTINUE LONG AFTER THE GRANT EXPIRES. ON AVERAGE, EACH GRANTEE RECEIVES ADDITIONAL GRANTS FOR FOLLOW-ON PROJECTS SPAWNED BY

**Part IV** Supplemental Information

THE BRIGHTFOCUS GRANT, WITH VALUES UP TO 10 TIMES THE LEVEL OF THE INITIAL BRIGHTFOCUS INVESTMENT.

BRIGHTFOCUS SOLICITS FEEDBACK FROM ITS GRANTEES, AND PROVIDES AN ANONYMOUS FORUM FOR COLLECTING SUCH INFORMATION. THROUGH THE BRIGHTFOCUS FOUNDATION WEBSITE AND WITHIN THE SCIENTIFIC PROGRESS REPORTS, THERE ARE DESIGNATED SECTIONS WHERE AWARDEES ARE ASKED TO PROVIDE FEEDBACK TO THE FOUNDATION. THROUGH THIS MECHANISM, THEY ARE GIVEN THE ABILITY TO ANONYMOUSLY PROVIDE FEEDBACK OR COMMUNICATE THEIR CONCERNS TO PROGRAM STAFF OR THE BRIGHTFOCUS' COMPLIANCE OFFICE. ANY SUGGESTIONS, CONCERNS, COMPLAINTS, OR POSITIVE EXPERIENCES CAN BE OUTLINED AND BROUGHT TO THE ATTENTION OF BRIGHTFOCUS IN THIS MANNER, SO THAT BRIGHTFOCUS CAN ADDRESS ANY AREAS NEEDING IMPROVEMENT, REAFFIRM PRAISE-WORTHY POLICIES, OR OTHERWISE ASSESS NEEDS FOR PROGRAMMATIC CHANGE. THE SENIOR LEADERSHIP PRESENTS AND SUMMARIZES THE STATUS AND PROGRESS ON GRANTS TO THE BRIGHTFOCUS BOARD OF DIRECTORS AT EACH OF THEIR QUARTERLY BOARD MEETINGS.

**SCHEDULE J  
(Form 990)**

**Compensation Information**

OMB No. 1545-0047

**2020**

Open to Public Inspection

For certain Officers, Directors, Trustees, Key Employees, and Highest Compensated Employees  
 ▶ Complete if the organization answered "Yes" on Form 990, Part IV, line 23.  
 ▶ Attach to Form 990.  
 ▶ Go to [www.irs.gov/Form990](http://www.irs.gov/Form990) for instructions and the latest information.

Department of the Treasury  
Internal Revenue Service

Name of the organization

**BRIGHTFOCUS FOUNDATION**

Employer identification number

**23-7337229**

**Part I Questions Regarding Compensation**

**1a** Check the appropriate box(es) if the organization provided any of the following to or for a person listed on Form 990, Part VII, Section A, line 1a. Complete Part III to provide any relevant information regarding these items.

- |  |  |
|--|--|
| <input type="checkbox"/> First-class or charter travel             | <input type="checkbox"/> Housing allowance or residence for personal use   |
| <input type="checkbox"/> Travel for companions                     | <input type="checkbox"/> Payments for business use of personal residence   |
| <input type="checkbox"/> Tax indemnification and gross-up payments | <input type="checkbox"/> Health or social club dues or initiation fees     |
| <input type="checkbox"/> Discretionary spending account            | <input type="checkbox"/> Personal services (such as maid, chauffeur, chef) |

**b** If any of the boxes on line 1a are checked, did the organization follow a written policy regarding payment or reimbursement or provision of all of the expenses described above? If "No," complete Part III to explain .....

**2** Did the organization require substantiation prior to reimbursing or allowing expenses incurred by all directors, trustees, and officers, including the CEO/Executive Director, regarding the items checked on line 1a? .....

**3** Indicate which, if any, of the following the organization used to establish the compensation of the organization's CEO/Executive Director. Check all that apply. Do not check any boxes for methods used by a related organization to establish compensation of the CEO/Executive Director, but explain in Part III.

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Compensation committee              | <input type="checkbox"/> Written employment contract                                |
| <input checked="" type="checkbox"/> Independent compensation consultant | <input checked="" type="checkbox"/> Compensation survey or study                    |
| <input checked="" type="checkbox"/> Form 990 of other organizations     | <input checked="" type="checkbox"/> Approval by the board or compensation committee |

**4** During the year, did any person listed on Form 990, Part VII, Section A, line 1a, with respect to the filing organization or a related organization:

- a** Receive a severance payment or change-of-control payment? .....
- b** Participate in or receive payment from a supplemental nonqualified retirement plan? .....
- c** Participate in or receive payment from an equity-based compensation arrangement? .....
- If "Yes" to any of lines 4a-c, list the persons and provide the applicable amounts for each item in Part III.

**Only section 501(c)(3), 501(c)(4), and 501(c)(29) organizations must complete lines 5-9.**

**5** For persons listed on Form 990, Part VII, Section A, line 1a, did the organization pay or accrue any compensation contingent on the revenues of:

- a** The organization? .....
- b** Any related organization? .....
- If "Yes" on line 5a or 5b, describe in Part III.

**6** For persons listed on Form 990, Part VII, Section A, line 1a, did the organization pay or accrue any compensation contingent on the net earnings of:

- a** The organization? .....
- b** Any related organization? .....
- If "Yes" on line 6a or 6b, describe in Part III.

**7** For persons listed on Form 990, Part VII, Section A, line 1a, did the organization provide any nonfixed payments not described on lines 5 and 6? If "Yes," describe in Part III .....

**8** Were any amounts reported on Form 990, Part VII, paid or accrued pursuant to a contract that was subject to the initial contract exception described in Regulations section 53.4958-4(a)(3)? If "Yes," describe in Part III .....

**9** If "Yes" on line 8, did the organization also follow the rebuttable presumption procedure described in Regulations section 53.4958-6(c)? .....

	Yes	No
<b>1b</b>		
<b>2</b>		
<b>4a</b>		<input checked="" type="checkbox"/>
<b>4b</b>		<input checked="" type="checkbox"/>
<b>4c</b>		<input checked="" type="checkbox"/>
<b>5a</b>		<input checked="" type="checkbox"/>
<b>5b</b>		<input checked="" type="checkbox"/>
<b>6a</b>		<input checked="" type="checkbox"/>
<b>6b</b>		<input checked="" type="checkbox"/>
<b>7</b>		<input checked="" type="checkbox"/>
<b>8</b>		<input checked="" type="checkbox"/>
<b>9</b>		

LHA For Paperwork Reduction Act Notice, see the Instructions for Form 990.

Schedule J (Form 990) 2020



Part II Officers, Directors, Trustees, Key Employees, and Highest Compensated Employees. Use duplicate copies if additional space is needed.

For each individual whose compensation must be reported on Schedule J, report compensation from the organization on row (i) and from related organizations, described in the instructions, on row (ii). Do not list any individuals that aren't listed on Form 990, Part VII.

Note: The sum of columns (B)(i)-(iii) for each listed individual must equal the total amount of Form 990, Part VII, Section A, line 1a, applicable column (D) and (E) amounts for that individual.

Table with columns: (A) Name and Title, (B) Breakdown of W-2 and/or 1099-MISC compensation (sub-columns: (i) Base compensation, (ii) Bonus & incentive compensation, (iii) Other reportable compensation), (C) Retirement and other deferred compensation, (D) Nontaxable benefits, (E) Total of columns (B)(i)-(D), (F) Compensation in column (B) reported as deferred on prior Form 990. Rows include Stacy Pagos Haller, Nancy Lynn, R. Brian Elderton, David F. Marks, CPAs, Diane Bovenkamp, Michael Buckley.



**SCHEDULE M  
(Form 990)**

**Noncash Contributions**

OMB No. 1545-0047

**2020**

Open to Public Inspection

Department of the Treasury  
Internal Revenue Service

- ▶ Complete if the organizations answered "Yes" on Form 990, Part IV, lines 29 or 30.
- ▶ Attach to Form 990.
- ▶ Go to [www.irs.gov/Form990](http://www.irs.gov/Form990) for instructions and the latest information.

Name of the organization **BRIGHTFOCUS FOUNDATION** Employer identification number **23-7337229**

**Part I Types of Property**

	(a) Check if applicable	(b) Number of contributions or items contributed	(c) Noncash contribution amounts reported on Form 990, Part VIII, line 1g	(d) Method of determining noncash contribution amounts
1 Art - Works of art				
2 Art - Historical treasures				
3 Art - Fractional interests				
4 Books and publications				
5 Clothing and household goods				
6 Cars and other vehicles				
7 Boats and planes				
8 Intellectual property				
9 Securities - Publicly traded	X	22	411,261. FMV	
10 Securities - Closely held stock				
11 Securities - Partnership, LLC, or trust interests				
12 Securities - Miscellaneous				
13 Qualified conservation contribution - Historic structures				
14 Qualified conservation contribution - Other				
15 Real estate - Residential				
16 Real estate - Commercial				
17 Real estate - Other				
18 Collectibles				
19 Food inventory				
20 Drugs and medical supplies				
21 Taxidermy				
22 Historical artifacts				
23 Scientific specimens				
24 Archeological artifacts				
25 Other ( )				
26 Other ( )				
27 Other ( )				
28 Other ( )				

29 Number of Forms 8283 received by the organization during the tax year for contributions for which the organization completed Form 8283, Part V, Donee Acknowledgement **29**

	Yes	No
30a During the year, did the organization receive by contribution any property reported in Part I, lines 1 through 28, that it must hold for at least three years from the date of the initial contribution, and which isn't required to be used for exempt purposes for the entire holding period?		X
b If "Yes," describe the arrangement in Part II.		
31 Does the organization have a gift acceptance policy that requires the review of any nonstandard contributions?	X	
32a Does the organization hire or use third parties or related organizations to solicit, process, or sell noncash contributions?		X
b If "Yes," describe in Part II.		
33 If the organization didn't report an amount in column (c) for a type of property for which column (a) is checked, describe in Part II.		

**Part II** **Supplemental Information.** Provide the information required by Part I, lines 30b, 32b, and 33, and whether the organization is reporting in Part I, column (b), the number of contributions, the number of items received, or a combination of both. Also complete this part for any additional information.

SCHEDULE M, PART I, COLUMN (B):

BRIGHTFOCUS REPORTS THE NUMBER OF CONTRIBUTIONS IN PART I, COLUMN (B).

Multiple horizontal lines for supplemental information.

**SCHEDULE O**  
**(Form 990 or 990-EZ)**

Department of the Treasury  
Internal Revenue Service

**Supplemental Information to Form 990 or 990-EZ**

Complete to provide information for responses to specific questions on  
Form 990 or 990-EZ or to provide any additional information.

▶ Attach to Form 990 or 990-EZ.

▶ Go to [www.irs.gov/Form990](http://www.irs.gov/Form990) for the latest information.

OMB No. 1545-0047

**2020**

Open to Public  
Inspection

Name of the organization

BRIGHTFOCUS FOUNDATION

Employer identification number

23-7337229

FORM 990, PART III, LINE 1, DESCRIPTION OF ORGANIZATION MISSION:

BRIGHTFOCUS FUNDS EXCEPTIONAL SCIENTIFIC RESEARCH WORLDWIDE TO DEFEAT  
ALZHEIMER'S DISEASE, MACULAR DEGENERATION, AND GLAUCOMA AND PROVIDES  
EXPERT INFORMATION ON THESE HEARTBREAKING DISEASES. OUR VISION IS: A  
WORLD FREE FROM DISEASES OF MIND AND SIGHT. COLLECTIVELY, 1 IN 16  
PEOPLE OVER THE AGE OF 40 IN THE U.S. HAS ONE OF THESE DISEASES.

BRIGHTFOCUS HAS A PROVEN TRACK RECORD OF SUPPORTING THE MOST  
INNOVATIVE, EARLY-STAGE RESEARCH SEEKING BETTER UNDERSTANDING,  
TREATMENTS, OR, ULTIMATELY, A CURE FOR THESE DISEASES. SINCE 1973,  
BRIGHTFOCUS HAS AWARDED NEARLY \$250 MILLION IN RESEARCH GRANTS TO  
THOUSANDS OF SCIENTISTS AROUND THE WORLD. OUR RESEARCH FUNDING HAS LED  
TO MAJOR CONTRIBUTIONS TO THE UNDERSTANDING OF THESE DISEASES AND  
SUPPORT FOR SCIENTISTS WHO HAVE RECEIVED PRESTIGIOUS AWARDS, INCLUDING  
TWO NOBEL PRIZES. AN INDICATOR OF OUR ABILITY TO PUSH NEW BOUNDARIES OF  
KNOWLEDGE IS THAT BRIGHTFOCUS-SUPPORTED RESEARCH WAS RECENTLY FOUND TO  
HAVE HAD TWICE THE IMPACT ON DRIVING FUTURE SCIENCE THAN WORK SUPPORTED  
BY MANY OTHER ORGANIZATIONS.

THE WORLD-CLASS RESEARCH IDENTIFIED AND SUPPORTED BY BRIGHTFOCUS IS ON  
THE CUTTING-EDGE OF THE FIGHT TO SAVE MIND AND SIGHT. OUR FUNDING ACTS  
AS A CATALYST IN EARLY-STAGE RESEARCH. THE BRIGHTFOCUS RESEARCH  
PROGRAMS ARE DESIGNED TO PROVIDE INITIAL FUNDING FOR HIGHLY INNOVATIVE  
EXPERIMENTAL IDEAS. DUE TO THE STRUCTURED GRANT REVIEW AND APPROVAL  
PROCESS, THE RESEARCH IMPACT OF BRIGHTFOCUS IS VERY HIGH. MOST  
RECIPIENTS OF BRIGHTFOCUS FUNDING GO ON TO RECEIVE FUTURE GRANTS FROM

LHA For Paperwork Reduction Act Notice, see the Instructions for Form 990 or 990-EZ.

Schedule O (Form 990 or 990-EZ) 2020

032211 11-20-20

Name of the organization

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23-7337229

OTHER SOURCES THAT ARE UP TO 10 TIMES LARGER THAN THE ORIGINAL BRIGHTFOCUS AWARD. THIS HIGH RETURN ON BRIGHTFOCUS INVESTMENT SPEAKS TO OUR ABILITY TO IDENTIFY PROMISING RESEARCH IN ITS EARLIEST STAGES AND SPAWN FUTURE SCIENTIFIC DISCOVERIES. IT IS OUR FIRM BELIEF THAT HAVING THE COURAGE TO INVEST IN INNOVATIVE IDEAS WILL LEAD TO REVOLUTIONARY APPROACHES AND LIFE-SAVING BREAKTHROUGHS.

ALONG WITH FUNDING CUTTING-EDGE RESEARCH TO FIND CURES TO SOME OF THE WORLD'S COSTLIEST DISEASES, BRIGHTFOCUS ALSO PROVIDES FREE EDUCATIONAL MATERIALS AND SUPPORT TO HUNDREDS OF THOUSANDS OF THOSE IMPACTED BY THESE DISEASES NATIONWIDE. WE ROOT THESE EDUCATIONAL MATERIALS IN THE LATEST RESEARCH FINDINGS.

BRIGHTFOCUS INCREASES PUBLIC AWARENESS OF ALZHEIMER'S, MACULAR DEGENERATION, AND GLAUCOMA, AND COMMUNICATES WITH THOUGHT LEADERS AND ELECTED OFFICIALS ABOUT THE IMPORTANCE OF SCIENTIFIC RESEARCH IN THESE AREAS.

BRIGHTFOCUS' AWARD-WINNING PUBLIC SERVICE ANNOUNCEMENTS (PSA) HAVE APPEARED ON TELEVISION, RADIO, AND IN PRINT THROUGHOUT THE NATION. THE IMPACT OF ALZHEIMER'S. MAKE A PLAN TODAY: GET YOUR EYES CHECKED AND NOW IS THE MOMENT TO STOP ALZHEIMER'S DISEASE POWERFULLY SEEK TO RAISE AWARENESS AND EARLY DETECTION, AND SIMILAR MESSAGES HAVE BEEN DELIVERED THROUGH DONATED PRINT PSA SPACE IN AIRPORTS AND TRAIN STATIONS, AS WELL AS AT PHARMACIES, SUPERMARKETS AND DIGITALLY. IN FISCAL YEAR 2021, THESE PSA MESSAGES GENERATED \$10,280,294 IN DONATED MEDIA SERVICES AND GARNERED OVER 592 MILLION IMPRESSIONS.

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SINCE 2014, THE BRIGHTFOCUS CHATS HAVE BROUGHT TOGETHER PATIENTS AND CAREGIVERS FOR FREE, INTERACTIVE MONTHLY TELEPHONE FORUMS TO LEARN FROM, AND ASK QUESTIONS OF, LEADING RESEARCHERS AND SPECIALISTS ON VISION DISEASES. THE CHATS ARE ARCHIVED ON OUR WEB SITE, WITH AUDIO AND PRINT TRANSCRIPTS AVAILABLE IN A NUMBER OF ACCESSIBLE FORMATS.

WE CONTINUE TO INCREASE OUR PRINT PUBLICATIONS, MANY IN SPANISH, THAT PROVIDE HELPFUL INFORMATION TO PATIENTS AND CAREGIVERS, AND REGULARLY UNVEIL NEW VIDEO AND AUDIO RESOURCES IN CONJUNCTION WITH ALLIES IN THE MEDICAL AND SCIENTIFIC COMMUNITIES.

PARTNERING WITH SEVERAL HIGH-PROFILE PUBLIC AND PRIVATE ORGANIZATIONS, BRIGHTFOCUS IS HELPING BETTER EDUCATE THE PUBLIC ON THE IMPORTANCE OF PARTICIPATION IN CLINICAL RESEARCH AS A WAY TO ACCELERATE THE PATH TO CURES FOR NEURODEGENERATIVE DISEASES.

SPECIFICALLY, BRIGHTFOCUS IS A PRESENTATION PARTNER FOR TURNING POINT, A DOCUMENTARY ON THE SCIENTISTS AND CLINICAL TRIAL VOLUNTEERS WORKING TO DEVELOP A NEW ALZHEIMER'S MEDICATION. BRIGHTFOCUS IS HELPING THE FILM BE SHOWN IN COMMUNITY SETTINGS ACROSS THE COUNTRY TO INCREASE THE AWARENESS OF, AND PARTICIPATION IN, ALZHEIMER'S CLINICAL RESEARCH.

WE HAVE EXPANDED OUR WRITTEN CONTENT OF KEY RESEARCH FINDINGS, PROMOTING AND SHARING THIS INFORMATION THROUGH OUR WEB SITE AND SOCIAL MEDIA PLATFORMS. BRIGHTFOCUS INFOGRAPHICS EASILY AND VISUALLY COMMUNICATE INFORMATION ON ALZHEIMER'S, MACULAR DEGENERATION, AND GLAUCOMA. IN THE SPRING OF 2020, WE LAUNCHED A FULL SECTION OF OUR WEBSITE DEDICATED TO SHARING EXCLUSIVE CONTENT ON COVID-19 FOR FAMILIES

**COPY**

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**IMPACTED BY DISEASES OF MIND AND SIGHT.**

**MORE SPECIFICALLY, EACH OF THESE PROGRAM AREAS MAIL AWARENESS-RAISING MATERIALS TO HUNDREDS OF THOUSANDS OF HOUSEHOLDS, WITH MESSAGES FOCUSING ON:**

- RISK FACTORS AND SYMPTOM RECOGNITION THROUGH PUBLIC AWARENESS AND STEPS THE PUBLIC SHOULD TAKE THAT MAY HELP REDUCE THEIR RISK.**
- LIFESTYLE CHOICES THAT PROMOTE GOOD HEALTH, ENCOURAGING READERS TO TAKE ACTION TO REDUCE THE LIKELIHOOD OF THE ONSET OF THE DISEASE.**
- RESEARCH RESULTS AND TREATMENTS AVAILABLE TO ADDRESS THE DISEASE.**

**BRIGHTFOCUS REGULARLY INTERACTS WITH ADVOCACY ORGANIZATIONS, GOVERNMENTS AT ALL LEVELS, AND MEMBERS OF THE MEDIA TO CALL GREATER ATTENTION TO DISEASES OF MIND AND SIGHT AND SHARE THE LATEST RESEARCH AND BEST PRACTICES WITH THE PUBLIC FIGURES AND KEY STAKEHOLDERS. THROUGH OUR OWN OUTREACH EFFORTS, AS WELL AS ACTIVE ROLES IN ADVOCACY COALITIONS WE HELP ADVANCE THE CAUSE OF PIONEERING SCIENCE AND BETTER POSITION BRIGHTFOCUS AS A RESOURCE FOR THOSE STRUGGLING WITH, AND SEARCHING FOR CURES FOR, THESE TERRIBLE DISEASES.**

**BRIGHTFOCUS IS THE PRESENTING SPONSOR OF THE HELEN KELLER PRIZE FOR VISION RESEARCH, ONE OF THE MOST PRESTIGIOUS RECOGNITIONS IN THE FIELD. SELECTED BY A PANEL OF THE WORLD'S FOREMOST VISION SCIENTISTS, EACH YEAR'S LAUREATE IS HONORED FOR A GROUNDBREAKING CONTRIBUTION OR DISCOVERY TO SAVE SIGHT. BRIGHTFOCUS BEGAN ITS SPONSORSHIP IN 2015 TO CALL GREATER ATTENTION TO VISION RESEARCH ACROSS THE PRIVATE AND PUBLIC SECTORS.**



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## FORM 990, PART III, LINE 4A, DESCRIPTION OF PROGRAM SERVICE:

ALZHEIMER'S DISEASE RESEARCH (ADR) -

ALZHEIMER'S DISEASE IS THE ONLY CAUSE OF DEATH AMONG THE TOP 10 IN AMERICA WITHOUT A WAY TO PREVENT, CURE, OR EVEN SLOW ITS PROGRESSION. IT IS AN IRREVERSIBLE DEGENERATION OF THE BRAIN THAT CAUSES DISRUPTIONS IN MEMORY, COGNITION, PERSONALITY, AND OTHER FUNCTIONS AND INEVITABLY LEADS TO DEATH. AN ESTIMATED 5.5 MILLION AMERICANS HAVE ALZHEIMER'S DISEASE, ABOUT TWO-THIRDS ARE WOMEN.

BRIGHTFOCUS' ADR PROGRAM FUNDS RESEARCH FOCUSED ON UNDERSTANDING THE CAUSES OF ALZHEIMER'S DISEASE, ITS EARLY DETECTION, AND TREATMENTS TO HELP SLOW OR STOP ITS PROGRESSION, AND ULTIMATELY TO PREVENT THE DISEASE ALTOGETHER. ADR ANNUALLY AWARDS PEER-REVIEWED GRANTS TO SCIENTISTS FROM INSTITUTIONS WORLDWIDE WHO ARE CONDUCTING BIOMEDICAL AND CLINICAL RESEARCH ON ALZHEIMER'S DISEASE.

SINCE INCEPTION, BRIGHTFOCUS HAS CONTRIBUTED MORE THAN \$154 MILLION TO THE CONQUERING OF ALZHEIMER'S DISEASE. DURING THE FISCAL YEAR ENDED MARCH 31, 2021, ADR AWARDED \$11,650,745 IN PEER-REVIEWED GRANT AWARDS TO 46 NEW RESEARCH PROJECTS AND THIRTEEN OTHER SCIENTIFIC AWARDS TO MAKE A TOTAL OF \$14,187,967 IN FUNDING.

NOTABLE PROJECTS INCLUDE: USING THE EYE TO DETECT DEMENTIA; LIFESTYLE EFFECTS ON RISK OF ALZHEIMER'S (INCLUDING LIPIDS); DRUG DISCOVERY; MOLECULAR AND DIGITAL BIOMARKERS; THE ROLE OF INFLAMMATION AND VASCULAR HEALTH IN DISEASE RISK; ROLE OF SLEEP DISTURBANCES CAUSING INCREASED

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RISK OF COGNITIVE ISSUES; MODELING ALZHEIMER'S IN A DISH; AND BETTER USE OF MODERN TECHNOLOGIES, INCLUDING MOBILE TECHNOLOGIES, BIG DATA, AND SYSTEMS GENETICS ANALYSIS FOR INCREASED AND DECREASED RISKS. ADDITIONAL INFORMATION ABOUT SPECIFIC PROJECTS IS INCLUDED IN SCHEDULES F & I.

BRIGHTFOCUS IS HONORED TO HAVE SUPPORTED THE EARLY RESEARCH OF TWO NOBEL PRIZE WINNERS: DR. STANLEY PRUSINER AND DR. PAUL GREENGARD, WHOSE WORK HAS BEEN INSTRUMENTAL TO OUR CURRENT UNDERSTANDING OF ALZHEIMER'S DISEASE.

BRIGHTFOCUS CONTINUES ITS PARTNERSHIP WITH THE ACADEMIC JOURNAL "MOLECULAR NEURODEGENERATION" AS THE OFFICIAL JOURNAL OF THE BRIGHTFOCUS FOUNDATION. THE JOURNAL PUBLISHES TECHNICAL PAPERS RELATED TO NEURODEGENERATION IN THE THREE DISEASE AREAS. TO ACCELERATE SCIENTIFIC PROGRESS, IT IS AN "OPEN ACCESS" JOURNAL, AND ALL CONTENT IS FREE OF CHARGE. THIS OPEN ACCESS ENSURES MAXIMAL REACH OF JOURNAL CONTENTS TO SCIENTISTS AND CARE PROVIDERS WORLDWIDE. MOLECULAR NEURODEGENERATION IS CURRENTLY THE HIGHEST IMPACT OPEN ACCESS JOURNAL IN THE NEUROSCIENCES.

IN ADDITION TO SUPPORTING CUTTING-EDGE RESEARCH, ALZHEIMER'S DISEASE RESEARCH PROVIDES EXCELLENT RESOURCES ON DETECTING, TREATING, AND LIVING WITH THE DISEASE. THESE ARE AVAILABLE IN BOTH PRINT AS WELL AS ON OUR WEBSITE, WWW.BRIGHTFOCUS.ORG.

FORM 990, PART III, LINE 4B, DESCRIPTION OF PROGRAM SERVICE:

MACULAR DEGENERATION RESEARCH (MDR) -

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AGE-RELATED MACULAR DEGENERATION IS A LEADING CAUSE OF VISION LOSS IN THE UNITED STATES. IT DESTROYS THE MACULA, THE PART OF THE EYE THAT PROVIDES SHARP, CENTRAL VISION NEEDED FOR SEEING OBJECTS CLEARLY. THE MOST COMMON EYE CONDITION IN PEOPLE AGE 60 AND OLDER, IT CAN LEAD TO VISION LOSS IN ONE OR BOTH EYES, MAKING IT DIFFICULT TO RECOGNIZE FACES, DRIVE A CAR, OR READ. AS MANY AS 11 MILLION AMERICANS HAVE SOME TYPE OF MACULAR DEGENERATION, INCLUDING BOTH THE EARLY AND LATER STAGES OF THE WET AND DRY TYPES. THIS NUMBER IS EXPECTED TO DOUBLE TO NEARLY 22 MILLION BY 2050.

MACULAR DEGENERATION RESEARCH (MDR), A PROGRAM OF BRIGHTFOCUS, HAS AWARDED MORE THAN \$39 MILLION TO SCIENTISTS STUDYING THE DISEASE. THE LATEST RESEARCH IS FOCUSED ON NOVEL TREATMENTS FOR THE DISEASE, UNDERSTANDING ITS CAUSES AND PROGRESSION, PREDICTION METHODS AND DISEASE MODELING, DRUG THERAPIES, THE ROLE OF THE METABOLISM IN DISEASE RISK, GENES, THE ROLE OF THE IMMUNE RESPONSE IN DISEASE RISK, AND NEW SCREENING TECHNIQUES.

MDR GRANTS ARE AVAILABLE TO MACULAR DEGENERATION RESEARCHERS WORLDWIDE. MDR PLACES SPECIAL EMPHASIS ON ENCOURAGING APPLICATIONS FROM YOUNG SCIENTISTS AND THOSE WITH CUTTING-EDGE IDEAS. ANNUAL GRANT APPLICATIONS ARE PEER-REVIEWED, AND RECIPIENT SELECTIONS ARE BASED ON SCIENTIFIC MERIT.

DURING THE FISCAL YEAR ENDING MARCH 31, 2021, MDR AWARDED \$6,135,716 IN PEER-REVIEWED GRANT AWARDS TO 20 NEW RESEARCH PROJECTS, WITH 3 ADDITIONAL SCIENTIFIC PROJECTS THAT TAKE THE TOTAL FUNDING TO

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\$6,175,716. DETAILS ABOUT SPECIFIC PROJECTS ARE INCLUDED IN SCHEDULES F & I.

IN ADDITION TO SUPPORTING CUTTING-EDGE RESEARCH, MACULAR DEGENERATION RESEARCH PROVIDES EXCELLENT RESOURCES ON DETECTING, TREATING, AND LIVING WITH THIS DISEASE. THESE ARE AVAILABLE IN BOTH PRINT AS WELL AS ON OUR WEBSITE, WWW.BRIGHTFOCUS.ORG.

FORM 990, PART III, LINE 4C, DESCRIPTION OF PROGRAM SERVICE:

NATIONAL GLAUCOMA RESEARCH (NGR) -

GLAUCOMA IS THE SECOND LEADING CAUSE OF BLINDNESS WORLDWIDE AFFECTING APPROXIMATELY 80 MILLION PEOPLE ACCORDING TO THE WORLD HEALTH ORGANIZATION. MORE THAN THREE MILLION AMERICANS HAVE GLAUCOMA AND IT IS ESTIMATED THAT ONLY HALF OF THE PEOPLE LIVING WITH THE DISEASE ARE AWARE THEY HAVE IT. IN THE UNITED STATES, GLAUCOMA IS A LEADING CAUSE OF BLINDNESS AMONG BLACK AND HISPANIC AMERICANS. WITH EARLY DETECTION AND TREATMENT, GLAUCOMA OFTEN CAN BE MANAGED TO PROTECT EYES FROM MORE SERIOUS VISION LOSS.

BRIGHTFOCUS' NGR PROGRAM HAS AWARDED MORE THAN \$43 MILLION WORLDWIDE FOR THE STUDY OF GLAUCOMA. NGR-SUPPORTED RESEARCH HAS BEEN FOCUSED ON THE EYE-BRAIN CONNECTION, THE BIOMECHANICS FOR PRESSURE BUILDUP IN THE EYE, OPTIC NERVE REGENERATION, DISCOVERING GLAUCOMA RISK GENES, AI/DEEP LEARNING, SLEEP DISTURBANCE AND RISK OF DEVELOPING GLAUCOMA, AND DEVELOPING EARLY GLAUCOMA SCREENING AND TARGETED TREATMENTS, AMONGST OTHER INNOVATIVE PURSUITS.

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NGR GRANTS ARE AVAILABLE TO GLAUCOMA RESEARCHERS WORLDWIDE. NGR PLACES SPECIAL EMPHASIS ON ENCOURAGING APPLICATIONS FROM YOUNG SCIENTISTS AND THOSE WITH CUTTING-EDGE IDEAS. ANNUAL GRANT APPLICATIONS ARE PEER-REVIEWED, AND RECIPIENT SELECTIONS ARE BASED ON SCIENTIFIC MERIT.

DURING THE FISCAL YEAR ENDING MARCH 31, 2021, NGR AWARDED \$3,097,742 IN PEER-REVIEWED GRANT AWARDS FOR 17 NEW PROJECTS AND SEVEN OTHER SCIENTIFIC AWARDS TO MAKE A TOTAL OF \$4,892,686 IN FUNDING. DETAILS ABOUT SPECIFIC PROJECTS ARE INCLUDED IN SCHEDULES F & I.

IN ADDITION TO SUPPORTING CUTTING-EDGE RESEARCH, NATIONAL GLAUCOMA RESEARCH PROVIDES EXCELLENT RESOURCES ON DETECTING, TREATING, AND LIVING WITH THE DISEASE. THESE ARE AVAILABLE IN BOTH PRINT AS WELL AS ON OUR WEBSITE, WWW.BRIGHTFOCUS.ORG.

FORM 990, PART VI, SECTION B, LINE 11B:

A DRAFT OF THE FEDERAL FORM 990 IS DISTRIBUTED TO THE AUDIT COMMITTEE FOR REVIEW PRIOR TO BEING SUBMITTED TO THE INTERNAL REVENUE SERVICE. THE DRAFT FEDERAL FORM 990 IS DISTRIBUTED EARLY ENOUGH TO PROVIDE EACH COMMITTEE MEMBER WITH A REASONABLE AMOUNT OF TIME FOR REVIEW AND SUBMISSION OF QUESTIONS OR COMMENTS PRIOR TO THE FILING DEADLINE. THE FINAL FEDERAL FORM 990 IS DISTRIBUTED TO EACH MEMBER OF THE FULL BOARD OF DIRECTORS PRIOR TO BEING FILED WITH THE INTERNAL REVENUE SERVICE. THE DRAFT OR FINAL FEDERAL FORM 990 MAY BE DISTRIBUTED IN PERSON, BY REGULAR MAIL, E-MAIL, OR FAX.

FORM 990, PART VI, SECTION B, LINE 12C:

BRIGHTFOCUS HAS ALL EMPLOYEES, OFFICERS, AND DIRECTORS AGREE TO THE CODE OF CONDUCT THAT INCLUDES ADHERENCE TO THE CONFLICT OF INTEREST AND

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IMPLEMENTATION POLICY. EACH BOARD DIRECTOR, OFFICER, AND EMPLOYEE IS  
REQUIRED TO COMPLETE A CONFLICT OF INTEREST DISCLOSURE STATEMENT ANNUALLY.

EMPLOYEES MEET ANNUALLY WITH THE BRIGHTFOCUS' CHIEF COMPLIANCE OFFICER TO  
REVIEW THEIR CONFLICT OF INTEREST STATEMENTS, AND GIVE AN ANNUAL CONFLICT  
OF INTEREST COMPLIANCE REPORT TO THE BOARD CHAIR AND VICE CHAIR. IF A  
CONFLICT IS REPORTED, IT IS THEN REFERRED TO THE PRESIDENT/CEO AND/OR  
BRIGHTFOCUS' LEGAL COUNSEL AND, IF APPROPRIATE AND NECESSARY, THEN TO THE  
BOARD OF DIRECTORS OR ITS APPOINTED COMMITTEE FOR FURTHER ACTION.

THE DIRECTOR'S AND OFFICER'S STATEMENTS ARE REVIEWED BY THE BRIGHTFOCUS  
LEGAL COUNSEL. IF A CONFLICT IS REPORTED, IT IS THEN REFERRED TO THE BOARD  
OF DIRECTORS OR ITS APPOINTED COMMITTEE FOR FURTHER ACTION.

AT THE TIME OF THE BRIGHTFOCUS DISCUSSION AND DECISION CONCERNING A  
CONFLICT OF INTEREST, THE CONFLICTED PARTY IS NOT PRESENT IN THE MEETING.

FORM 990, PART VI, SECTION B, LINE 15:

BRIGHTFOCUS' BOARD OF DIRECTORS HAS OVERALL AUTHORITY AND RESPONSIBILITY  
FOR APPROVING THE ANNUAL BUDGET WHICH INCLUDES SALARY AND BENEFITS FOR ALL  
EMPLOYEES AT EVERY LEVEL INCLUDING NON-DIRECTOR OFFICERS AND KEY EMPLOYEES.  
ALL PAY ADJUSTMENTS ARE MADE ON A YEARLY BASIS EFFECTIVE APRIL 1ST, THE  
BEGINNING OF THE BRIGHTFOCUS FISCAL YEAR.

BEFORE APPROVING THE COMPENSATION OF THE PRESIDENT/CEO, THE BOARD  
DETERMINES THE TOTAL COMPENSATION TO BE PROVIDED BY BRIGHTFOCUS TO THE  
PRESIDENT/CEO IS REASONABLE IN LIGHT OF THE POSITION, RESPONSIBILITY AND  
QUALIFICATION OF THE POSITION HELD INCLUDING THE RESULT OF AN EVALUATION OF

Name of the organization BRIGHTFOCUS FOUNDATION	Employer identification number 23-7337229
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PRIOR PERFORMANCE FOR BRIGHTFOCUS, IF APPLICABLE. THE PRESIDENT/CEO IS EVALUATED ANNUALLY BY THE BOARD OF DIRECTORS THROUGH THE USE OF AN IN-DEPTH GOAL ATTAINMENT STRUCTURE, (DEVELOPED WITH ADVICE FROM BOARD SOURCE) THAT INCLUDES A SELF ASSESSMENT AND A BOARD OF DIRECTORS ASSESSMENT AND EVALUATION AGAINST SET GOALS, OUTCOMES AND DELIVERABLES. IN ADDITION, THE BOARD OF DIRECTORS PERIODICALLY ENGAGES AN OUTSIDE CONSULTANT TO OBTAIN AND CONSIDER APPROPRIATE DATA, INCLUDING A SALARY SURVEY, WHICH INCLUDES INFORMATION COMPILED FROM THE FEDERAL FORM 990 OF OTHER ORGANIZATIONS, CONCERNING COMPENSATION PAID TO CEOS IN LIKE CIRCUMSTANCES. IN MAKING THE DETERMINATION, THE BOARD OF DIRECTORS SHALL CONSIDER TOTAL COMPENSATION TO INCLUDE THE SALARY AND VALUE OF ALL BENEFITS PROVIDED BY BRIGHTFOCUS TO THE INDIVIDUAL IN PAYMENT FOR SERVICES. AT THE TIME OF THE BRIGHTFOCUS BOARD DISCUSSION AND DECISION CONCERNING THE PRESIDENT/CEO'S COMPENSATION, THE PRESIDENT/CEO IS NOT PRESENT IN THE MEETING.

THE BOARD SHALL SET FORTH THE BASIS FOR ITS DECISIONS WITH RESPECT TO COMPENSATION IN THE MINUTES OF THE MEETING AT WHICH THE DECISIONS ARE MADE, INCLUDING THE CONCLUSIONS OF THE EVALUATION AND THE BASIS FOR DETERMINING THAT THE INDIVIDUAL'S COMPENSATION WAS REASONABLE IN LIGHT OF THE EVALUATION AND COMPARABILITY DATA.

THE PRESIDENT/CEO IS CHARGED WITH THE SETTING OF SALARIES OF ALL OTHER EMPLOYEES IN ACCORDANCE WITH A COMPENSATION STRUCTURE AND BUDGET APPROVED BY THE BOARD OF DIRECTORS. THE PRESIDENT/CEO AND HUMAN RESOURCES REVIEW EMPLOYEE COMPENSATION AND BENEFITS THAT INCLUDE KEY EMPLOYEES, BY PERIODICALLY ENGAGING AN OUTSIDE CONSULTANT TO CONDUCT COMPENSATION AND BENEFIT BENCHMARKING STUDIES THAT INCLUDE VARIOUS REGIONAL AND NATIONAL NON-PROFIT COMPENSATION REPORTS AND SURVEYS. COMPENSATION DELIBERATIONS AND

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DECISIONS INCLUDE THE REVIEW OF SELF AND SUPERVISORY EVALUATIONS OF EMPLOYEE PERFORMANCE COMPARED TO SET INDIVIDUAL AND ORGANIZATIONAL GOALS.

FORM 990, PART VI, LINE 17, LIST OF STATES RECEIVING COPY OF FORM 990:  
AK, AL, AR, CA, CT, FL, GA, HI, IL, KS, KY, ME, MD, MA, MI, MN, MO, MS, NC, ND, NH, NJ, NM, NY, OH  
OK, OR, PA, RI, SC, TN, UT, VA, WA, WI, WV

FORM 990, PART VI, SECTION C, LINE 19:  
BRIGHTFOCUS MAKES ITS GOVERNING DOCUMENTS INCLUDING ITS ARTICLES OF INCORPORATION AND BYLAWS, THE FEDERAL FORM 1023, THE 501(C)(3) LETTER OF DETERMINATION FROM THE INTERNAL REVENUE SERVICE, CONFLICT OF INTEREST POLICY, AUDITED FINANCIAL STATEMENTS AND FEDERAL FORM 990 AVAILABLE TO THE PUBLIC UPON REQUEST. IN ADDITION, THE PUBLIC ALSO HAS ACCESS TO THE ANNUAL REPORT, AUDITED FINANCIAL STATEMENTS, THE 501(C)(3) LETTER OF DETERMINATION FROM THE INTERNAL REVENUE SERVICE, AND FEDERAL FORM 990 ON OUR WEBSITE.

FORM 990, PART XI, LINE 9, CHANGES IN NET ASSETS:

RECOVERIES OF PRIOR YEAR GRANTS	518,962.
CHANGE IN PRESENT VALUE OF GRANTS	-7,225.
TOTAL TO FORM 990, PART XI, LINE 9	511,737.

SCHEDULE F, PART II, LINE 1, COLUMN D:  
REGION: EUROPE (D) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY WHITNEY FREEZE, PHD, ENTITLED: (A2021007F) DETECTING LEAKY VESSELS IN CEREBRAL AMYLOID ANGIOPATHY - A NOVEL APPROACH. INVESTIGATORS SUMMARY: THIS PROJECT COMBINES STATE OF THE ART MAGNETIC RESONANCE IMAGING TECHNIQUES WITH DETAILED POST-MORTEM EXAMINATIONS TO EXPLORE ASSOCIATIONS BETWEEN BBB LEAKAGE, SUBTLE HEMORRHAGIC BRAIN PATHOLOGY,



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AND COGNITIVE FUNCTIONING IN PATIENTS WITH CEREBRAL AMYLOID ANGIOPATHY.

THE SUCCESS OF THIS PROJECT WILL ULTIMATELY PROVIDE THE FIELD WITH A NEW TOOL TO PREDICT RISK OF HEMORRHAGES IN DEMENTIA AT AN EARLY STAGE, WHICH WILL BE PIVOTAL IN THE SELECTION OF INDIVIDUALS FOR AMYLOID-MODIFYING THERAPIES, AND FOR THE DEVELOPMENT OF NEW DRUGS TO PREVENT THE FORMATION OF BLEEDS. GRANT AWARDED: \$200,000, LEIDEN UNIVERSITY MEDICAL CENTER - DIRECTORAAT ONDERZOEK, LEIDEN, THE NETHERLANDS. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: [WWW.BRIGHTFOCUS.ORG/GRANT/A2021007F](http://WWW.BRIGHTFOCUS.ORG/GRANT/A2021007F)

REGION: EUROPE (D) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY EMIL GUSTAVSSON, PHD, ENTITLED: (A2021009F) THE LANDSCAPE AND EXPRESSION OF APOE TRANSCRIPTS IN HUMAN BRAIN AND ALZHEIMER'S DISEASE. INVESTIGATORS SUMMARY: CHANGES TO THE APOE RNA MOLECULE THE TEMPLATE PRODUCED BY DNA THAT ALSO TRANSLATES INTO PROTEINS, THE BUILDING BLOCKS IN THE BODY MAY CONTRIBUTE TO THE RISK OF ALZHEIMER'S DISEASE (AD). THE PROPOSED PROJECT WILL USE A NEW TECHNOLOGY CALLED LONG-READ RNA-SEQUENCING TO EXPLORE THE DIFFERENT TYPES OF RNA TRANSCRIPTS THAT ARE PRODUCED IN AD. THIS WILL RESULT IN A FULL LANDSCAPE OF APOE RNA TRANSCRIPTS TO STUDY THEIR EXPRESSION PATTERNS IN NEURONS AND MICROGLIA AND DETERMINE WHETHER FUNCTION CORRELATES WITH DISEASE USING LARGE, PUBLICLY AVAILABLE DATASETS. GRANT AWARDED: \$199,575, UNIVERSITY COLLEGE LONDON, UNITED KINGDOM. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: [WWW.BRIGHTFOCUS.ORG/GRANT/A2021009F](http://WWW.BRIGHTFOCUS.ORG/GRANT/A2021009F)

REGION: EUROPE (D) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY ALEXA PICHET BINETTE, PHD, ENTITLED: (A2021013F) CHARACTERIZATION OF TAU PATHOLOGY HETEROGENEITY ACROSS THE ALZHEIMER'S DISEASE SPECTRUM.

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INVESTIGATORS SUMMARY: THIS STUDY WILL USE THE LATEST POSITRON EMISSION TOMOGRAPHY MARKER TO IMAGE TAU DEPOSITION IN A LARGE, LONGITUDINAL, WELL-CHARACTERIZED COHORT RANGING FROM PRE-CLINICAL OLDER ADULTS TO PEOPLE WITH DEMENTIA. PARTICIPANTS WILL BE GROUPED ACCORDING TO THEIR DIFFERENT TAU SUBTYPES AND ADDITIONALLY CHARACTERIZED USING BIOFLUIDIC, GENETIC, AND COGNITIVE MEASUREMENTS TO UNDERSTAND THE MECHANISMS THAT UNDERLIE THE ACCUMULATION OF PATHOLOGY AND COGNITIVE DECLINE. GRANT AWARDED: \$200,000, LUND UNIVERSITY, DEPARTMENT OF CLINICAL SCIENCES, MALMOE, SWEDEN. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/A2021013F

REGION: EUROPE (D) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY MAXIME VAN EGROO, PHD, ENTITLED: (A2021016F) THE BRAINSTEM LOCUS COERULEUS: POTENTIAL BRIDGE BETWEEN SLEEP-WAKE DISRUPTION AND ALZHEIMER'S DISEASE PATHOGENESIS. INVESTIGATORS SUMMARY: THE PROPOSED PROJECT POSTULATES THAT A TINY REGION LOCATED DEEP IN THE BRAIN, THE BRAINSTEM LOCUS COERULEUS (LC), IS PARTICULARLY IMPORTANT FOR THE LINK BETWEEN SLEEP-WAKE DISTURBANCES AND THE EARLIEST MANIFESTATIONS OF ALZHEIMER'S DISEASE (AD). INDEED, THE LC IS A CRUCIAL STRUCTURE IN THE CONSOLIDATION OF THE SLEEP-WAKE CYCLE AND HAS BEEN DEMONSTRATED TO BE AMONG THE FIRST REGIONS AFFECTED BY AD. THIS RESEARCH AIMS TO USE ADVANCED BRAIN IMAGING METHODS TO EXTENSIVELY CHARACTERIZE THE LC IN HEALTHY ADULTS ACROSS THE LIFESPAN, IN ORDER TO DETERMINE HOW MODIFICATIONS IN THE STRUCTURE AND FUNCTION OF THE LC RELATE TO CHANGES IN THE SLEEP-WAKE CYCLE, IN THE ACCUMULATION OF HALLMARK AD PATHOLOGIES, AND ULTIMATELY TO COGNITIVE DECLINE. GRANT AWARDED: \$200,000, MAASTRICHT UNIVERSITY, MAASTRICHT, THE NETHERLANDS. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE:

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WWW.BRIGHTFOCUS.ORG/GRANT/A2021016F

REGION: EAST ASIA & PACIFIC (D) PURPOSE OF GRANT: ALZHEIMER'S DISEASE

RESEARCH BY XIAOFEN CHEN, PHD, ENTITLED: (A2021023S) PHYSICAL

INTERACTION OF TREM2 AND C1Q IN ALZHEIMER'S DISEASE. INVESTIGATORS

SUMMARY: TRIGGERING RECEPTOR EXPRESSED ON MYELOID CELLS 2 (TREM2) IS AN

INNATE IMMUNE RECEPTOR SPECIFICALLY EXPRESSED IN MICROGLIA. CODING

VARIATIONS IN TREM2 HAVE BEEN REPORTED TO INCREASE THE RISK FOR

ALZHEIMER'S DISEASE (AD) AND OTHER NEURODEGENERATIVE DISEASES. THIS

PROJECT WILL STUDY THE MECHANISM BY WHICH TREM2 MODULATES AD-RELATED

PATHWAYS IN MICROGLIA AND NEURONS TO INFLUENCE COGNITION AND PATHOLOGY

IN MOUSE MODELS. GRANT AWARDED: \$300,000, XIAMEN UNIVERSITY, XIAMEN,

CHINA. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE:

WWW.BRIGHTFOCUS.ORG/GRANT/A2021023S

REGION: EUROPE (D) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY

NICOLAI FRANZMEIER, PHD, ENTITLED: (A2021026S) THE ROLE OF BRAIN

CONNECTIVITY AS A MECHANISTIC LINK BETWEEN AMYLOID AND TAU PATHOLOGY

SPREAD IN ALZHEIMER'S DISEASE. INVESTIGATORS SUMMARY: AMYLOID PATHOLOGY

IS ASSUMED TO TRIGGER THE SPREAD OF TAU PATHOLOGY ACROSS INTERCONNECTED

BRAIN REGIONS. OTHER STUDIES HAVE SHOWN THAT NEURONAL ACTIVITY ENHANCES

TAU SPREADING ACROSS CONNECTED NEURONS. THIS STUDY ADDRESSES WHETHER

TAU SPREADING ACROSS CONNECTED BRAIN REGIONS IS SPECIFICALLY ENHANCED

BY AMYLOID-INDUCED HYPERCONNECTIVITY IN ALZHEIMER'S DISEASE (AD)

PATIENTS. USING CUTTING-EDGE NEUROIMAGING PROTOCOLS IN AD PATIENTS,

THIS STUDY WILL DETERMINE WHETHER EARLY AMYLOID DEPOSITION IS

ASSOCIATED WITH NEURONAL HYPERACTIVITY, THEREBY TRIGGERING TAU SPREAD.

GRANT AWARDED: \$297,300, HOSPITAL OF THE LUDWIG MAXIMILIAN UNIVERSITY,

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MUNICH, GERMANY. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE:

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SCHEDULE F, PART II, LINE 1, COLUMN D:

REGION: EUROPE (D) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY HENNE HOLSTEGE, PHD, ENTITLED: (A2021031S) BLOOD-BASED MARKERS FOR ALZHEIMER'S PATHOLOGY IN COGNITIVELY HEALTHY CENTENARIANS: REVEALING MECHANISMS OF RESISTANCE AND RESILIENCE. INVESTIGATORS SUMMARY: THIS PROPOSAL WILL INVESTIGATE TO WHAT EXTENT CENTENARIANS CAN TOLERATE HIGH LEVELS OF ALZHEIMER RELATED PROTEINS IN THEIR BRAINS (RESILIENCE) AND TO WHAT EXTENT CENTENARIANS ESCAPE THE ACCUMULATION OF THESE ALZHEIMER RELATED PROTEINS (RESISTANCE). STATE OF THE ART TECHNOLOGY WILL BE USED TO MEASURE PROTEINS IN THE BLOOD OF 400 COGNITIVELY HEALTHY CENTENARIANS AND THEIR FAMILY MEMBERS TO DETERMINE WHETHER CENTENARIANS USE DIFFERENT PROTECTIVE MECHANISMS TO MAINTAIN BRAIN FUNCTION. THIS RESEARCH CAN HELP IDENTIFY LIFESTYLE AND GENETIC FACTORS THAT INFLUENCE RESILIENCE AND RESISTANCE. GRANT AWARDED: \$299,707, VU UNIVERSITY MEDICAL CENTER AMSTERDAM, THE NETHERLANDS. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: [WWW.BRIGHTFOCUS.ORG/GRANT/A2021031S](http://WWW.BRIGHTFOCUS.ORG/GRANT/A2021031S)

REGION: EUROPE (D) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY SOYON HONG, PHD, ENTITLED: (A2021032S) IMMUNE MECHANISMS OF SYNAPSE LOSS IN ALZHEIMER'S DISEASE. INVESTIGATORS SUMMARY: RECENT SINGLE-CELL PROFILING STUDIES HAVE SHOWN THAT CERTAIN 'ACTIVATED' MICROGLIA SURROUND AMYLOID PLAQUES IN ALZHEIMER'S DISEASE (AD) BRAINS AND EXPRESS A UNIQUE SET OF GENES, HENCE COINED 'DISEASE-ASSOCIATED MACROPHAGES' (DAMS). WHAT DAMS DO AND WHETHER DAMS ARE BENEFICIAL OR DETRIMENTAL ARE NOT KNOWN. PILOT DATA SUGGEST THAT DAM-LIKE CELLS ARE EXPRESSED EARLY

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IN AD MODELS WHEN SYNAPSES ARE VULNERABLE TO LOSS. THIS PROPOSAL WILL TEST THE HYPOTHESIS THAT DAMS FACILITATE SYNAPSE LOSS IN AD VIA UPREGULATION OF SPP1 (OSTEOPONTIN) AND, DETERMINE WHETHER THIS IS COMPLEMENT DEPENDENT, USING IN VIVO MOUSE AND IN VITRO MODELS AS WELL AS HUMAN AD BRAINS. GRANT AWARDED: \$300,000, UNIVERSITY COLLEGE LONDON, UNITED KINGDOM. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/A2021032S

REGION: EUROPE (D) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY RENZO MANCUSO, PHD, ENTITLED: (A2021034S) FROM GENETICS TO THE CELLULAR PHASE OF ALZHEIMER'S DISEASE: UNTANGLING THE ROLE OF LIPID PATHWAYS IN MICROGLIA RESPONSES TO AMYLOID PATHOLOGY. INVESTIGATORS SUMMARY: GENETIC STUDIES REVEAL A LINK BETWEEN NEUROINFLAMMATION AND SUSCEPTIBILITY FOR ALZHEIMER'S DISEASE (AD), SUGGESTING THAT INFLAMMATION MIGHT BE A DRIVER OF THE DISEASE OPPOSED TO JUST A CONSEQUENCE. THIS PROJECT AIMS TO DETERMINE THE LINK BETWEEN AD GENETIC RISK, MICROGLIA, AND LIPID METABOLISM BY COMBINING NOVEL MODELS WHERE HUMAN STEM CELL DERIVED MICROGLIA ARE INJECTED IN AD MICE, AND SINGLE CELL RNA SEQUENCING IS USED FOR IN DEPTH ANALYSIS OF MICROGLIAL FUNCTION. BY DOING THIS, WE WILL BE ABLE TO DISSECT THE CONTRIBUTION OF MICROGLIA AND LIPID METABOLISM IN THE AD BRAIN IN A CRUCIAL HUMAN SYSTEM. GRANT AWARDED: \$199,568, VIBVZW, GENT, BELGIUM. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/A2021034S

REGION: EUROPE (D) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY JONAS NEHER, PHD, ENTITLED: (A2021035S) THE ROLE OF HIF-1A IN THE MICROGLIAL RESPONSE TO ALZHEIMER'S DISEASE PATHOLOGY. INVESTIGATORS

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SUMMARY: ONE ROLE OF MICROGLIA IS TO SHIELD THE BRAIN FROM THE DAMAGING EFFECTS OF AMYLOID PLAQUES THIS IS CALLED THE MICROGLIAL 'BARRIER FUNCTION'. IMPORTANTLY, GENETIC MUTATIONS THAT DISRUPT THIS MICROGLIAL BARRIER LEAD TO A STRONGLY INCREASED RISK FOR DEVELOPING ALZHEIMER'S DISEASE (AD). PRELIMINARY WORK IDENTIFIED A PREVIOUSLY UNKNOWN MOLECULAR TARGET WHOSE GENETIC ELIMINATION SIGNIFICANTLY INCREASES THE MICROGLIAL BARRIER AROUND AMYLOID PLAQUES. THIS PROJECT WILL CHARACTERIZE THE LONG-TERM EFFECTS OF MANIPULATING THIS MOLECULAR PATHWAY IN TWO INDEPENDENT ANIMAL MODELS OF AD PATHOLOGY, WITH A PARTICULAR FOCUS ON MOLECULAR AND FUNCTIONAL CHANGES IN MICROGLIA, PATHOLOGICAL HALLMARKS OF AD AND MOST IMPORTANTLY, COGNITIVE FUNCTION. GRANT AWARDED: \$289,650, GERMAN CENTER FOR NEURODEGENERATIVE DISEASES, BONN, GERMANY. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/A2021035S

REGION: EUROPE (D) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY JEROME ROBERT, PHD, ENTITLED: (A2021037S) THE ROLE OF HDL CONTAINING APOE IN ALZHEIMER'S DISEASE. INVESTIGATORS SUMMARY: THE ROLE OF THE BRAIN'S BLOOD VESSELS IN ALZHEIMER'S DISEASE IS WELL RECOGNIZED, AS THEY HELP TO CLEAR THE BUILD UP OF CEREBRAL WASTE AND CARDIOVASCULAR DISEASES' RISK FACTORS SUCH AS DIABETES, HYPERTENSION AND DYSLIPIDEMIA WHICH, ARE ASSOCIATED WITH INCREASED RISK OF ALZHEIMER'S DISEASE. HOWEVER, HOW BLOOD-CIRCULATING FACTORS EXACTLY AFFECT BRAIN VESSEL AND NEURON HEALTH REMAINS POORLY UNDERSTOOD MAINLY DUE TO THE LACK OF ADEQUATE EXPERIMENTAL SYSTEM WITH WHICH TO STUDY HOW THE HUMAN BRAIN AND BLOOD INTERACT. USING A HUMAN BLOOD VESSEL GROWN IN THE TEST TUBE, WE AIM HERE TO UNCOVER HOW BLOOD LIPID TRANSPORTER NAMELY HIGH-DENSITY LIPOPROTEIN (HDL, THE GOOD CHOLESTEROL) PROMOTES BRAIN VESSEL HEALTH.

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GRANT AWARDED: \$300,000, UNIVERSITY HOSPITAL OF ZURICH, SWITZERLAND.

FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE:

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REGION: EAST ASIA & PACIFIC (D) PURPOSE OF GRANT: ALZHEIMER'S DISEASE

RESEARCH BY TIMOTHY SARGEANT, PHD, ENTITLED: (A2021040S) REDUCED

PROTEIN INTAKE COUNTERACTS ALZHEIMER'S DISEASE: EXAMINATION OF

NUTRITION SIGNALING AND THE LYSOSOMAL SYSTEM. INVESTIGATORS SUMMARY:

THE BRAIN'S CLEARANCE SYSTEM, CALLED AUTOPHAGY, WORKS LESS EFFICIENTLY

WITH AGE, RESULTING IN THE ACCUMULATION AND SPREAD OF TOXIC DISEASE

ASSOCIATED PROTEINS. AUTOPHAGY CAN DESTROY AMYLOID PLAQUES ASSOCIATED

WITH ALZHEIMER'S DISEASE (AD) AND IT CAN BE ACTIVATED USING DRUGS OR,

BY RESTRICTING CERTAIN NUTRIENTS IN THE DIET. IN MICE, REDUCING THE

AMOUNT OF PROTEIN IN FOOD DECREASES THE AMOUNT OF PLAQUE MATERIAL THAT

ACCUMULATES IN THE BRAIN. THESE FINDINGS WILL BE APPLIED TO HUMANS TO

DETERMINE WHETHER REDUCING THE AMOUNT OF PROTEIN CONSUMED IN THE

AVERAGE DIET INCREASES AUTOPHAGY; FOR COMPARATIVE PURPOSES, THE SAME

DIETARY CHANGES WILL BE APPLIED TO MICE WITH AD. GRANT AWARDED:

\$297,266, SOUTH AUSTRALIAN HEALTH AND MEDICAL RESEARCH INSTITUTE,

ADELAIDE, AUSTRALIA. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS

WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/A2021040S

SCHEDULE F, PART II, LINE 1, COLUMN D:

REGION: EUROPE (D) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY

SUSANNE WEGMANN, PHD, ENTITLED: (A2021044S) UNDERSTANDING TAU-INDUCED

NUCLEAR TRANSPORT DEFICITS IN ALZHEIMER'S DISEASE. INVESTIGATORS

SUMMARY: THE ABERRANT INTERACTIONS OF TAU WITH NUCLEOPORE PROTEINS,

NUCLEOPORINS (NUPS), INDUCE A PRONOUNCED IMPAIRMENT IN

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NUCLEOCYTOPLASMIC TRANSPORT PROCESSES, WHEREBY TWO MECHANISMS SEEM TO PLAY A ROLE: DIRECT BINDING OF SOLUBLE TAU TO NUPS IN PORE COMPLEXES, AND CO-AGGREGATION OF NUPS WITH TAU IN CYTOSOLIC NEUROFIBRILLARY TANGLES, THE HALLMARK TAU PATHOLOGICAL CHANGE IN ALZHEIMER'S BRAINS. TO UNDERSTAND HOW TAU INTERACTS WITH AND IMPAIRS NUCLEAR PORES, THE TAU:NUP INTERACTOME WILL BE DETERMINED IN HUMAN NEURONS AND THESE FINDINGS WILL BE CORRELATED WITH THE STATUS OF HUMAN AD BRAINS. CELLS EQUIPPED WITH A NUCLEAR TRANSPORT REPORTER WILL BE USED TO SCREEN FOR SMALL MOLECULES AND GENETIC MODIFIERS OF TAU-INDUCED NUCLEAR TRANSPORT DEFICITS. GRANT AWARDED: \$299,800, GERMAN CENTER FOR NEURODEGENERATIVE DISEASES, BONN, GERMANY. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/A2021044S

REGION: NORTH AMERICA (D) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY CHERYL WELLINGTON, PHD, ENTITLED: (A2021045S) THE ROLE OF PERIPHERAL APOE IN THE HIGH DENSITY LIPOPROTEIN FRACTION IN VASCULAR CONTRIBUTIONS TO ALZHEIMER'S DISEASE. INVESTIGATORS SUMMARY: APOE IS MADE BOTH WITHIN THE BRAIN AND OUTSIDE THE BRAIN, BUT THE "BRAIN" AND "BLOOD" POOLS OF APOE ARE SEPARATED BY THE BLOOD BRAIN BARRIER. CIRCULATING HIGH-DENSITY LIPOPROTEIN (HDL) PARTICLES, OR "GOOD CHOLESTEROL", CAN HELP AMYLOID BETA (AB) FROM GETTING STUCK IN THE BLOOD VESSEL WALL AS IT MOVES FROM "BRAIN" TO "BLOOD". IMPORTANTLY, 6% OF HDL ALSO CONTAINS APOE, AND THESE APOE-HDL PARTICLES SEEM TO BE THE BEST AT HELPING AB FROM GETTING STUCK IN THE VESSEL. THIS PROJECT USES A NEW METHOD TO MEASURE APOE-HDL IN 2000 BLOOD SAMPLES FROM PEOPLE WITH DEMENTIA VS. PEOPLE RESISTANT TO DEMENTIA AND USE ADDITIONAL TEST TUBE APPROACHES TO STUDY HOW APOE-HDL ACTS ON THE SMALL BLOOD VESSELS OF THE BRAIN. GRANT AWARDED: \$300,000, UNIVERSITY OF BRITISH COLUMBIA,



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VANCOUVER, BC, CANADA. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS

WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/A2021045S

REGION: NORTH AMERICA (D) PURPOSE OF GRANT: ALZHEIMER'S DISEASE

RESEARCH BY SANJEEV KUMAR, MD, ENTITLED: (A2018667S) IDENTIFYING AND  
TARGETING CORTICAL INHIBITION DEFICITS IN AGITATION/AGGRESSION DUE TO  
ALZHEIMER'S DEMENTIA. EMERGENCY RELIEF SUPPLEMENT DUE TO COVID-19.

GRANT AWARDED: \$56836, CENTRE FOR ADDICTION AND MENTAL HEALTH, TORONTO,  
ON, CANADA. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE:

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REGION: EUROPE (D) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY

DR. MARIANNE LEGER ENTITLED: (CA2021013) LOU RAT AS A MODEL OF  
COGNITIVE RESILIENCE IN THE FIELD OF ALZHEIMER'S DISEASE. INVESTIGATORS

SUMMARY: THIS PROJECT, WHICH WILL TAKE PLACE AT UNIVERSITY OF CAEN  
NORMANDIE, AIMS TO UNDERSTAND THE BRAIN MECHANISMS RESPONSIBLE FOR THIS  
RESISTANCE TO COGNITIVE DECLINE INDUCED BY ALZHEIMER'S DISEASE.THE

IDENTIFICATION OF THESE NEUROPROTECTIVE MECHANISMS IS UNPRECEDENTED.IT

WILL THEREFORE MAKE IT POSSIBLE TO DEVELOP INNOVATIVE THERAPEUTIC

STRATEGIES TO INCREASE THE COGNITIVE RESERVE OF PEOPLE WITH ALZHEIMER'S

DISEASE AND THUS RESIST THE PATHOLOGY. GRANT AWARDED: \$72,046,

FONDATION VAINCRE ALZHEIMER, PARIS, FRANCE. FOR MORE INFORMATION, VISIT

THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/CA2021013

REGION: EUROPE (D) PURPOSE OF GRANT: NATIONAL GLAUCOMA RESEARCH BY

ESTER REINA-TORRES, PHD, ENTITLED: (G2021004F) MECHANISMS CONTROLLING  
AQUEOUS HUMOUR SEGMENTAL OUTFLOW IN MICE. INVESTIGATORS SUMMARY: THIS

PROJECT WILL CONTRIBUTE TO UNDERSTANDING AQUEOUS HUMOUR DRAINAGE

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BETTER, WHICH WOULD HELP THE DEVELOPMENT OF MORE EFFECTIVE DRUGS TO LOWER EYE PRESSURE AND TREAT GLAUCOMA. GRANT AWARDED: \$149,999, IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE, LONDON, UNITED KINGDOM. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/G2021004F

REGION: EAST ASIA & PACIFIC (D) PURPOSE OF GRANT: NATIONAL GLAUCOMA RESEARCH BY PUYA GHARAKHANI, PHD, ENTITLED: (G2021009S) HARNESSING ARTIFICIAL INTELLIGENCE APPROACHES TO BETTER UNDERSTAND GENETIC CONTRIBUTIONS TO OPTIC NERVE HEAD DEGENERATION AND GLAUCOMA. INVESTIGATORS SUMMARY: IN THIS STUDY RESEARCHERS PROPOSE APPLYING ARTIFICIAL INTELLIGENCE (AI) APPROACHES TO IDENTIFY THE GENES CONTRIBUTING TO OPTIC NERVE DAMAGE, AS WELL AS ANY TRENDS IN NERVE DAMAGE OVER TIME. THEY WILL INVESTIGATE WHETHER THESE GENES ARE TARGETED BY EXISTING APPROVED DRUGS (USED FOR TREATMENT OF THE OTHER DISEASES), AS THIS PROVIDES AN AVENUE TO DEVELOP NOVEL ACCESSIBLE TREATMENTS FOR GLAUCOMA BLINDNESS AIMED AT PREVENTING OPTIC NERVE DAMAGE. GRANT AWARDED: \$199,802, BERGHOFER MEDICAL RESEARCH INSTITUTE, QUEENSLAND INSTITUTE OF MEDICAL RESEARCH, HERSTON, QLD, AUSTRALIA. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/G2021009S

SCHEDULE F, PART II, LINE 1, COLUMN D:  
 REGION: EAST ASIA & PACIFIC (D) PURPOSE OF GRANT: NATIONAL GLAUCOMA RESEARCH BY MICHAEL GIRARD, PHD, ENTITLED: (G2021010S) THE BIOMECHANICAL PHENOTYPE OF NORMAL-TENSION GLAUCOMA. INVESTIGATORS SUMMARY: TO UNDERSTAND WHY SOME PATIENTS WITH NORMAL EYE PRESSURE DEVELOP GLAUCOMA, THIS STUDY PROPOSES ENGINEERING AND ARTIFICIAL

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INTELLIGENCE TOOLS TO FULLY ASSESS AND UNDERSTAND THE ROBUSTNESS OF THE OPTIC NERVE HEAD (ONH) IN A GIVEN PATIENT. THEIR GOAL IS TO ESTABLISH WHETHER ONH ROBUSTNESS CAN HELP US PREDICT WHO IS AT RISK OF DEVELOPING FUTURE GLAUCOMA DAMAGE, AND IF PROVEN, WE WILL BE ABLE TO PROVIDE EARLIER TREATMENT IN THE EYES THAT ARE DEEMED MECHANICALLY UNSTABLE.

GRANT AWARDED: \$200,000, SINGAPORE EYE RESEARCH INSTITUTE, SINGAPORE.

FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE:

[WWW.BRIGHTFOCUS.ORG/GRANT/G2021010S](http://WWW.BRIGHTFOCUS.ORG/GRANT/G2021010S)

REGION: EUROPE (D) PURPOSE OF GRANT: NATIONAL GLAUCOMA RESEARCH BY PIRRO HYSI, MD, PHD, ENTITLED: (G2021011S) IDENTIFICATION OF POTENTIAL GLAUCOMA THERAPY TARGETS THROUGH INTEGRATED MACHINE LEARNING ANALYSIS OF MULTI-OMIC BIOMARKERS. INVESTIGATORS SUMMARY: THE PURPOSE OF THIS PROJECT IS TO IDENTIFY HIGHLY VARIABLE AND MODIFIABLE MOLECULAR CHANGES THAT PARTICIPATE IN MECHANISMS CAUSING PRIMARY OPEN-ANGLE GLAUCOMA, AS IMMEDIATE TARGETS OF NOVEL TREATMENTS. THIS PROJECT WILL IDENTIFY MODIFIABLE CHANGES OF METABOLISM OR CHEMICAL MODIFICATIONS OF THE DNA THAT LEAD TO GLAUCOMA. THIS PROJECT WILL USE POWERFUL MACHINE LEARNING TO STACK MILLIONS OF DATA POINTS ACQUIRED THROUGH HIGH-THROUGHPUT PLATFORMS ("OMICS") IN A VERY LARGE NUMBER OF INDIVIDUALS TO IDENTIFY ROBUST SIGNALS OF EPIGENETIC AND METABOLIC CHANGES THAT TOGETHER MODULATE THE GLAUCOMA RISK. GRANT AWARDED: \$198,873, KING'S COLLEGE LONDON, UNITED KINGDOM. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: [WWW.BRIGHTFOCUS.ORG/GRANT/G2021011S](http://WWW.BRIGHTFOCUS.ORG/GRANT/G2021011S)

REGION: NORTH AMERICA (D) PURPOSE OF GRANT: NATIONAL GLAUCOMA RESEARCH BY MICHAEL REBER, PHD, ENTITLED: (G2021014S) SENSING ELEVATED INTRA-OCULAR PRESSURE IN MOUSE MODELS OF GLAUCOMA: POTENTIAL ROLE OF

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PIEZOS CHANNELS. INVESTIGATORS SUMMARY: THIS STUDY LOOKS INTO A NEW SET OF PRESSURE SENSOR MOLECULES DISCOVERED IN 2010 IN MAMMALS, THE PIEZO1 AND 2 RECEPTORS, EXPRESSED BY RETINAL GANGLION CELLS (RGCS) ARE SENSING EYE PRESSURE. IN THIS PROJECT, RESEARCHERS WANT TO INVESTIGATE FURTHER THE ROLE OF PIEZO1 AND 2 RECEPTORS IN SENSING EYE PRESSURE IN AN ANIMAL MODEL OF GLAUCOMA USING PHARMACOLOGICAL AND GENETIC APPROACHES AND MEASURE THE EFFECT ON RGC DEATH. GRANT AWARDED: \$200,000, UNIVERSITY HEALTH NETWORK, TORONTO, ON, CANADA. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/G2021014S

REGION: EAST ASIA & PACIFIC (D) PURPOSE OF GRANT: NATIONAL GLAUCOMA RESEARCH BY ZHICHAO WU, PHD, ENTITLED: (G2021016S) ACCURATE PREDICTION AND DETECTION OF GLAUCOMA PROGRESSION USING HYPERSPECTRAL AND WIDEFIELD OPTICAL COHERENCE TOMOGRAPHY IMAGING. INVESTIGATORS SUMMARY: THIS PROJECT COULD PROVIDE THE MUCH-NEEDED TOOLS TO BETTER GUIDE THE DECISION MAKING IN GLAUCOMA TREATMENT. THESE TOOLS CAN ALSO BE USED TO EXPEDITE THE DISCOVERY OF NEW TREATMENTS IN GLAUCOMA, BY IMPROVING OUR ABILITY TO IDENTIFY HIGH-RISK INDIVIDUALS TO ENROLL IN CLINICAL TRIALS AND BY PROVIDING SENSITIVE OUTCOME MEASURES TO DETECT TREATMENT EFFECTS OVER A MUCH SHORTER TIMEFRAME. GRANT AWARDED: \$199,504, CENTRE FOR EYE RESEARCH AUSTRALIA LIMITED, EAST MELBOURNE, AUSTRALIA. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/G2021016S

REGION: EUROPE (D) PURPOSE OF GRANT: NATIONAL GLAUCOMA RESEARCH BY DARRYL OVERBY, PHD, ENTITLED: (CG2020003) SELECTIVE TARGETING OF SCHLEMM'S CANAL INNER WALL FOR NEXT-GENERATION GLAUCOMA DRUGS: SUBPART C INVESTIGATORS SUMMARY: GLAUCOMA IS A BLINDING EYE DISEASE THAT CAN

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ONLY BE TREATED BY LOWERING EYE PRESSURE. OUR RESEARCH HAS IDENTIFIED A PARTICULAR CELL TYPE (SCHLEMM'S CANAL CELLS) THAT REGULATE EYE PRESSURE BY CONTROLLING THE DRAINAGE OF AQUEOUS HUMOR FROM THE EYE. IN THIS PROJECT, WE WILL DEVELOP AND APPLY NOVEL SCREENING TECHNOLOGIES TO IDENTIFY NEW DRUGS TO LOWER EYE PRESSURE BY IMPROVING AQUEOUS HUMOR DRAINAGE ACROSS SCHLEMM'S CANAL CELLS. GRANT AWARDED: \$391,901, IMPERIAL COLLEGE OF LONDON, UNITED KINGDOM. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/CG2020003

REGION: EUROPE (D) PURPOSE OF GRANT: NATIONAL GLAUCOMA RESEARCH BY DARRYL OVERBY, PHD, ENTITLED: (CG2020003A) SELECTIVE TARGETING OF SCHLEMM'S CANAL INNER WALL FOR NEXT-GENERATION GLAUCOMA DRUGS: SUBPART C. EMERGENCY RELIEF SUPPLEMENT DUE TO COVID-19. GRANT AWARDED: \$62,148, IMPERIAL COLLEGE OF LONDON, UNITED KINGDOM. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/CG2020003

SCHEDULE F, PART II, LINE 1, COLUMN D:

REGION: NORTH AMERICA (D) PURPOSE OF GRANT: MACULAR DEGENERATION RESEARCH BY BRITTANY CARR, PHD, ENTITLED: (M2021001F) TRACKING THE DEVELOPMENT OF RETICULAR PSEUDODRUSEN AND AGE-RELATED RETINAL DISEASE IN PROM1-NUL X. LAEVIS.. INVESTIGATORS SUMMARY: THIS STUDY INVOLVES CHARACTERIZING A NEW ANIMAL MODEL OF AGE-RELATED MACULAR DEGENERATION (AMD) THAT WILL PROVIDE SIGNIFICANT INSIGHT INTO THE RELATIONSHIP BETWEEN RETICULAR PSEUDODRUSEN (RPD) AND AMD PROGRESSION. ESTABLISHING RPD AS AN EARLY-INDICATOR OF AMD AND UNDERSTANDING ITS ROLE IN AMD PROGRESSION WILL RESULT IN MORE EFFECTIVE PREVENTION OF AMD-ASSOCIATED BLINDNESS. GRANT AWARDED: \$189,570, UNIVERSITY OF BRITISH COLUMBIA,

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**VANCOUVER, BC, CANADA. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/M2021001F**

**REGION: NORTH AMERICA (D) PURPOSE OF GRANT: MACULAR DEGENERATION RESEARCH BY RONY CHIDIAC, PHD, ENTITLED: (M2021003F) NOVEL FRIZZLED-4/LRP5 ANTIBODY-BASED AGONIST FOR NEOVASCULAR MACULAR DEGENERATION. INVESTIGATORS SUMMARY: FOR THE FIRST TIME, RESEARCHERS OF THIS STUDY COULD PRECISELY ACTIVATE ONE RECEPTOR OF THE MANY MIMICKING WNT PROTEINS AND STUDY ITS ROLE IN BLOOD VESSEL FORMATION AND INTEGRITY. THEY AIM TO TEST THIS MOLECULE'S THERAPEUTIC POTENTIAL IN MODELS MIMICKING THE NEOVASCULAR AGE-RELATED MACULAR DEGENERATION (AMD). THESE SYNTHETIC AGONISTS ARE ATTRACTIVE THERAPEUTIC MODALITIES TO CONTROL THE FORMATION OF NEW BLOOD VESSELS DURING NEOVASCULAR AMD. GRANT AWARDED: \$200,000, UNIVERSITY OF TORONTO, ON, CANADA. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/M2021003F**

**REGION: MIDDLE EAST (D) PURPOSE OF GRANT: MACULAR DEGENERATION RESEARCH BY MICHELLE GRUNIN, PHD, ENTITLED: (M2021006F) INTEGRATED IMMUNOGENOMICS TO DEVELOP TRANSLATIONAL TREATMENT FOR AGE-RELATED MACULAR DEGENERATION. INVESTIGATORS SUMMARY: THIS STUDY WILL USE NOVEL TECHNOLOGICAL TOOLS AND DIVERSE ANCESTRY REFERENCE PANELS THAT WERE PREVIOUSLY UNAVAILABLE, TO IDENTIFY NEW GENETIC RISK FACTORS FOR AGE-RELATED MACULAR DEGENERATION (AMD) AND POSSIBLE NEW GENETIC OR IMMUNE SYSTEM TARGETS FOR TREATMENT OF THE DISEASE. RESEARCHERS WILL UTILIZE THE EXISTING GENETICS OF THE INTERNATIONAL AMD GENOMICS CONSORTIUM, WITH OVER 50,000 SAMPLES, TO INVESTIGATE THESE ISSUES ON A LARGE SCALE. UTILIZING MULTIETHNIC PARTICIPANTS WILL ALLOW FOR**

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DISCOVERY OF RARE GENETIC VARIANTS NOT PREVIOUSLY INVESTIGATED. GRANT

AWARDED: \$200,000, HEBREW UNIVERSITY OF JERUSALEM, ISRAEL. FOR MORE

INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE:

WWW.BRIGHTFOCUS.ORG/GRANT/M2021006F

REGION: EAST ASIA & PACIFIC (D) PURPOSE OF GRANT: MACULAR DEGENERATION

RESEARCH BY YVETTE WOUFF, PHD, ENTITLED: (M2021012F) THERAPEUTIC

REPLENISHMENT OF HOMEOSTATIC MICRORNA USING EXTRACELLULAR VESICLES FOR

THE TREATMENT OF AGE-RELATED MACULAR DEGENERATION. INVESTIGATORS

SUMMARY: IN THE RETINA, EXTRACELLULAR VESICLES (EV) ARE RESPONSIBLE FOR

MEDIATING THIS ESSENTIAL COMMUNICATION AND WORK BY DELIVERING MOLECULAR

CARGO, INCLUDING SMALL GENE REGULATORS CALLED MICRORNA (MIRNA), TO

TARGET CELLS AND ARE REDUCED WITH DEGENERATING RETINA. IN THIS STUDY,

RESEARCHERS WILL SUPPLEMENT THE DEGENERATING RETINA WITH ESSENTIAL

RETINAL EV CARGO DERIVED FROM DONOR STEM CELLS AND INVESTIGATE THE

EFFECT ON RETINAL HEALTH. GRANT AWARDED: \$198,062, THE AUSTRALIAN

NATIONAL UNIVERSITY, CANBERRA, AUSTRALIA. FOR MORE INFORMATION, VISIT

THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/M2021012F

SCHEDULE I, PART II, LINE 1, COLUMN (H):

NAME OF ORGANIZATION OR GOVERNMENT: MASSACHUSETTS GENERAL HOSPITAL. (H)

PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY MOUSTAFA ALGAMAL,

PHD, ENTITLED: (A2021001F) RESTORING SLEEP AND MEMORY DEFICITS IN

ALZHEIMER'S DISEASE BY TARGETING SOMATOSTATIN INTERNEURONS.

INVESTIGATOR'S SUMMARY: SLOW-WAVE SLEEP IS CLOSELY ASSOCIATED WITH

MEMORY PERFORMANCE IN HEALTHY INDIVIDUALS AND IS ALSO DISRUPTED IN

ALZHEIMER'S DISEASE. THIS PROJECT AIMS TO FIND AND ACTIVATE THE GROUP

OF NEURONS RESPONSIBLE FOR SLOW-WAVE SLEEP REGULATION AND IMPROVE THEIR

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FUNCTION IN ALZHEIMER'S DISEASE (AD) MOUSE MODELS THROUGH TWO DIFFERENT APPROACHES. THE FIRST APPROACH WILL UTILIZE A NOVEL GENETIC TECHNOLOGY TO ACTIVATE THESE NEURONS WITH LIGHT, FOLLOWED BY ASSESSING MEMORY AND PATHOLOGY OF AD IN ANIMALS. THE SECOND APPROACH WILL RELY ON PHARMACOLOGICAL APPROACHES TO SUPPORT THE FUNCTION OF THESE NEURONS.

FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE:

[WWW.BRIGHTFOCUS.ORG/GRANT/A2021001F](http://WWW.BRIGHTFOCUS.ORG/GRANT/A2021001F)

NAME OF ORGANIZATION OR GOVERNMENT: BROWN UNIVERSITY. (H) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY BENEDETTA ASSETTA, PHD, ENTITLED: (A2021002F) ASTROGLIAL INFLAMMATORY SIGNALING IN ALZHEIMER'S DISEASE. INVESTIGATOR'S SUMMARY: NEUROINFLAMMATION SITS AT THE CENTER OF ALZHEIMER'S DISEASE (AD) PATHOGENESIS. THIS STUDY WILL INVESTIGATE THE REGULATORY ROLE OF CHI3L1, AN INFLAMMATORY MOLECULE THAT CORRELATES WITH AD DEVELOPMENT. THE BIOLOGICAL MECHANISMS OF CHI3L1 IN AD PATHOLOGY WILL BE STUDIED USING PATIENT DERIVED STEM CELLS AND ANIMAL MODELS. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE:

[WWW.BRIGHTFOCUS.ORG/GRANT/A2021002F](http://WWW.BRIGHTFOCUS.ORG/GRANT/A2021002F)

NAME OF ORGANIZATION OR GOVERNMENT: YALE UNIVERSITY. (H) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY YIFEI CAI, PHD, ENTITLED: (A2021003F) MOLECULAR MECHANISMS OF AXONAL PATHOLOGY IN ALZHEIMER'S DISEASE. INVESTIGATOR'S SUMMARY: AMYLOID DEPOSITS IN ALZHEIMER'S DISEASE ARE SURROUNDED BY AXONS WITH ABNORMALLY ENLARGED BULBOUS STRUCTURES. THESE STRUCTURES SEVERELY AFFECT AXONAL CONDUCTION OF SIGNALS AND THAT THIS MAY BE CORRELATED WITH MEMORY LOSS IN HUMANS. THE GOAL OF THIS PROJECT IS TO INVESTIGATE THE MOLECULAR AND CELLULAR MECHANISMS INVOLVED IN THE FORMATION OF THESE BULBS AND DETERMINE IF



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REVERSING THIS PATHOLOGY IS POSSIBLE, AND IF SO WHETHER THIS CAN RESTORE NORMAL AXONAL FUNCTION. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/A2021003F

NAME OF ORGANIZATION OR GOVERNMENT: UNIVERSITY OF CALIFORNIA, BERKELEY.

(H) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY XI CHEN, PHD, ENTITLED: (A2021004F) THE RELATIONSHIP BETWEEN AMYLOID/TAU PATHOLOGY AND DIFFERENT MEMORY PROCESSES UNDERLYING MEMORY AGING. INVESTIGATOR'S SUMMARY: THE PROPOSED PROJECT, FOCUSING ON EARLY STAGE ALZHEIMER'S DISEASE (AD), WILL EXAMINE THE BRAIN AND BEHAVIORAL DEFICITS IN OLDER ADULTS WITH NORMAL COGNITIVE PERFORMANCE BUT ALREADY HARBORING AD PATHOLOGY. THIS STUDY WILL USE FUNCTIONAL MRI TO INVESTIGATE HOW DIFFERENT BRAIN REGIONS ACTIVATE WHEN PARTICIPANTS VIEW PICTURES OF AN OBJECT, A SCENE, AND AN OBJECT IN A SCENE. PARTICIPANTS WILL COMPLETE A SURPRISE MEMORY TEST ON THE PICTURES 20 MINUTES LATER. THESE RESULTS WILL ISOLATE BRAIN ACTIVITIES THAT ARE CRITICAL FOR SUCCESSFUL MEMORY. PET IMAGING WILL THEN BE USED TO VISUALIZE THE DEPOSITION OF AMYLOID BETA AND TAU IN THE BRAIN TO DETERMINE THE SPECIFIC EFFECT THESE PROTEINS HAVE ON DIFFERENT DOMAINS OF MEMORY PERFORMANCE (OBJECT, SCENE, AND INTEGRATED OBJECT-SCENE MEMORY) AND WHAT BRAIN REGIONS ARE MOST AFFECTED. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/A2021004F

NAME OF ORGANIZATION OR GOVERNMENT: UNIVERSITY OF PENNSYLVANIA. (H)

PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY APRIL DARLING, PHD, ENTITLED: (A2021005F) ENGINEERING THERAPEUTIC TRIM11 DISAGGREGASES. INVESTIGATOR'S SUMMARY: A CLASS OF HELPFUL PROTEINS KNOWN AS DISAGGREGASES HAVE THE ABILITY TO DISSOLVE PROTEIN AGGREGATES. ONE

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RECENTLY IDENTIFIED IS TRIM11, AN IMPRESSIVE PROTEIN THAT CAN DISSOLVE PRE-FORMED AGGREGATES AND TARGET THEM FOR DEGRADATION LEADING TO DIMINISHED DISEASE SYMPTOMS. WHILE TRIM11 IS IMPRESSIVE, PROTEIN DISAGGREGASES CAN BE ENGINEERED TO HAVE ENHANCED ACTIVITY LEADING TO A MORE ROBUST RESCUE. ADDITIONALLY, TRIM PROTEINS CAN BE ENGINEERED FOR SPECIFICITY OF A PRE-DEFINED TARGET. THIS PROPOSAL WILL ENGINEER TRIM11 VARIANTS AND TEST THEIR ABILITY TO RESCUE TOXICITY INDUCED BY AGGREGATING PROTEINS. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: [WWW.BRIGHTFOCUS.ORG/GRANT/A2021005F](http://WWW.BRIGHTFOCUS.ORG/GRANT/A2021005F)

NAME OF ORGANIZATION OR GOVERNMENT: MAYO CLINIC ARIZONA. (H) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY CAMILA DE AVILA DAL BO, PHD, ENTITLED: (A2021006F) NUCLEUS INCERTUS OF THE BRAIN: MAPPING ITS GENOMIC EXPRESSION AND CHANGES IN ALZHEIMER'S DISEASE. INVESTIGATOR'S SUMMARY: CERTAIN AREAS IN THE BRAINSTEM, SUCH AS THE LOCUS COERULEUS, ARE HIGHLY VULNERABLE TO NEURODEGENERATIVE CONDITIONS, INCLUDING ALZHEIMER'S DISEASE. A RECENT LANDMARK PAPER PUBLISHED IN SCIENCE ESTABLISHED A KEY ROLE FOR THE BRAINSTEM REGION KNOWN AS THE NUCLEUS INCERTUS (NI) IN MEMORY, BY CONFIRMING IN MICE STRONG NEURAL COMMUNICATION BETWEEN THE NI AND THE HIPPOCAMPUS, A BRAIN REGION CRUCIAL FOR LEARNING AND MEMORY. IN HUMANS, THE SPECIFIC FUNCTIONS OF NI NEURONS AND THEIR CHEMICAL MESSENGERS, PRECISE DISTRIBUTION, AND CONNECTIVITY, ARE CURRENTLY UNKNOWN. THE MAIN GOAL OF THIS PROJECT IS TO INVESTIGATE THE NI IN HUMANS AND ELUCIDATE THE ROLE OF THE NI IN DEMENTIA AND ALZHEIMER'S DISEASE PATHOLOGY. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: [WWW.BRIGHTFOCUS.ORG/GRANT/A2021006F](http://WWW.BRIGHTFOCUS.ORG/GRANT/A2021006F)

NAME OF ORGANIZATION OR GOVERNMENT: BAYLOR COLLEGE OF MEDICINE. (H)

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PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY LINDSEY GOODMAN, PHD, ENTITLED: (A2021008F) DEFINING CONNECTIONS BETWEEN ROS-INDUCED GLIAL LIPID DROPLETS AND TAU IN ALZHEIMER'S DISEASE. INVESTIGATOR'S SUMMARY: TWO EARLY EVENTS THAT MAY CONTRIBUTE TO ALZHEIMER'S DISEASE (AD)-ONSET ARE THE DYSREGULATION OF LIPIDS AND EXCESS ACCUMULATION OF REACTIVE OXYGEN SPECIES (ROS). IN FLY AND MOUSE BRAINS, NEURONS EXPRESSING ROS PRODUCE PEROXIDATED LIPIDS THAT ARE TRANSFERRED TO GLIA WHERE THEY FORM LIPID DROPLETS. WITHIN GLIA, THESE LIPIDS ARE RESOLVED, PROTECTING NEURONS FROM ROS-INDUCED DAMAGE. MOUSE DATA SUGGESTS THAT TAU PLAYS A NORMAL ROLE IN THE RESOLUTION OF ROS IN THE BRAIN PRIOR TO THE FORMATION OF TAU TANGLES. THIS PROPOSAL WILL INVESTIGATE HOW TAU FUNCTIONS TO MEDIATE ROS IN AD BY DISRUPTING THE FORMATION OF LIPID DROPLETS AND EXAMINING TAU HYPERPHOSPHORYLATION AND AGGREGATION. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/A2021008F

SCHEDULE I, PART II, LINE 1, COLUMN (H):

NAME OF ORGANIZATION OR GOVERNMENT: THE JACKSON LABORATORY. (H) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY NIRAN HADAD, PHD, ENTITLED: (A2021010F) SYSTEMS GENETICS ANALYSIS OF ALZHEIMER'S DISEASE RELATED SLEEP DISRUPTION. INVESTIGATOR'S SUMMARY: TRADITIONAL MOUSE MODELS OF ALZHEIMER'S DISEASE (AD) HAVE PROVIDED SUBSTANTIAL INSIGHTS INTO POSSIBLE MECHANISMS CAUSING SLEEP LOSS IN AD. HOWEVER, THESE MODEL LACKS THE GENETIC DIVERSITY REQUIRED TO IDENTIFY GENES CONFERRING INDIVIDUAL RISK TO DEVELOP AD-RELATED SLEEP LOSS AND SUBSEQUENT COGNITIVE DECLINE. THE WORK PROPOSED HERE SEEKS TO IDENTIFY GENES THAT UNDERLIE AN INDIVIDUALS' RISK FOR DEVELOPING ALZHEIMER'S-RELATED LOSS OF SLEEP USING A WELL-CHARACTERIZED, GENETICALLY DIVERSE MOUSE MODEL OF

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**AD THAT BETTER MODELS THE COMPLEXITY OF HUMAN GENETIC DIVERSITY. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/A2021010F**

**NAME OF ORGANIZATION OR GOVERNMENT: STANFORD UNIVERSITY. (H) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY HARINI IYER, PHD, ENTITLED: (A2021011F) LYSOSOMAL SIGNALING IN MICROGLIA AND ALZHEIMER'S DISEASE. INVESTIGATOR'S SUMMARY: MICROGLIA CHEW UP DEAD CELLS AND FIGHT INFECTIONS IN THE BRAIN TO MAKE SURE THAT OTHER BRAIN CELLS, SUCH AS NEURONS, FUNCTION NORMALLY. WHEN MICROGLIA EAT BACTERIA OR DEAD MATERIAL, THIS MATERIAL PASSES THROUGH THE LYSOSOME, WHERE IT GETS RECYCLED OR BROKEN UP INTO SMALLER PIECES. DNA MUTATIONS IN PEOPLE WITH ALZHEIMER'S DISEASE OCCUR IN GENES THAT ARE IMPORTANT FOR MICROGLIA AND LYSOSOME FUNCTION. THIS PROJECT WILL INVESTIGATE HOW THESE GENES ARE IMPORTANT FOR THE NORMAL ACTIVITY OF MICROGLIA AND LYSOSOMES AND HOW, OVER TIME, THEY CAN CAUSE MICROGLIA TO SWITCH FROM BEING GOOD FOR THE BRAIN TO HARMING BRAIN CELLS. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/A2021011F**

**NAME OF ORGANIZATION OR GOVERNMENT: WASHINGTON UNIVERSITY SCHOOL OF MEDICINE. (H) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY KARIN MEEKER, PHD, ENTITLED: (A2021012F) TAU PHOSPHORYLATION IN PRECLINICAL AND SYMPTOMATIC AUTOSOMAL DOMINANT ALZHEIMER DISEASE. INVESTIGATOR'S SUMMARY: CHANGES IN BLOOD TAU LEVELS, COGNITIVE TESTS, AND BRAIN NETWORK CONNECTIVITY CAN BE USED AS BIOMARKERS TO MAP DISEASE PROGRESSION AND INDICATE CONVERSION FROM PRECLINICAL TO CLINICAL ALZHEIMER'S DISEASE (AD). IT IS UNKNOWN, HOWEVER, HOW VARIOUS PHOSPHORYLATION SITES ON TAU ARE ASSOCIATED WITH BRAIN NETWORK**

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ORGANIZATION AND WHETHER THEY CONTRIBUTE TO THE PROPAGATION OF TAU THROUGH BRAIN NETWORKS. THIS STUDY WILL USE NEUROIMAGING, CEREBROSPINAL FLUID, AND COGNITIVE MARKERS TO CHARACTERIZE AND STAGE THE TEMPORAL AND SPATIAL PROGRESSION OF TAUOPATHY OCCURRING DURING THE TRANSITION PERIOD IN AUTOSOMAL DOMINANT AD. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/A2021012F

NAME OF ORGANIZATION OR GOVERNMENT: ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI. (H) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY ANNA PODLESNY-DRABINIOK, PHD, ENTITLED: (A2021014F) INVESTIGATING THE ROLE OF LIVER X RECEPTORS IN CONTROL OF ALZHEIMER'S DISEASE RISK GENES AND LIPID CLEARANCE IN HIPSC-DERIVED MICROGLIA. INVESTIGATOR'S SUMMARY: ANALYSIS OF GENETIC FACTORS CONTRIBUTING TO ALZHEIMER'S DISEASE (AD) POINT TO THE CRITICAL ROLE OF BRAIN IMMUNE CELLS (MICROGLIA) AND FUNCTIONS THAT THEY EXERT SUCH AS EFFICIENT REMOVAL OF DYING CELLS IN THE PROCESS CALLED PHAGOCYTOSIS. IN AD BRAINS, IMMUNE CELLS ARE UNABLE TO PROPERLY REMOVE AMYLOID PLAQUES, AND THEY SUSTAIN INFLAMMATION CONTRIBUTING TO DISEASE PROGRESSION. THIS PROJECT WILL TEST WHETHER LIVER X RECEPTORS AND THE AD RISK GENE, BHLHE40/41, ARE MASTER REGULATORS OF MICROGLIAL PHAGOCYTOSIS USING HUMAN CELLS CARRYING AD MUTATIONS. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/A2021014F

NAME OF ORGANIZATION OR GOVERNMENT: MAYO CLINIC JACKSONVILLE. (H) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY ANA-CAROLINE RAULIN, PHD, ENTITLED: (A2021015F) PROTECTIVE MECHANISM OF APOE3-CHRISTCHURCH IN ALZHEIMER'S DISEASE. INVESTIGATOR'S SUMMARY: APOLIPOPROTEIN E (APOE) IS A PROTEIN WITH THE PRINCIPAL FUNCTION OF CARRYING LIPIDS AND

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CHOLESTEROL THROUGHOUT THE BODY. GENETIC VARIANTS OF THE APOE GENE AND RESULTING APOE PROTEIN HAVE DIFFERENT EFFECTS ON ALZHEIMER'S DISEASE STATUS. APOE4 INCREASES RISK, APOE3 IS NEUTRAL, AND APOE2 IS PROTECTIVE. RECENTLY, A RARE VERSION OF APOE CALLED APOE3-CHRISTCHURCH (APOE-CH) HAS BEEN SHOWN TO BE HIGHLY PROTECTIVE AGAINST AD. THIS STUDY WILL USE ANIMAL MODELS, HUMAN STEM CELLS, AND CEREBRAL ORGANIDS ('MINI-BRAINS IN A DISH') TO UNDERSTAND HOW APOE3-CH PROTECTS THE BRAIN FROM THE TOXIC EFFECTS OF BETA-AMYLOID ACCUMULATION. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/A2021015F

NAME OF ORGANIZATION OR GOVERNMENT: UNIVERSITY OF FLORIDA. (H) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY REBECCA WALLINGS, D.PHIL, ENTITLED: (A2021017F) THE ROLE OF THE PERIPHERAL IMMUNE-SYSTEM IN FTD-GRN; INCREASING UNDERSTANDING FOR FUTURE THERAPEUTIC TARGET DEVELOPMENT. INVESTIGATOR'S SUMMARY: PREVIOUS EVIDENCE SUGGESTS THAT MICROGLIA ARE NOT THE ONLY CULPRIT IN FRONTOTEMPORAL DEMENTIA (FTD), BUT RATHER, IMMUNE CELLS NORMALLY FOUND IN CIRCULATING BLOOD (MONOCYTES) INFILTRATE INTO THE BRAIN AND MAY PLAY A ROLE IN NEURODEGENERATION. LYSOSOMES, ORGANELLES IN CELLS RESPONSIBLE FOR PROTEIN RECYCLING AND CELL SIGNALING, ARE CRUCIAL FOR PROPER IMMUNE CELL FUNCTION, AND MAY BE DYSREGULATED IN FTD MONOCYTES. USING A COMBINATION OF MOUSE MODELS AND FTD-PATIENT SAMPLES, THIS RESEARCH AIMS TO UNVEIL THE ROLE OF THESE PERIPHERAL IMMUNE CELLS AND DYSFUNCTIONAL LYSOSOMES IN THE DEVELOPMENT OF FTD. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/A2021017F

NAME OF ORGANIZATION OR GOVERNMENT: UNIVERSITY OF CALIFORNIA, SAN

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FRANCISCO. (H) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY XIAOWEI WANG, PHD, ENTITLED: (A2021018F) DETERMINING MECHANISMS OF AGE-RELATED CEREBROVASCULAR DYSFUNCTION IN A GENETIC MODEL OF CEREBRAL SMALL VESSEL DISEASE. INVESTIGATOR'S SUMMARY: TYPE IV COLLAGEN (ENCODED BY COL4A1 AND COL4A2 GENES) IS A FUNDAMENTAL COMPONENT OF THE VASCULAR BASEMENT MEMBRANE A SHEET-LIKE STRUCTURE AROUND BLOOD VESSELS THAT PROVIDES PHYSICAL SUPPORT AND ACTS AS A PLATFORM FOR SIGNALING. PATIENTS WITH MUTATIONS IN COL4A1 OR COLA2 HAVE VERY HIGH PREVALENCE OF CEREBRAL SMALL VESSEL DISEASES AND GENETIC ASSOCIATION STUDIES ALSO IMPLICATE THESE TWO GENES IN GENERAL CEREBROVASCULAR HEALTH. COL4A1 MUTANT MICE FAITHFULLY REPLICATE HUMAN PATHOLOGIES AND SHOW AGE-DEPENDENT LOSS OF CEREBROVASCULAR TONE, WHICH COULD FURTHER CAUSE COGNITIVE IMPAIRMENT. USING THIS MOUSE MODEL, THIS PROPOSAL AIMS TO IDENTIFY THE EARLY VASCULAR CHANGES AND UNDERLYING MOLECULAR MECHANISMS THAT ULTIMATELY LEAD TO THE AGE-DEPENDENT LOSS OF CEREBROVASCULAR TONE. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/A2021018F

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NAME OF ORGANIZATION OR GOVERNMENT: J. DAVID GLADSTONE INSTITUTES. (H) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY ZHAOQI YAN, PHD, ENTITLED: (A2021019F) FIBRINOGEN-MEDIATED INNATE IMMUNE ACTIVATION AND NEURONAL DYSFUNCTION IN ALZHEIMER'S DISEASE. INVESTIGATOR'S SUMMARY: FIBRINOGEN, A BLOOD COAGULATION PROTEIN, DEPOSITS IN THE BRAINS OF PEOPLE WITH ALZHEIMER'S DISEASE (AD) AND CAUSES MICROGLIA ACTIVATION, OXIDATIVE STRESS, NEURONAL LOSS, AND COGNITIVE IMPAIRMENT. THIS PROPOSAL WILL USE A MULTI-PRONGED EXPERIMENTAL DESIGN TO EXAMINE THE CEREBROVASCULAR MECHANISMS REGULATING NEURONAL DYSFUNCTION IN AD.

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STATE-OF-THE-ART IMAGING WILL BE USED TO STUDY THE INTERACTION OF FIBRINOGEN AND NEURONS IN LIVING MICE WITH SUBCELLULAR RESOLUTION. THE TRANSCRIPTIONAL MACHINERY UNDERLYING FIBRINOGEN-MEDIATED OXIDATIVE STRESS WILL BE DETERMINED AND USED TO GENERATE A GLOBAL TRANSCRIPTIONAL ATLAS IN THE BRAIN OF AD MICE AT SINGLE-CELL LEVEL. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE:  
WWW.BRIGHTFOCUS.ORG/GRANT/A2021019F

NAME OF ORGANIZATION OR GOVERNMENT: UNIVERSITY OF CALIFORNIA, SAN FRANCISCO. (H) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY BEIKA ZHU, PHD, ENTITLED: (A2021020F) CHARACTERIZING THE ROLE OF MICROGLIAL GPR56 IN ALZHEIMER'S DISEASE. INVESTIGATOR'S SUMMARY: THIS PROPOSAL WILL TEST THE HYPOTHESIS THAT MICROGLIAL GPR56, A CELL SURFACE PROTEIN THAT RECEIVES SIGNALS FROM NEIGHBORING CELLS, PLAYS A ROLE IN MAINTAINING BRAIN FUNCTION AND STOPS ALZHEIMER'S DISEASE (AD) PROGRESSION. GPR56 FUNCTION WILL BE DETERMINED BY GENERATING A NEW MOUSE MODEL WHERE GPR56 ACTIVITY IS INHIBITED, OR KNOCKED DOWN. INVESTIGATING CHANGES IN INFLAMMATORY RESPONSES, MEMORY, AND MOTOR FUNCTION, WILL ELUCIDATE THE MECHANISMS BY WHICH GPR56 MEDIATES AD ONSET AND PROGRESSION. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/A2021020F

NAME OF ORGANIZATION OR GOVERNMENT: ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI. (H) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY KATHRYN BOWLES, PHD, ENTITLED: (A2021021S) SINGLE CELL PROFILING OF MAPT SPLICING MUTATION IPSC-DERIVED ORGANOID AND BRAIN TISSUE. INVESTIGATOR'S SUMMARY: PROGRESSIVE SUPRANUCLEAR PALSY (PSP) AND FRONTOTEMPORAL DEMENTIA (FTD) ARE AGE-RELATED DEMENTIAS ASSOCIATED WITH



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THE ACCUMULATION OF 4R TAU. PSP AND FTD CAN BE CAUSED BY SPECIFIC MUTATIONS ON THE GENE ENCODING FOR TAU, MAPT. A PANEL OF IPSC LINES THAT CARRY SPECIFIC PSP/FTD MUTATIONS AND HAVE INCREASED 4R TAU EXPRESSION, WILL BE USED TO GENERATE 3D BRAIN ORGANIDS. GENE EXPRESSION ANALYSES AND PHENOTYPIC ASSAYS WILL BE CONDUCTED TO IDENTIFY EARLY CHANGES ASSOCIATED WITH 4R TAU AND THE DEVELOPMENT OF DISEASE. NEXT, BULK AND SINGLE-NUCLEI SEQUENCING WILL BE CARRIED OUT ON BRAIN TISSUES FROM INDIVIDUALS WITH THE SAME MAPT MUTATIONS TO VALIDATE THESE CHANGES AND THOROUGHLY CHARACTERIZE THE IMPACT OF 4R TAU ACCUMULATION IN ADULT HUMAN BRAIN. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/A2021021S

NAME OF ORGANIZATION OR GOVERNMENT: BRIGHAM AND WOMEN'S HOSPITAL, INC.

(H) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY OLEG BUTOVSKY, PHD, ENTITLED: (A2021022S) APOE4 GENDER-DEPENDENT REGULATION OF NEUTROPHIL-MICROGLIA CRASS-TALK IN ALZHEIMER'S DISEASE. INVESTIGATOR'S SUMMARY: APOE PLAYS A CRITICAL ROLE IN INDUCING MICROGLIAL PHENOTYPES THAT ARE ASSOCIATED WITH NEURODEGENERATION. A KEY QUESTION IS WHETHER APOE VARIANTS DERIVED FROM INNATE IMMUNITY PERIPHERAL CELLS (MACROPHAGES AND NEUTROPHILS) ALSO CONTROL IMMUNE RESPONSES DRIVEN BY MICROGLIA AND CONTRIBUTE TO DISEASE PROGRESSION. PRELIMINARY DATA SHOW THAT HUMAN APOE VARIANTS MEDIATE DIFFERENTIAL REGULATION OF PRO-INFLAMMATORY SIGNATURES IN NEUTROPHILS IN A SEX-DEPENDENT MANNER. IMPORTANTLY, RECENT STUDIES IDENTIFIED SIMILAR INFLAMMATORY SIGNATURES IN BLOOD NEUTROPHILS, WHICH WAS ASSOCIATED WITH COGNITIVE DECLINE IN ALZHEIMER'S DISEASE (AD) PATIENTS. THIS PROPOSAL AIMS TO INVESTIGATE THE ROLE OF APOE VARIANTS IN THE REGULATION OF NEUTROPHIL-MICROGLIA INTERACTIONS AS A THERAPEUTIC TARGET FOR AD. FOR MORE INFORMATION,

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NAME OF ORGANIZATION OR GOVERNMENT: BRIGHAM AND WOMEN'S HOSPITAL, INC.

(H) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY LAURA COX, PHD,

ENTITLED: (A2021024S) THE MICROBIOTA CELL-TYPE SPECIFIC REGULATION OF

AD PATHOGENESIS. INVESTIGATOR'S SUMMARY: THE GUT MICROBIOTA CONTAINS

TRILLIONS OF MICROBES THAT PROMOTE HEALTH BY PRODUCING VITAMINS,

DEFENDING AGAINST BAD BACTERIA, OR TRAINING THE IMMUNE SYSTEM. THE GUT

MICROBIOTA ALSO AFFECTS THE BRAIN BY SECRETING SUBSTANCES THAT CAN

AFFECT THE IMMUNE SYSTEM OR MOOD. IN AGING, THE GUT MICROBIOTA BECOMES

DESTABILIZED AND CAN CONTRIBUTE TO DISEASE. THIS PROJECT INVESTIGATES

HOW AGE-RELATED MICROBIOTA CHANGES CONTRIBUTE TO ALZHEIMER'S DISEASE TO

FIND WAYS TO CONTROL THE MICROBIOME AND PROMOTE HEALTHY BRAIN AGING.

FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE:

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NAME OF ORGANIZATION OR GOVERNMENT: MAYO CLINIC JACKSONVILLE. (H)

PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY SANDRO DA MESQUITA,

PHD, ENTITLED: (A2021025S) EFFECTS AND MECHANISMS OF APOE-INDUCED

MENINGEAL LYMPHATIC REMODELING IN ALZHEIMER'S DISEASE. INVESTIGATOR'S

SUMMARY: THIS PROPOSAL TESTS THE HYPOTHESIS THAT EXPRESSION OF APOE4 IS

AFFECTING BRAIN FUNCTION BY IMPAIRING THE MENINGEAL LYMPHATIC

VASCULATURE AND, CONSEQUENTLY, DISTURBING BRAIN DRAINAGE AND INCREASING

NEUROINFLAMMATION. TO ADDRESS THIS, MALE AND FEMALE MICE LACKING

ENDOGENOUS APOE, OR EXPRESSING HUMAN APOE3 OR APOE4 INSTEAD, WILL BE

USED TO STUDY THE CELLULAR AND MOLECULAR MECHANISMS INVOLVED IN THE

REGULATION OF MENINGEAL LYMPHATIC FUNCTION AT DIFFERENT AGES. FOR MORE

INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE:

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NAME OF ORGANIZATION OR GOVERNMENT: OHIO STATE UNIVERSITY. (H) PURPOSE

OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY HONGJUN FU, PHD, ENTITLED:

(A2021027S) CEREBRAL ORGANOIDS TO INVESTIGATE CELLULAR AND NEURONAL

NETWORK VULNERABILITY IN ALZHEIMER'S DISEASE AND PROGRESSIVE

SUPRANUCLEAR PALSY. INVESTIGATOR'S SUMMARY: ABNORMAL TAU PROTEINS

SPREAD BETWEEN CELLS IN THE BRAIN IN BOTH ALZHEIMER'S DISEASE (AD) AND

PROGRESSIVE SUPRANUCLEAR PALSY (PSP) CAUSING NEURODEGENERATION AND

DYSFUNCTION. TAU BUILD UP HAS ALSO BEEN FOUND TO SPREAD IN ANIMAL

MODELS, HOWEVER, THESE MODELS DON'T FULLY REPLICATE THE MOLECULAR,

STRUCTURAL, AND GENETIC COMPLEXITY OF THESE DISEASES. WE PROPOSE TO USE

CEREBRAL ORGANOIDS OR MINIATURE BRAINS GROWN FROM HUMAN INDUCED

PLURIPOTENT STEM CELLS CONTAINING WILD-TYPE OR A TAU MUTATION AND TREAT

THEM WITH DIFFERENT TAU SEEDS TO INVESTIGATE WHICH CELL TYPES ARE

VULNERABLE IN AD AND PSP AND WHY. FOR MORE INFORMATION, VISIT THE

BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/A2021027S

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NAME OF ORGANIZATION OR GOVERNMENT: OHIO STATE UNIVERSITY. (H) PURPOSE

OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY JIE GAO, PHD, ENTITLED:

(A2021028S) TARGETING E3 LIGASE IDOL TO MITIGATE APOE4-MEDIATED TAU

PATHOLOGY. INVESTIGATOR'S SUMMARY: APOLIPOPROTEIN E4 (APOE4) MARKEDLY

EXACERBATES TAU PATHOLOGY AND TAU-MEDIATED NEURODEGENERATION IN

ALZHEIMER'S DISEASE (AD). THEREFORE, TARGETING APOE4'S DETRIMENTAL

EFFECTS IN TAU PATHOLOGY MIGHT SERVE AS A PROMISING STRATEGY FOR THE

TREATMENT OF AD. IDOL IS A NOVEL, MAJOR REGULATOR OF BRAIN APOE

RECEPTOR EXPRESSION, AND HAS A PROFOUND IMPACT ON APOE METABOLISM. THIS

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STUDY AIMS TO UNDERSTAND THE MULTIFACTORIAL ROLE AND UNDERLYING MECHANISMS OF ACTION OF IDOL IN MITIGATING APOE4-MEDIATED TAU PATHOLOGY IN AD. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/A2021028S

NAME OF ORGANIZATION OR GOVERNMENT: UNIVERSITY OF CALIFORNIA, SAN FRANCISCO. (H) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY JASON GESTWICKI, PHD, ENTITLED: (A2021029S) DE-PHOSPHORYLATION OF TAU BY CHAPERONE COMPLEXES. INVESTIGATOR'S SUMMARY: TAU IS ABNORMALLY MODIFIED BY PHOSPHORYLATION AND PHOSPHORYLATION AT SPECIFIC SITES MAY PRECEDE DISEASE. WHILE THE ENZYMES THAT ADD PHOSPHORYLATION GROUPS ARE WELL KNOWN, THERE HAS BEEN SIGNIFICANTLY LESS ATTENTION PAID TO THE ENZYMES, TERMED PHOSPHATASES, THAT REMOVE THESE MODIFICATIONS. EXCITING PRELIMINARY RESULTS SHOWED THAT SPECIFIC 'HELPER' PROTEINS, OR CHAPERONES, CAN BIND TO TAU AND RECRUIT A SPECIFIC PHOSPHATASE, PP5. THIS STUDY WILL USE CUTTING EDGE TECHNIQUES TO LOOK AT PROTEIN STRUCTURES AND INTERACTIONS OF CHAPERONES WITH PP5 TO DETERMINE WHETHER THESE INTERACTIONS ARE IMPORTANT FOR REMOVING PHOSPHORYLATION GROUPS FROM TAU. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/A2021029S

NAME OF ORGANIZATION OR GOVERNMENT: COLUMBIA UNIVERSITY. (H) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY ULRICH HENGST, PHD, ENTITLED: (A2021030S) TRANSCRIPTIONAL DYSREGULATION OF THE ENDOCYTTIC MACHINERY IN AD. INVESTIGATOR'S SUMMARY: ENDOSOMES FORM COMPLEXES WITH MULTIPLE OTHER PROTEINS, INCLUDING TRANSFERRINS (TF), TO PERFORM INTRACELLULAR SORTING OF SUBSTANCES THAT WILL ULTIMATELY BE DEGRADED OR RECYCLED. A NEW TF COMPLEX THAT IS ASSOCIATED WITH AMYLOID HAS BEEN IDENTIFIED AND

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IS PROPOSED TO TRANSCRIPTIONALLY REGULATE COMPONENTS OF THE RETROMER, A MULTIPROTEIN COMPLEX THAT MEDIATES THE SORTING AND TRANSPORT OF PROTEINS OUT OF EARLY ENDOSOMES. THIS PROJECT WILL DETERMINE THE SUFFICIENCY OF THE TF COMPLEX TO DEREGULATE THE EXPRESSION OF RETROMER COMPONENTS AND TO CAUSE ENDOSOMAL TRAFFICKING DEFECTS, AND INVESTIGATE WHETHER AD PATHOLOGY IS ALTERED IN MICE LACKING ONE OF THE TFS. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE:  
[WWW.BRIGHTFOCUS.ORG/GRANT/A2021030S](http://WWW.BRIGHTFOCUS.ORG/GRANT/A2021030S)

NAME OF ORGANIZATION OR GOVERNMENT: WASHINGTON UNIVERSITY. (H) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY LAURA IBANEZ, PHD, ENTITLED: (A2021033S) PATHOPHYSIOLOGY OF SRNAS IN ALZHEIMER'S DISEASE.

INVESTIGATOR'S SUMMARY: THIS PROPOSAL WILL CHARACTERIZE THE DIFFERENT POPULATIONS OF SMALL RNAS IN BRAIN, PLASMA, AND CEREBROSPINAL FLUID OF INDIVIDUALS WITH ALZHEIMER'S DISEASE. THEIR BIOLOGICAL ROLE WILL BE INVESTIGATED BY: I) IDENTIFYING WHICH SMALL RNAS ARE DIFFERENT BETWEEN CASES AND CONTROLS IN EACH SPECIMEN (BRAIN, PLASMA AND CEREBROSPINAL FLUID); II) USE SMALL RNAS TO GENERATE TOOLS THAT ALLOW DISEASE PREDICTION, AND III) USE CELLULAR MODELS TO INVESTIGATE THE BIOLOGICAL CONSEQUENCES OF DYSREGULATING THE IDENTIFIED SMALL RNAS. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE:  
[WWW.BRIGHTFOCUS.ORG/GRANT/A2021033S](http://WWW.BRIGHTFOCUS.ORG/GRANT/A2021033S)

NAME OF ORGANIZATION OR GOVERNMENT: NORTHEAST OHIO MEDICAL UNIVERSITY. (H) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY ERIN REED-GEAGHAN, PHD, ENTITLED: (A2021036S) DEVELOPMENTAL DETERMINANTS OF SEXUALLY DIVERGENT NEUROINFLAMMATORY PROCESSES IN ALZHEIMER'S DISEASE. INVESTIGATOR'S SUMMARY: IN ADDITION TO THE PATHOLOGICAL HALLMARKS OF

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AMYLOID PLAQUES AND NEUROFIBRILLARY TANGLES, ALZHEIMER'S DISEASE (AD) IS CHARACTERIZED BY A ROBUST INFLAMMATORY RESPONSE IN THE BRAIN. WOMEN ARE DISPROPORTIONALLY AFFECTED IN AD, AND HAVE MORE INFLAMMATION, BUT THE REASONS FOR THESE SEX DIFFERENCES ARE UNCLEAR. THE STUDIES IN THIS PROPOSAL ARE DESIGNED TO IDENTIFY THE DEVELOPMENTAL PROCESSES THAT ESTABLISH AND PERPETUATE THE SEX DIFFERENCES IN THIS INFLAMMATORY RESPONSE. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: [WWW.BRIGHTFOCUS.ORG/GRANT/A2021036S](http://WWW.BRIGHTFOCUS.ORG/GRANT/A2021036S)

NAME OF ORGANIZATION OR GOVERNMENT: MAYO CLINIC JACKSONVILLE. (H)  
PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY WILFRIED ROSSOLL, PHD, ENTITLED: (A2021038S) IDENTIFYING NOVEL MODIFIERS OF TAU AGGREGATION AND PATHOLOGY USING PROXIMITY PROTEOMICS. INVESTIGATOR'S SUMMARY: THE GOAL OF THIS PROJECT IS TO IDENTIFY PROTEINS THAT ASSOCIATE WITH TAU PROTEIN AGGREGATES THAT MAY CONTRIBUTE TO TAU PATHOLOGY IN ALZHEIMER'S DISEASE (AD). A NOVEL METHOD TO PRECISELY MAP THE COMPOSITION OF INSOLUBLE PROTEIN AGGREGATES IN THE CONTEXT OF LIVING BRAIN TISSUE VIA PROXIMITY LABELING AND PROTEOMIC ANALYSIS WILL BE USED TO OVERCOME THE LIMITATIONS OF CLASSICAL AFFINITY-PURIFICATION METHODS. THIS APPROACH HAS BEEN FURTHER OPTIMIZED TO STUDY THE TRANSITION OF TAU FROM ITS PHYSIOLOGICAL TO ITS PATHOLOGICAL FORM IN CULTURED NEURONS AND BRAIN TISSUE MODELS OF AD. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: [WWW.BRIGHTFOCUS.ORG/GRANT/A2021038S](http://WWW.BRIGHTFOCUS.ORG/GRANT/A2021038S)

NAME OF ORGANIZATION OR GOVERNMENT: BAYLOR COLLEGE OF MEDICINE. (H)  
PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY MELANIE SAMUEL, PHD, ENTITLED: (A2021039S) PERICYTE NEURON CROSSTALK AND THE PROGRESSION OF ALZHEIMER'S DISEASE. INVESTIGATOR'S SUMMARY: ALZHEIMER'S DISEASE (AD)

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AFFECTS MILLIONS OF INDIVIDUALS, AND CO-MORBIDITIES SUCH AS VASCULAR DISEASE CAN SIGNIFICANTLY ACCELERATE COGNITIVE DECLINE. ALTERATIONS TO NEURON AND BLOOD VESSEL COMMUNICATION MAY DRIVE THESE OUTCOMES. THIS STUDY AIMS TO UNDERSTAND HOW AD DISRUPTS ENERGY HOMEOSTASIS AND NEUROVASCULAR COUPLING THROUGH SPECIALIZED VASCULAR STRUCTURES CALLED PERICYTE NANOTUBES. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/A2021039S

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NAME OF ORGANIZATION OR GOVERNMENT: MEDICAL UNIVERSITY OF SOUTH CAROLINA. (H) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY TAKASHI SATO, PHD, ENTITLED: (A2021041S) NEURAL CIRCUIT MECHANISMS UNDERLYING SLEEP DISRUPTION IN ALZHEIMER'S DISEASE MODEL MICE. INVESTIGATOR'S SUMMARY: SLEEP DISTURBANCE IS BOTH AN EARLY SYMPTOM OF ALZHEIMER'S DISEASE (AD) IN THE PRODROMAL PHASE, AND ONE OF THE FACTORS THAT EXACERBATES AD. THIS PROJECT WILL STUDY THE INTERACTION BETWEEN SLEEP AND AD PROGRESSION USING ADVANCED MICROSCOPY AND OPTICAL STIMULATION. KEY COMPONENTS OF THE NEURAL CIRCUITS THAT CONTRIBUTE TO SLEEP WILL BE IDENTIFIED AND SPECIFIC COMPONENTS OF THE NEURAL CIRCUIT WILL BE MANIPULATED DURING SLEEP TO ENHANCE SLEEP-RELATED ACTIVITY IN THE BRAIN AND EXAMINE HOW THESE MANIPULATIONS AFFECT AD PROGRESSION AND COGNITION. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/A2021041S

NAME OF ORGANIZATION OR GOVERNMENT: WASHINGTON UNIVERSITY. (H) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY ARISTEIDIS SOTIRAS, PHD, ENTITLED: (A2021042S) DETECTING AND CHARACTERIZING PRECLINICAL AD USING AI AND STRUCTURAL MRI. INVESTIGATOR'S SUMMARY: THE PROPOSED PROJECT

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WILL DEVELOP ARTIFICIAL INTELLIGENCE (AI) TOOLS BASED ON DEEP LEARNING (DL) THAT USE WIDELY AVAILABLE IMAGING, COGNITIVE AND CLINICAL DATA TO IDENTIFY INDIVIDUALS THAT SHOW EARLY SIGNS OF ALZHEIMER'S PATHOLOGY AND PREDICT THEIR FUTURE COGNITIVE PERFORMANCE. SUCH TOOLS ARE CRUCIAL FOR IMPROVING CLINICAL CARE BY ENABLING EARLY DIAGNOSIS AND INTERVENTION. ADDITIONALLY, THEY CAN REDUCE CLINICAL TRIAL COSTS BY ENABLING TARGETED RECRUITMENT OF HOMOGENEOUS GROUPS OF INDIVIDUALS AT INCREASED RISK OF COGNITIVE DECLINE AND PROGRESSION TO ALZHEIMER'S DISEASE DEMENTIA. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE:  
WWW.BRIGHTFOCUS.ORG/GRANT/A2021042S

NAME OF ORGANIZATION OR GOVERNMENT: CASE WESTERN RESERVE UNIVERSITY - SCHOOL OF MEDICINE. (H) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY MASASHI TABUCHI, PHD, ENTITLED: (A2021043S) CLOCK-DRIVEN SLEEP FRAGMENTATIONS IN TAUOPATHY. INVESTIGATOR'S SUMMARY: THE OVERALL OBJECTIVE OF THIS PROPOSAL IS TO ELUCIDATE THE ROLE THAT INACTIVATION STATES OF VOLTAGE-GATED SODIUM CHANNELS PLAY IN THE REGULATION OF CIRCADIAN RHYTHMS AND SLEEP IN ALZHEIMER'S DISEASE (AD) AND RELATED TAUOPATHIES. THIS PROPOSAL WILL TEST THROUGH COMPARATIVE, BOTH IN VIVO (DROSOPHILA) AND IN VITRO (IPS CELLS), ASSESSMENTS OUR CENTRAL HYPOTHESIS THAT MANIPULATIONS OF INACTIVATION STATES OF VOLTAGE-GATED SODIUM CHANNELS IN AD LEAD TO MOLECULAR AND CELLULAR ALTERATIONS RESULTING IN DYSFUNCTIONAL CIRCADIAN RHYTHMS, SLEEP ALTERATIONS, AND DISEASE PROGRESSION. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/A2021043S

NAME OF ORGANIZATION OR GOVERNMENT: MAYO CLINIC JACKSONVILLE. (H)

PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY NA ZHAO, PHD,



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ENTITLED: (A2021046S) APOE GENOTYPE-DEPENDENT EFFECTS OF LIFE-STYLE INTERVENTION IN HEALTHY AGING AND ALZHEIMER'S DISEASE. INVESTIGATOR'S SUMMARY: AGING AND THE APOLIPOPROTEIN E4 (APOE4) GENE ARE THE GREATEST RISK FACTORS FOR LATE-ONSET ALZHEIMER'S DISEASE (AD). WHILE MANY THERAPIES HAVE FAILED IN CLINICAL TRIALS, RESEARCH SHOWS THAT LIFE-STYLE INTERVENTIONS CAN DELAY DISEASE ONSET. FOOD RESTRICTION HAS BEEN RECOGNIZED AS ONE OF THE MOST EFFECTIVE WAYS TO EXTEND HEALTHSPAN, HOWEVER, IT IS UNCLEAR WHETHER GENETICALLY SUSCEPTIBLE INDIVIDUALS SUCH AS APOE4 CARRIERS CAN STILL BENEFIT FROM PREVENTIVE LIFE-STYLE INTERVENTIONS. AS SUCH, THIS PROPOSAL PLANS TO INVESTIGATE HOW DIET CONTROL OR EXERCISE AFFECTS BRAIN HEALTH USING ANIMAL MODELS WITH AGING OR AD, AND WITH OR WITHOUT THE APOE4 GENE. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/A2021046S

NAME OF ORGANIZATION OR GOVERNMENT: MAYO CLINIC, JACKSONVILLE. (H)

PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH ENTITLED: (CA2017563) MOLECULAR NEURODEGENERATION JOURNAL. WE PARTNER WITH BIOMED CENTRAL'S OPEN ACCESS JOURNAL, MOLECULAR NEURODEGENERATION(MN), WHICH IS THE OFFICIAL JOURNAL OF BRIGHTFOCUS. THE OPEN ACCESS PUBLISHING MODEL PROVIDES FREE ARTICLES TO THE GENERAL PUBLIC, AS WELL AS SCIENTISTS, CLINICIANS, AND OTHER HEALTHCARE PRACTITIONERS. MN PUBLISHES PEER-REVIEWED, ORIGINAL SCIENTIFIC RESEARCH ON THE CAUSES OF NEURODEGENERATIVE DISEASES, SUCH AS ALZHEIMER'S OR PARKINSON' AND ON THE PRE-CLINICAL TESTING OF POTENTIAL THERAPIES FOR THESE DEVASTATING DISEASES. MN HAS AN IMPACT SCORE OF 6.43 (WITH A 5-YEAR IMPACT FACTOR OF 7.08, REFLECTING THE SUSTAINED IMPACT OF OUR JOURNAL), AND REMAINS THE HIGHEST RANKED OPEN ACCESS NEUROSCIENCE JOURNAL IN THE JOURNAL CITATION REPORTS (JCR).

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NAME OF ORGANIZATION OR GOVERNMENT: MAYO CLINIC, JACKSONVILLE. (H)

PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH ENTITLED: (CA2021010)

MOLECULAR NEURODEGENERATION JOURNAL. THE AIM OF MOLECULAR

NEURODEGENERATION (MN) JOURNAL

([HTTPS://MOLECULARNEURODEGENERATION.BIOMEDCENTRAL.COM/](https://molecularneurodegeneration.biomedcentral.com/)) IS TO SERVE THE

SCIENTIFIC COMMUNITY BY PUBLISHING HIGH-IMPACT, HIGH-QUALITY, AND

FRONT-LINE RESEARCH DISCOVERIES IN DIVERSE AREAS OF NEURODEGENERATIVE

DISEASES INCLUDING ALZHEIMER'S DISEASE AND EYE-RELATED DEGENERATIVE

CONDITIONS. MN IS THE OFFICIAL JOURNAL OF THE BRIGHTFOCUS FOUNDATION.

THE OPEN ACCESS PUBLISHING MODEL PROVIDES FREE ARTICLES TO THE GENERAL

PUBLIC, AS WELL AS SCIENTISTS, CLINICIANS, AND OTHER HEALTHCARE

PRACTITIONERS. THE JOURNAL HAS SEEN FURTHER GROWTH IN RECENT YEARS IN

PARTICULAR IN THE AREA OF SCIENTIFIC IMPACT AND REPUTATION. SOME OF

THESE ARE REFLECTED IN THE FOLLOWING METRICS: 1) THE USAGE OF THE

JOURNAL: 568,061 DOWNLOADS IN 2019 AND 770,533 DOWNLOAD IN 2020; 2) THE

CITATIONS TRACKED BY WEB OF SCIENCE: 4290 IN 2018, 5217 IN 2019, AND

6488 IN 2020.; 3) THE IMPACT FACTOR: 8.274 IN 2018, AND 9.599 IN 2019;

4) THE RANKING BY JCR: MOLECULAR NEURODEGENERATION HAS BEEN RANKED AS

THE NO. 1 OPEN-ACCESS JOURNAL IN THE NEUROSCIENCE CATEGORY FOR SEVEN

YEARS IN A ROW (2013 PRESENT), AND RANKED NO. 15 AMONG ALL 272

NEUROSCIENCE JOURNALS (WITHIN THE TOP 5.5%).

NAME OF ORGANIZATION OR GOVERNMENT: INTERNATIONAL SOCIETY FOR MOLECULAR

NEURODEGENERATION. (H) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH

ENTITLED: (CA2021011) MOLECULAR NEURODEGENERATION JOURNAL. THIS AWARD

IS FOR THE CREATION, AND GROWTH OF, THE "INTERNATIONAL SOCIETY FOR

MOLECULAR NEURODEGENERATION (ISMND) AND SUPPORT OF ITS BI-ANNUAL

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MEETINGS AND EDUCATIONAL AND SCIENTIFIC PURPOSES. IN ACCORDANCE WITH SECTION 501(C)(3) OF THE INTERNAL REVENUE CODE AND THE PROVISIONS OF THE FLORIDA NOT FOR PROFIT CORPORATION ACT. THE INTERNATIONAL SOCIETY FOR MOLECULAR NEURODEGENERATION (ISMND) SHALL BE ORGANIZED AND OPERATED PRIMARILY AND EXCLUSIVELY FOR EDUCATIONAL AND SCIENTIFIC PURPOSES. THE INTERNATIONAL SOCIETY FOR MOLECULAR NEURODEGENERATION'S MISSION IS TO SERVE AS AN ACCELERATOR FOR THE CONTINUOUS IMPROVEMENT OF BRAIN AND EYE HEALTH AND WELL-BEING BY CREATING A MULTIDISCIPLINARY GLOBAL PLATFORM FOR SCIENTISTS, PHYSICIANS, AND THE PUBLIC FROM DIFFERENT FACETS AND SCIENTIFIC DISCIPLINES TO MORE READILY CONNECT, SHARE AND COMMUNICATE SCIENTIFIC DISCOVERIES, AND DEVELOP CURES FOR NEURODEGENERATIVE DISEASES, IN THE HOPES OF A WORLD FREE OF BRAIN AND EYE DISEASES.

SCHEDULE I, PART II, LINE 1, COLUMN (H):

NAME OF ORGANIZATION OR GOVERNMENT: TUFTS UNIVERSITY - BOSTON. (H)  
 PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY WONHEE KIM, PHD,  
 ENTITLED: (A2019021F) IMPACT OF ELEVATED APP ON BACE1 SUBSTRATES  
 PROCESSING. EMERGENCY RELIEF SUPPLEMENT DUE TO COVID-19. FOR MORE  
 INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE:  
[WWW.BRIGHTFOCUS.ORG/GRANT/A2019021F](http://WWW.BRIGHTFOCUS.ORG/GRANT/A2019021F)

NAME OF ORGANIZATION OR GOVERNMENT: MASSACHUSETTS GENERAL HOSPITAL. (H)  
 PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY MASATO MAESAKO, PHD,  
 ENTITLED: (A2019056F) VISUALIZATION OF AMYLOID-BETA PRODUCTION.  
 EMERGENCY RELIEF SUPPLEMENT DUE TO COVID-19. FOR MORE INFORMATION,  
 VISIT THE BRIGHTFOCUS WEBSITE: [WWW.BRIGHTFOCUS.ORG/GRANT/A2019056F](http://WWW.BRIGHTFOCUS.ORG/GRANT/A2019056F)

NAME OF ORGANIZATION OR GOVERNMENT: EMORY UNIVERSITY. (H) PURPOSE OF

Name of the organization <b>BRIGHTFOCUS FOUNDATION</b>	Employer identification number <b>23-7337229</b>
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**GRANT: ALZHEIMER'S DISEASE RESEARCH BY THOMAS KUKAR, PHD, ENTITLED: (A2019355S) UNDERSTANDING LYSOSOME DYSFUNCTION IN ALZHEIMER'S DISEASE. EMERGENCY RELIEF SUPPLEMENT DUE TO COVID-19. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/A2019355S**

**NAME OF ORGANIZATION OR GOVERNMENT: MASSACHUSETTS GENERAL HOSPITAL. (H)  
PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY JILL GOLDSTEIN, PHD, ENTITLED: (CA2018607) DEVELOPMENT OF CLINICAL ALGORITHM TO IDENTIFY RISK FOR ALZHEIMER'S DISEASE IN EARLY MIDLIFE. EMERGENCY RELIEF SUPPLEMENT DUE TO COVID-19. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/CA2018607**

**NAME OF ORGANIZATION OR GOVERNMENT: JOHNS HOPKINS UNIVERSITY. (H)  
PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY QUINCY SAMUS, PHD, ENTITLED: (CA2021001) DISSEMINATION OF MIND AT HOME DEMENTIA CARE MODEL TO DRIVE HEALTH CARE TRANSFORMATION AND GREATER VALUE. INVESTIGATOR'S SUMMARY: INFORMED BY DECADES OF DEMENTIA CARE CLINICAL EXPERTISE, BEST PRACTICE RECOMMENDATIONS, AND CLINICAL STUDIES, MIND AT HOME IS AN EFFECTIVE, COMPREHENSIVE, HOMEBASED DEMENTIA CARE COORDINATION MODEL THAT SYSTEMATICALLY ASSESSES AND ADDRESSES A BROAD RANGE OF DEMENTIARELATED CARE NEEDS THAT PLACE ELDERS AT RISK FOR HEALTH DISPARITIES, HOSPITALIZATIONS, UNWANTED LONG TERM CARE PLACEMENT, POOR QUALITY OF LIFE AND FAMILY CAREGIVERS AT RISK FOR BURNOUT AND HEALTH IMPACTS. YET TRANSLATION INTO PRACTICE HAS BEEN SLOW PRIMARILY DUE LACK OF DATA ON ITS POTENTIAL FOR RETURN ON INVESTMENT AND ITS VALUE PROPOSITION TO HEALTH SYSTEMS, HEALTH PLANS, AND PROVIDERS, AS WELL LACK OF DATA ON HOW TO EFFECTIVELY REFINE THE MODEL TO INTEGRATE INTO EXISTING HEALTH CARE DELIVERY ENVIRONMENTS. THIS GRANT SUPPORTS A**

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**PARTNERSHIP WITH UNIVERSITY OF MARYLAND BALTIMORE COUNTY, JADE GONG & ASSOCIATES LLC, AND JOHNS HOPKINS HOME CARE GROUP, WITH THE SUPPORT OF MARYLAND PRIMARY CARE PROGRAM, MARYLAND MEDICAID, AND JOHNS HOPKINS ALLIANCE FOR PATIENTS TO STRATEGICALLY ADVANCE THE DISSEMINATION AND TRANSLATION OF JOHN HOPKINS UNIVERSITY'S EVIDENCEBASED MIND AT HOME MODEL, IN THE CONTEXT OF MARYLAND'S NEW PRIMARY CARE PROGRAM (MDPCP) AS A TRANSFORMATIVE TOOL TO ACHIEVE GREATER CARE COORDINATION AND VALUE FOR A VULNERABLE COGNITIVELY IMPAIRED POPULATION. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/CA2021001**

**NAME OF ORGANIZATION OR GOVERNMENT: MEDICAL TECHNOLOGY ENTERPRISE CONSORTIUM. (H) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH ENTITLED: (CA2021014) SUPPORT FOR PROPOSAL MTEC-20-16-MTBI-002, ADVANCING THE PROMISING CEREBROPROTECTANT AST-004 TO HUMAN TRAUMATIC BRAIN INJURY CLINICAL TRIALS. INVESTIGATOR'S SUMMARY: SUPPORT FOR PROPOSAL MTEC-20-16-MTBI-002, ADVANCING THE PROMISING CEREBROPROTECTANT AST-004 TO HUMAN TRAUMATIC BRAIN INJURY CLINICAL TRIALS. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/CA2021014**

**NAME OF ORGANIZATION OR GOVERNMENT: MEDICAL TECHNOLOGY ENTERPRISE CONSORTIUM. (H) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH ENTITLED: (CA2021015) SUPPORT FOR PROPOSAL MTEC-20-16-MTBI-005, MITOCHONDRIAL UNCOUPLING PRODRUG TO TREAT REPEATED MILD TRAUMATIC BRAIN INJURY INVESTIGATOR'S SUMMARY: SUPPORT FOR PROPOSAL MTEC-20-16-MTBI-005, MITOCHONDRIAL UNCOUPLING PRODRUG TO TREAT REPEATED MILD TRAUMATIC BRAIN INJURY. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/CA2021015**

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SCHEDULE I, PART II, LINE 1, COLUMN (H):

NAME OF ORGANIZATION OR GOVERNMENT: FOUNDATION FOR THE NATIONAL  
 INSTITUTES OF HEALTH. (H) PURPOSE OF GRANT: ALZHEIMER'S DISEASE  
 RESEARCH BY ENTITLED: (CA2021012) PRE-COMPETITIVE ANALYTICAL  
 VALIDATION OF SV2A PET IMAGING AS A BIOMARKER OF SYNAPTIC DENSITY  
 INVESTIGATOR'S SUMMARY: THE SV2A PET PROJECT AIMS TO DEMONSTRATE THE  
 RELIABILITY OF SV2A PET IMAGING AS A BIOMARKER OF SYNAPTIC DENSITY IN  
 ALZHEIMER'S DISEASE AND ACCELERATE THE APPLICATION OF SV2A PET AS A  
 TREATMENT RESPONSE MARKER IN DISEASE-MODIFYING CLINICAL TRIALS. FOR  
 MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE:  
[WWW.BRIGHTFOCUS.ORG/GRANT/CA2021012](http://WWW.BRIGHTFOCUS.ORG/GRANT/CA2021012)

NAME OF ORGANIZATION OR GOVERNMENT: BOSTON UNIVERSITY SCHOOL OF  
 MEDICINE. (H) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY  
 BENJAMIN WOLOZIN, MD, PHD ENTITLED: (CA2020002) DEVELOPMENT OF  
 SYNTHETIC GENE FEEDBACK CIRCUITS TO PREVENT TAU AGGREGATION.  
 INVESTIGATOR'S SUMMARY: THIS PROPOSAL USES A RADICALLY NOVEL APPROACH  
 TERMED "SYNTHETIC BIOLOGY", WHICH USES CONCEPTS FROM ELECTRICAL  
 ENGINEERING TO DESIGN NEW TYPES OF GENETIC THERAPY FOR ALZHEIMER'S  
 DISEASE (AD). WE WILL CREATE NEW SYNTHETIC GENE CIRCUITS THAT CAN  
 DETECT AND THEN REMOVE HARMFUL TAU PATHOLOGY AS IT APPEARS IN THE  
 BRAINS OF PATIENTS WITH AD. THESE NEW THERAPIES WILL SELECTIVELY TARGET  
 ONLY THOSE NERVE CELLS THAT ACTUALLY HAVE PATHOLOGY, INCREASING THE  
 EFFECTIVENESS WHILE REDUCING THE POTENTIAL FOR UNWANTED SIDE EFFECTS.  
 FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE:  
[WWW.BRIGHTFOCUS.ORG/GRANT/CA2020002](http://WWW.BRIGHTFOCUS.ORG/GRANT/CA2020002)

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**NAME OF ORGANIZATION OR GOVERNMENT: UNIVERSITY OF DENVER. (H) PURPOSE OF GRANT: ALZHEIMER'S DISEASE RESEARCH BY ANN CHARLOTTE GRANHOLM-BENTLEY, PHD, ENTITLED: (CA2018010) INTERNATIONAL BRAIN BANK FOR DOWN SYNDROME-RELATED ALZHEIMER'S DISEASE INVESTIGATOR'S SUMMARY: THE FOCUS OF THIS SPECIAL PROJECT IS TO DEVELOP A STRONG COLLABORATE NETWORK BETWEEN SIX DIFFERENT RESEARCH GROUPS FOCUSED ON PROVIDING MUCH-NEEDED INFORMATION ABOUT THE DOWN SYNDROME POPULATION, OF WHICH AS MANY AS 80 PERCENT HAVE ALZHEIMER'S PATHOLOGY BY THE TIME THEY ARE IN THEIR 50S AND 60S. ALTHOUGH THERE ARE MANY CENTERS AND RESEARCHERS THAT FOCUS ON ALZHEIMER'S IN THE GENERAL POPULATION, FEW OF THEM FOCUS ON PEOPLE WITH DOWN SYNDROME. THE INFORMATION GENERATED BY OUR PROJECT WILL BE OF GREAT HELP TO THOSE WITH DOWN SYNDROME AND THOSE WITH ALZHEIMER'S DISEASE. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/CA2018010**

**NAME OF ORGANIZATION OR GOVERNMENT: THE MILKEN INSTITUTE. (H) PURPOSE OF GRANT: PROJECT SUPPORT FOR STUDY ON NEUROTECHNOLOGY THAT INCLUDES IDENTIFYING AREAS FOR FUTURE INVESTMENT IN RESEARCH.**

**NAME OF ORGANIZATION OR GOVERNMENT: NEW YORK UNIVERSITY SCHOOL OF MEDICINE. (H) PURPOSE OF GRANT: NATIONAL GLAUCOMA RESEARCH BY JI WON BANG, PHD, ENTITLED: (G2021001F) ALTERATIONS OF THE SLEEP-REGULATING SYSTEMS IN GLAUCOMA. INVESTIGATOR'S SUMMARY: THIS STUDY WILL USE MULTIMODAL BRAIN NEUROIMAGING, CLINICAL OPHTHALMIC ASSESSMENTS, AND SLEEP QUALITY ASSESSMENTS IN EARLY-STAGE AND ADVANCED-STAGE GLAUCOMA PATIENTS, AND HEALTHY SUBJECTS. THE OUTCOMES SHOULD PROVIDE A MECHANISTIC ACCOUNT OF THE HIGH INCIDENCE OF SLEEP DISORDERS IN GLAUCOMA AND COULD LEAD TO THERAPEUTIC ADVANCEMENTS BENEFITTING**

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MILLIONS OF PEOPLE. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS

WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/G2021001F

NAME OF ORGANIZATION OR GOVERNMENT: BOSTON CHILDREN'S HOSPITAL. (H)

PURPOSE OF GRANT: NATIONAL GLAUCOMA RESEARCH BY NICHOLAS HANOVICE, PHD,

ENTITLED: (G2021002F) AUGMENTING OPTIC NERVE REGENERATION USING

CELL-INTRINSIC AND EXTRINSIC MANIPULATIONS. INVESTIGATOR'S SUMMARY:

THIS PROPOSAL WILL IDENTIFY THE INFLAMMATORY CELL TYPE THAT PROMOTES

RGC AXON REGENERATION, DETERMINING WHICH RGC SUBTYPES EXTEND AXONS INTO

THE INJURY SITE, AND TEST WHETHER EXPANDING INFLAMMATION FURTHER INTO

THE OPTIC NERVE WILL ENHANCE LONG-DISTANCE AXON REGENERATION. RESULTS

FROM THIS PROPOSAL WILL PROVIDE MECHANISTIC INSIGHT INTO NEURO-IMMUNE

INTERACTIONS THAT STIMULATE RGC AXON REGENERATION, AND POTENTIALLY OPEN

NEW AVENUES TO RESTORE SIGHT IN GLAUCOMA PATIENTS. FOR MORE

INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE:

WWW.BRIGHTFOCUS.ORG/GRANT/G2021002F

NAME OF ORGANIZATION OR GOVERNMENT: UNIVERSITY OF PITTSBURGH. (H)

PURPOSE OF GRANT: NATIONAL GLAUCOMA RESEARCH BY YI HUA, PHD, ENTITLED:

(G2021003F) HEMODYNAMICS AND BIOMECHANICS OF THE MONKEY LAMINA

CRIBROSA. INVESTIGATOR'S SUMMARY: THIS STUDY WILL TEST IF ELEVATED EYE

PRESSURE DEFORMS THE MICROVESSELS THAT SUPPLY BLOOD, NUTRIENTS, AND

OXYGEN TO THE LAMINA REGION AT THE BACK OF THE EYE TO SUPPORT THE NERVE

CELLS. THE LONG-TERM GOAL IS TO UNDERSTAND AXON DEATH MECHANISMS IN

GLAUCOMA AND HELP DEVELOP NOVEL DIAGNOSTIC AND THERAPEUTIC AGENTS FOR

CLINICAL GLAUCOMA TREATMENT. FOR MORE INFORMATION, VISIT THE

BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/G2021003F



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SCHEDULE I, PART II, LINE 1, COLUMN (H):

NAME OF ORGANIZATION OR GOVERNMENT: GEORGIA TECH RESEARCH CORPORATION.

(H) PURPOSE OF GRANT: NATIONAL GLAUCOMA RESEARCH BY BABAK SAFA, PHD, ENTITLED: (G2021005F) INVESTIGATING THE OPTIC NERVE HEAD REMODELING IN GLAUCOMATOUS OPTIC NEUROPATHY. INVESTIGATOR'S SUMMARY: IN THIS PROJECT RESEARCHER WILL: (1) PROVIDE THE MOST ACCURATE CHARACTERIZATION OF THE MECHANICAL PROPERTIES AND MECHANOBIOLOGY OF THE OPTIC NERVE HEAD, THE PRIMARY SITE OF DAMAGE IN GLAUCOMATOUS OPTIC NEUROPATHY, AND (2) WILL DEVELOP A PHYSIOLOGICALLY-APPROPRIATE EX VIVO 3D CULTURE MODEL TO STUDY THE MECHANOBIOLOGIC RESPONSE OF ONH CELLS, THOUGHT TO DRIVE CHARACTERISTIC CHANGES IN GLAUCOMA. THIS SYSTEM WILL EVENTUALLY FORM THE BASIS OF A HIGH-THROUGHPUT DRUG DISCOVERY SYSTEM, ACCELERATING THE DEVELOPMENT OF FUTURE TREATMENTS FOR GLAUCOMA. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/G2021005F

NAME OF ORGANIZATION OR GOVERNMENT: BOSTON CHILDREN'S HOSPITAL. (H)

PURPOSE OF GRANT: NATIONAL GLAUCOMA RESEARCH BY KIMBERLY WONG, PHD, ENTITLED: (G2021006F) TRANSCRIPTIONAL MECHANISMS THAT REGULATE GANGLION CELL SURVIVAL AND AXON REGENERATION. INVESTIGATOR'S SUMMARY: THE GOAL OF OUR RESEARCH IS TO INVESTIGATE HOW CELL DEATH AND AXON REGENERATION ARE REGULATED BY PROTEINS DUAL LEUCINE ZIPPER KINASE (DLK) AND LEUCINE ZIPPER KINASE (LZK) THAT ARE CRUCIAL FOR RGC DEATH. THIS WORK CAN LEAD TO THE DEVELOPMENT OF NEW THERAPIES TO HALT OR EVEN REVERSE RGC DEATH AND VISION LOSS. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/G2021006F

NAME OF ORGANIZATION OR GOVERNMENT: COLUMBIA UNIVERSITY. (H) PURPOSE OF

GRANT: NATIONAL GLAUCOMA RESEARCH BY REVATHI BALASUBRAMANIAN, PHD,

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ENTITLED: (G2021007S) MECHANISMS OF ANGLE DEVELOPMENT AND GLAUCOMA.

INVESTIGATOR'S SUMMARY: IN SEVERAL CASES OF GLAUCOMA AND ESPECIALLY EARLY-ONSET GLAUCOMA, DRAINAGE STRUCTURES THAT REGULATE THE EYE PRESSURE ARE AFFECTED. TO ADDRESS THIS, WE NEED TO UNDERSTAND THE GENETICS OF DRAINAGE STRUCTURE DEVELOPMENT. WE HAVE DEVELOPED A MOUSE MODEL OF EARLY-ONSET GLAUCOMA. USING A NEWLY DEVELOPED MOUSE MODEL OF EARLY-ONSET AND MODERN IMAGING METHODS, RESEARCHERS WILL DETERMINE HOW DRAINAGE STRUCTURES DEVELOP AND THE MECHANISM THROUGH WHICH ABNORMALITIES IN DRAINAGE TISSUE GLAUCOMA. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/G2021007S

NAME OF ORGANIZATION OR GOVERNMENT: DUKE UNIVERSITY SCHOOL OF MEDICINE.

(H) PURPOSE OF GRANT: NATIONAL GLAUCOMA RESEARCH BY ROMAIN CARTONI, PHD, ENTITLED: (G2021008S) DECIPHERING THE LOCAL EFFECT OF GLAUCOMA RISK FACTORS ON AXONAL MITOPROTEOME. INVESTIGATOR'S SUMMARY: MITOCHONDRIA, AN INTRACELLULAR ORGANELLE RESPONSIBLE FOR KEY CELLULAR PROCESSES SUCH AS ENERGY PRODUCTION AND PROGRAMMED CELL DEATH REGULATION, HAVE BEEN SHOWN TO BE IMPAIRED IN RETINAL GANGLION CELLS (RGCS) AFFECTED BY GLAUCOMA. THIS STUDY WILL UNCOVER REGULATORS OF MITOCHONDRIAL FUNCTIONS THAT ARE AFFECTED IN GLAUCOMATOUS CONDITIONS WHICH MAY CONSTITUTE NOVEL THERAPEUTIC TARGETS. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/G2021008S

NAME OF ORGANIZATION OR GOVERNMENT: JOHNS HOPKINS UNIVERSITY. (H)

PURPOSE OF GRANT: NATIONAL GLAUCOMA RESEARCH BY THAO NGUYEN, PHD, ENTITLED: (G2021012S) IN VIVO CHARACTERIZATION OF THE MECHANICAL PROPERTIES OF THE HUMAN OPTIC NERVE HEAD. INVESTIGATOR'S SUMMARY: THE PROPOSED RESEARCH AIMS TO MEASURE THE DEFORMATION OF THE LAMINA

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CRIBROSA, A CONNECTIVE TISSUE STRUCTURE IN THE OPTIC NERVE HEAD THAT SUPPORTS THE OPTIC NERVE AXONS, IN PATIENTS CAUSED BY A SHORT-TERM CHANGE IN THE EYE PRESSURE BY LASER SUTURELYSIS AND WEARING TIGHT-FITTING SWIM GOGGLES. THE IMPLICATIONS OF THIS WORK CAN BE IMPORTANT TO UNDERSTANDING THE SUSCEPTIBILITY OF INDIVIDUALS TO GLAUCOMA AND TO DEVELOPING NEW DIAGNOSTICS TECHNIQUES AND NEW THERAPEUTIC STRATEGIES. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: [WWW.BRIGHTFOCUS.ORG/GRANT/G2021012S](http://WWW.BRIGHTFOCUS.ORG/GRANT/G2021012S)

NAME OF ORGANIZATION OR GOVERNMENT: JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE. (H) PURPOSE OF GRANT: NATIONAL GLAUCOMA RESEARCH BY IAN PITHA, PHD, ENTITLED: (G2021013S) MAPPING SCLERAL FIBROBLASTS AND THEIR SIGNIFICANCE IN GLAUCOMA. INVESTIGATOR'S SUMMARY: DAMAGE TO THE NERVE CELLS OCCURS BECAUSE PRESSURE WITHIN THE EYE PINCHES THE NERVE AT THE OPTIC NERVE HEAD. INTRAOCULAR PRESSURE REDUCTION ALLEVIATES THIS PINCHING AND ALLOWS THE CELL TO FUNCTION PROPERLY. THUS, THIS PROPOSAL AIMS TO UNDERSTAND BETTER HOW THE WALL OF THE EYE REMODELS IN GLAUCOMA AND TEST AN APPROACH TO PREVENT PINCHING OF THE NERVE CELLS BY ALTERING THIS PROCESS. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: [WWW.BRIGHTFOCUS.ORG/GRANT/G2021013S](http://WWW.BRIGHTFOCUS.ORG/GRANT/G2021013S)

NAME OF ORGANIZATION OR GOVERNMENT: THE MEDICAL COLLEGE OF WISCONSIN, INC. (H) PURPOSE OF GRANT: NATIONAL GLAUCOMA RESEARCH BY MATTHEW VELDMAN, PHD, ENTITLED: (G2021015S) NEW NEUROPROTECTIVE GENES AGAINST AXONAL DAMAGE AND GLAUCOMA. INVESTIGATOR'S SUMMARY: THE CURRENT PROJECT USES LOSS OF FUNCTION STUDIES IN ZEBRAFISH AND GAIN OF FUNCTION STUDIES IN MAMMALIAN CELLS TO TEST THE NEUROPROTECTIVE ABILITY OF FOUR CANDIDATE GENES IDENTIFIED IN ZEBRAFISH. THE GOAL OF THIS STUDY IS TO

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UNDERSTAND THE BASIC BIOLOGY OF INJURY RESILIENCE AND OPTIC NERVE  
REGENERATION IN THE ZEBRAFISH AND APPLY THAT KNOWLEDGE TO MAMMALIAN  
MODELS OF GLAUCOMA WITH THE LONG-TERM HOPES OF IDENTIFYING NEW AVENUES  
FOR THERAPEUTIC DEVELOPMENT IN PATIENTS. FOR MORE INFORMATION, VISIT  
THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/G2021015S

SCHEDULE I, PART II, LINE 1, COLUMN (H):

NAME OF ORGANIZATION OR GOVERNMENT: UNIVERSITY OF CALIFORNIA, DAVIS.

(H) PURPOSE OF GRANT: NATIONAL GLAUCOMA RESEARCH BY ROBERT ZAWADZKI,  
PHD, ENTITLED: (G2021017S) VALIDATION OF NOVEL OCT BASED IMAGING TOOLS  
FOR NONINVASIVE LONGITUDINAL MONITORING OF THE RETINAL GANGLION CELLS  
IN ANIMAL MODELS OF GLAUCOMA. INVESTIGATOR'S SUMMARY: NOVEL TREATMENTS  
FOCUSED ON RESTORING VISION IN GLAUCOMA, USING GENE OR STEM CELL  
THERAPIES, WOULD BENEFIT FROM THE DEVELOPMENT OF CELLULAR RESOLUTION IN  
VIVO IMAGING TOOLS, THAT COULD OFFER SENSITIVITY AND SPECIFICITY BEYOND  
CURRENT CLINICAL TESTS. TO ACHIEVE THAT WE PROPOSE TO DEVELOP AND  
VALIDATE NOVEL STRUCTURAL AND FUNCTIONAL EXTENSION OF OPTICAL COHERENCE  
TOMOGRAPHY (OCT), SO-CALLED TEMPORAL SPECKLE ANALYSIS OCT (TSA-OCT),  
FOR BASIC SCIENCE RESEARCH. FOR MORE INFORMATION, VISIT THE  
BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/G2021017S

NAME OF ORGANIZATION OR GOVERNMENT: UNIVERSITY OF WISCONSIN-MADISON.

(H) PURPOSE OF GRANT: NATIONAL GLAUCOMA RESEARCH BY ROBERT W. NICKELLS,  
PHD, ENTITLED: (G2018166) THE PATHOLOGICAL CONTRIBUTION OF CELL  
ADHESION DISRUPTION IN RGC DEATH. EMERGENCY RELIEF SUPPLEMENT DUE TO  
COVID-19. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE:  
WWW.BRIGHTFOCUS.ORG/GRANT/G2018166

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NAME OF ORGANIZATION OR GOVERNMENT: UNIVERSITY OF ILLINOIS AT CHICAGO.

(H) PURPOSE OF GRANT: NATIONAL GLAUCOMA RESEARCH BY JOHN HETLING, PHD, ENTITLED: (G2019356) DIAGNOSING GLAUCOMA IN THE PERIPHERAL RETINA.

EMERGENCY RELIEF SUPPLEMENT DUE TO COVID-19. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/G2019356

NAME OF ORGANIZATION OR GOVERNMENT: GEORGIA INSTITUTE OF TECHNOLOGY.

(H) PURPOSE OF GRANT: NATIONAL GLAUCOMA RESEARCH BY C. ROSS ETHIER, PHD, ENTITLED: (CG2020001) SELECTIVE TARGETING OF SCHLEMM'S CANAL INNER

WALL FOR NEXT-GENERATION GLAUCOMA DRUGS: SUBPART A INVESTIGATOR'S SUMMARY: ALL TREATMENTS FOR GLAUCOMA SEEK TO LOWER INTRAOCULAR PRESSURE

(IOP), YET EXISTING APPROACHES ARE INSUFFICIENT. WE NOW UNDERSTAND THAT ENDOTHELIAL CELL OF THE INNER WALL OF SCHLEMM'S CANAL (SC) PLAY A KEY

ROLE IN HOMEOSTATIC CONTROL MECHANISMS THAT MAINTAIN IOP WITHIN A TARGET RANGE. HOWEVER, TOOLS FOR DIRECTLY ASSESSING SC INNER WALL

ENDOTHELIAL FUNCTION ARE LACKING, AS ARE MOLECULAR APPROACHES FOR DIRECTLY TARGETING AND INTERROGATING THESE CELLS. THE LONG-TERM GOAL OF

THIS INTER-DEPENDENT, MULTIPLE PRINCIPAL INVESTIGATOR AND GRANTEE INSTITUTION-ASSOCIATED PROJECT IS TO DEVELOP NOVEL THERAPIES THAT

DIRECTLY TARGET SC CELLS TO IMPROVE IOP CONTROL. THESE TARGETED THERAPIES WILL BE HIGHLY EFFECTIVE DUE THEIR SPECIFICITY, AND WILL THUS

GREATLY BENEFIT GLAUCOMA PATIENTS. TO ACCOMPLISH THIS GOAL, WE HAVE ASSEMBLED AN OUTSTANDING TEAM THAT BRINGS TOGETHER ALL NECESSARY

EXPERTISE TO INTERVENE IN THIS COMPLEX SYSTEM. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/CG2020001

NAME OF ORGANIZATION OR GOVERNMENT: DUKE UNIVERSITY. (H) PURPOSE OF

GRANT: NATIONAL GLAUCOMA RESEARCH BY W. DANIEL STAMER, PHD, ENTITLED:



Name of the organization BRIGHTFOCUS FOUNDATION	Employer identification number 23-7337229
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(CG2020002) SELECTIVE TARGETING OF SCHLEMM'S CANAL INNER WALL FOR NEXT-GENERATION GLAUCOMA DRUGS: SUBPART B INVESTIGATOR'S SUMMARY: FOR THE PROJECT, WE WILL SCREEN CANDIDATE ADENO ASSOCIATED VIRUSES AND ENGINEERED PROMOTERS CLONED INTO LENTIVIRUSES OBTAINED FROM COLLABORATORS IN HUMAN SCHLEMM'S CANAL CELLS IN VITRO AND ANTERIOR SEGMENTS EX VIVO FOR SELECTIVE TROPISM TO/ACTIVITY IN TRABECULAR MESHWORK VERSUS SCHLEMM'S CANAL. WE WILL UTILIZE RECENTLY VALIDATED VIRUS TECHNOLOGY (ENOS PROMOTERS DRIVING XFP OR SEAP REPORTER PROTEINS) TO TRANSDUCE SCHLEMM'S CANAL IN HUMAN ANTERIOR SEGMENTS AND MONITOR SHEAR STRESS LEVELS AND LOCATION THROUGHOUT SCHLEMM'S CANAL. WE WILL PROVIDE A STEADY SUPPLY OF SCHLEMM'S CANAL CELLS FOR DEVELOPMENT AND TESTING OF DRUG SCREENING PLATFORMS. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/CG2020002

NAME OF ORGANIZATION OR GOVERNMENT: COLUMBIA UNIVERSITY. (H) PURPOSE OF GRANT: NATIONAL GLAUCOMA RESEARCH BY SIMON JOHN, PHD, ENTITLED: (CG2020004) SELECTIVE TARGETING OF SCHLEMM'S CANAL INNER WALL FOR NEXT-GENERATION GLAUCOMA DRUGS: SUBPART D INVESTIGATOR'S SUMMARY: THE PROJECT AIMS TO DEVELOP AND TEST RESOURCES FOR SCHLEMM'S CANAL SPECIFIC TARGETING AND EXPRESSION OF GENES FOR GENE THERAPY. SUCCESSFUL DEVELOPMENT OF THIS TARGETED THERAPY WILL HELP CONTROL EYE PRESSURE MORE EFFECTIVELY AND PROVIDE BETTER TREATMENT OPTIONS FOR GLAUCOMA PATIENTS. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/CG2020004

NAME OF ORGANIZATION OR GOVERNMENT: COLUMBIA UNIVERSITY. (H) PURPOSE OF GRANT: MACULAR DEGENERATION RESEARCH BY YA-JU CHANG, PHD, ENTITLED: (M2021002F) CRISPR GENOME ENGINEERING IN AMD RISK ALLELES.

Name of the organization <b>BRIGHTFOCUS FOUNDATION</b>	Employer identification number <b>23-7337229</b>
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INVESTIGATOR'S SUMMARY: IN THE STUDY, THE RESEARCHER PLANS TO ADDRESS THE KNOWLEDGE GAP IN OUR UNDERSTANDING OF THE CAUSE OF AGE-RELATED MACULAR DEGENERATION (AMD) BY DEVELOPING A STEM CELL MODEL CAPABLE OF MIMICKING AMD IN HUMAN PATIENTS. THE CUTTING-EDGE GENE-EDITING TOOL, CRISPR/CAS9, WILL BE USED TO CONVERT AMD RISK GENES FROM THE HIGH-RISK TO LOW-RISK VARIANTS IN AMD PATIENT-DERIVED STEM CELLS AND EVALUATE THE EFFECT ON THE CELLS' DEFENSE AGAINST OXIDATIVE STRESS. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/M2021002F

SCHEDULE I, PART II, LINE 1, COLUMN (H):

NAME OF ORGANIZATION OR GOVERNMENT: UNIVERSITY OF CALIFORNIA, LOS ANGELES. (H) PURPOSE OF GRANT: MACULAR DEGENERATION RESEARCH BY ANTONIO ESCUDERO PANIAGUA, PHD, ENTITLED: (M2021004F) ADDRESSING THE LINK ABOUT IMPAIRMENT IN PHAGOSOME DEGRADATION AND AGE-RELATED MACULAR DEGENERATION. INVESTIGATOR'S SUMMARY: RESEARCHERS PROPOSE TO INVESTIGATE THE MATURATION RATE AND THE ACCUMULATION OF SPECIFIC PHAGOSOME (A VESICLE FORMED AROUND A PARTICLE ENGULFED BY A PHAGOCYTE CELL) STAGES IN RPE CELLS FROM MACULAR DYSTROPHY PATIENTS IN COMPARISON TO CELLS FROM HEALTHY PATIENTS AND MICE MODELS. . THESE STUDIES WILL PROVIDE A PARADIGM SHIFT IN OUR IDENTIFICATION AND UNDERSTANDING OF THE ETIOLOGY OF MACULAR DYSTROPHYS AND COULD BE KEY FOR THE DEVELOPMENT OF NEW STRATEGIES TO STOP OR PREVENT THEM. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/M2021004F

NAME OF ORGANIZATION OR GOVERNMENT: UNIVERSITY OF PITTSBURGH. (H) PURPOSE OF GRANT: MACULAR DEGENERATION RESEARCH BY SAYAN GHOSH, PHD, ENTITLED: (M2021005F) UNDERSTANDING THE ROLE OF AKT2 SIGNALING IN

Name of the organization

BRIGHTFOCUS FOUNDATION

Employer identification number

23-7337229

INFLAMMATORY PROCESSES IN AGE-RELATED MACULAR DEGENERATION.

INVESTIGATOR'S SUMMARY: IN THIS PROPOSAL, USING THEIR GENETICALLY ENGINEERED MOUSE MODELS, RESEARCHERS AIM TO UNDERSTAND IF THEIR GENE OF INTEREST REGULATES RETINAL INFLAMMATION AND DEGENERATION AS SEEN IN AGE-RELATED MACULAR DEGENERATION (AMD), THROUGH THE INTERACTION BETWEEN INFILTRATING INFLAMMATORY CELLS (NEUTROPHILS) AND THE IMMUNE CELLS (RETINAL MICROGLIA). UNDERSTANDING THESE MOLECULAR CHANGES MAY PROVIDE NOVEL BACKGROUND FOR FUTURE DRUG DISCOVERIES FOR ATROPHIC AMD. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE:  
[WWW.BRIGHTFOCUS.ORG/GRANT/M2021005F](http://WWW.BRIGHTFOCUS.ORG/GRANT/M2021005F)

NAME OF ORGANIZATION OR GOVERNMENT: UNIVERSITY OF PENNSYLVANIA. (H)

PURPOSE OF GRANT: MACULAR DEGENERATION RESEARCH BY ROHINI M NAIR, PHD, ENTITLED: (M2021007F) EXPLORING THE ROLE OF HEPATIC LIPASE AND LIPID METABOLISM IN AGE-RELATED MACULAR DEGENERATION PATHOGENESIS.

INVESTIGATOR'S SUMMARY: THIS STUDY AIMS TO UNRAVEL THE ROLE OF HEPATIC LIPASE (HL) THAT BREAKS DOWN HIGH-DENSITY LIPOPROTEINS (HDL) TO SMALLER DENSER PARTICLES TO BE CLEARED AWAY BY SYSTEMIC CIRCULATION.

UNDERSTANDING ITS ROLE IN REGULATING CHOLESTEROL EFFLUX USING CELLULAR (IPSC DERIVED RPE CULTURES) AND ANIMAL MODELS WOULD HELP DESIGN TARGETED THERAPIES FOR SLOWING DOWN THE DISEASE PROGRESSION. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE:

[WWW.BRIGHTFOCUS.ORG/GRANT/M2021007F](http://WWW.BRIGHTFOCUS.ORG/GRANT/M2021007F)

NAME OF ORGANIZATION OR GOVERNMENT: STANFORD UNIVERSITY. (H) PURPOSE OF

GRANT: MACULAR DEGENERATION RESEARCH BY KE NING, MD, ENTITLED:

(M2021008F) CILIARY LIPIDS IN RPE REPAIR: A NOVEL TARGET FOR

AGE-RELATED MACULAR DEGENERATION (AMD). INVESTIGATOR'S SUMMARY:



Name of the organization BRIGHTFOCUS FOUNDATION	Employer identification number 23-7337229
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RESEARCHERS IN THIS STUDY HAVE DISCOVERED A NOVEL ROLE OF RPE CILIA (THAT LOOKS LIKE AN ANTENNA) THAT IS RELATED TO THE CONTROL OF RPE REPAIR IN MICE; LOSS OF THESE ORGANELLES PROMOTES CELL PROLIFERATION AND WOUND HEALING. THEY PROPOSE TO STUDY HOW THIS ORGANELLE MEDIATES CELL PROLIFERATION AND WOUND HEALING. THE RESULT OF THIS STUDY WILL HELP US UNDERSTAND HOW ANTENNA WORKS IN RPE PROLIFERATION AND TARGETING THIS MECHANISM FOR DRUG DEVELOPMENT IN AMD. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: [WWW.BRIGHTFOCUS.ORG/GRANT/M2021008F](http://WWW.BRIGHTFOCUS.ORG/GRANT/M2021008F)

NAME OF ORGANIZATION OR GOVERNMENT: NATIONAL EYE INSTITUTE, NIH. (H)

PURPOSE OF GRANT: MACULAR DEGENERATION RESEARCH BY DAVIDE ORTOLAN, PHD,

ENTITLED: (M2021009F) MACULAR AND MID-PERIPHERAL SPECIFIC IPSC-RPE

MODELS TO DISCOVER REGIONAL RPE SUSCEPTIBILITY IN AGE-RELATED MACULAR

DEGENERATION (AMD). INVESTIGATOR'S SUMMARY: THIS STUDY WILL IDENTIFY

MOLECULAR AND PHYSIOLOGICAL DIFFERENCES BETWEEN THE TWO POPULATIONS OF

RPE CELLS (DERIVED FROM THE CENTRAL AND THE PERIPHERAL RETINA) IN A

DISH AND WILL FIND WHICH PROPERTIES MAKE THE CENTRAL RPE MORE

VULNERABLE THAN PERIPHERAL RPE. WITH THIS NEW KNOWLEDGE, PLUS HAVING AN

EASILY REPRODUCIBLE MODEL IN A DISH, WILL EVENTUALLY TRANSLATE IN THE

DEVELOPMENT OF DRUGS TO PREVENT VISION LOSS CAUSED BY AMD. FOR MORE

INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE:

[WWW.BRIGHTFOCUS.ORG/GRANT/M2021009F](http://WWW.BRIGHTFOCUS.ORG/GRANT/M2021009F)

NAME OF ORGANIZATION OR GOVERNMENT: THE SCHEPENS EYE RESEARCH

INSTITUTE. (H) PURPOSE OF GRANT: MACULAR DEGENERATION RESEARCH BY DAISY

SHU, PHD, ENTITLED: (M2021010F) ELUCIDATING THE ROLE OF METABOLIC

REPROGRAMMING IN TNFA-INDUCED RPE DYSFUNCTION AND INFLAMMATION IN

AGE-RELATED MACULAR DEGENERATION. INVESTIGATOR'S SUMMARY: THIS PROPOSAL

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SEEKS TO INCREASE OUR UNDERSTANDING OF THE INTERPLAY BETWEEN METABOLISM AND INFLAMMATION IN AGE-RELATED MACULAR DEGENERATION (AMD). RESVERATROL (FOUND IN RED WINE) IS A DRUG KNOWN TO ENHANCE METABOLIC FUNCTION AND SUPPRESS INFLAMMATION. ITS EFFICACY IN BLOCKING TUMOR NECROSIS FACTOR-ALPHA (TNFA) WILL BE TESTED AS A POTENTIAL DRUG TARGET FOR AMD. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE:

[WWW.BRIGHTFOCUS.ORG/GRANT/M2021010F](http://WWW.BRIGHTFOCUS.ORG/GRANT/M2021010F)

NAME OF ORGANIZATION OR GOVERNMENT: STANFORD UNIVERSITY. (H) PURPOSE OF GRANT: MACULAR DEGENERATION RESEARCH BY YOUNG JOO SUN, PHD, ENTITLED: (M2021011F) CRYOEM STRUCTURE-BASED DEVELOPMENT OF HTRA1 SPECIFIC INHIBITORS FOR AGE-RELATED MACULAR DEGENERATION (AMD). INVESTIGATOR'S SUMMARY: RESEARCHERS IN THIS STUDY PROPOSE TO CHARACTERIZE THE EFFICACY OF OUR 'LEAD-LIKE' COMPOUND THAT INHIBITS HTRA1 IN CELLS. THE SUCCESS OF THIS STUDY WILL BRING FORTH AN HTRA1 INHIBITOR AS A THERAPEUTIC CANDIDATE FOR AMD. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE:

[WWW.BRIGHTFOCUS.ORG/GRANT/M2021011F](http://WWW.BRIGHTFOCUS.ORG/GRANT/M2021011F)

SCHEDULE I, PART II, LINE 1, COLUMN (H):

NAME OF ORGANIZATION OR GOVERNMENT: UNIVERSITY OF CALIFORNIA, IRVINE. (H) PURPOSE OF GRANT: MACULAR DEGENERATION RESEARCH BY ANDREW BROWNE, MD, PHD, ENTITLED: (M2021013N) FUNCTIONAL IMAGING OF THE HUMAN RETINA USING TWO-PHOTON OPHTHALMOSCOPY. INVESTIGATOR'S SUMMARY: THIS PROPOSAL SEEKS TO DEVELOP A CAMERA FOR USE IN HUMANS AND DIRECTLY EXAMINE THE CAUSES OF AGE-RELATED MACULAR DEGENERATION IN HUMAN SUBJECTS. RESEARCHERS WILL TRANSLATE THE 2-PHOTON (2P) MICROSCOPY TECHNOLOGY ALREADY ESTABLISHED TO STUDY MODELS TO A DEVICE THAT CAN NON-INVASIVELY ACQUIRE IMAGES AT SUCH HIGH RESOLUTION THAT THEY CAN REVEAL WHAT IS

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**HAPPENING INSIDE CELLS. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/M2021013N**

**NAME OF ORGANIZATION OR GOVERNMENT: MASSACHUSETTS EYE AND EAR INFIRMARY. (H) PURPOSE OF GRANT: MACULAR DEGENERATION RESEARCH BY ROSARIO FERNANDEZ GODINO, PHD, ENTITLED: (M2021014N) BIOMECHANICAL PROPERTIES OF THE BRUCH'S MEMBRANE AND THEIR RELEVANCE TO THE RPE PATHOLOGY IN AGE-RELATED MACULAR DEGENERATION. INVESTIGATOR'S SUMMARY: IN THIS PROPOSAL, RESEARCHERS WILL EVALUATE THE RIGIDITY OF EYES WITH AND WITHOUT AGE-RELATED MACULAR DEGENERATION (AMD) AND HOW THE ELASTICITY OF THE RETINA IMPACTS THE FUNCTION OF THE RETINAL CELLS. THE RESULTS WILL CONTRIBUTE TO BRIDGE THE GAPS BETWEEN AGING AND AMD AS WELL AS TO IMPROVE EXISTING THERAPEUTIC APPROACHES FOR AMD PATIENTS, SUCH AS THE RPE TRANSPLANTATION. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/M2021014N**

**NAME OF ORGANIZATION OR GOVERNMENT: UNIVERSITY OF CALIFORNIA, SAN FRANCISCO. (H) PURPOSE OF GRANT: MACULAR DEGENERATION RESEARCH BY TYSON KIM, PHD, ENTITLED: (M2021015N) ELUCIDATING THE ORIGIN AND ARTERIOVENOUS IDENTITY OF CHORIORETINAL ANASTOMOSES IN A MODEL OF TYPE 3 NEOVASCULAR AGE-RELATED MACULAR DEGENERATION. INVESTIGATOR'S SUMMARY: IN ORDER TO STUDY THE FORMATION OF CHORIORETINAL ANASTOMOSES (CRA), WHICH IS A LESION FORMED BY THE VASCULAR FUSIONS BETWEEN THE RETINAL AND CHOROIDAL VASCULAR NETWORKS, RESEARCHERS IN THIS STUDY WILL DEVELOP AN ADVANCED IMAGING METHOD TO LOOK DEEPER INTO THE LIVING EYE WITH CELLULAR RESOLUTION, MOLECULAR INFORMATION, AND THE ABILITY TO MEASURE BLOOD FLOW DOWN TO INDIVIDUAL MICROVESSEL IN NEOVASCULAR AGE-RELATED MACULAR DEGENERATIO (AMD) MODELS. THIS WILL PROVIDE INSIGHTS TO HELP**

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DEVELOP MORE EFFECTIVE TREATMENTS FOR NEOVASCULAR AMD. FOR MORE

INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE:

WWW.BRIGHTFOCUS.ORG/GRANT/M2021015N

NAME OF ORGANIZATION OR GOVERNMENT: NORTHWESTERN UNIVERSITY, FEINBERG

SCHOOL OF MEDICINE. (H) PURPOSE OF GRANT: MACULAR DEGENERATION RESEARCH

BY JEREMY LAVINE, MD, PHD, ENTITLED: (M2021016N) MACROPHAGE ORIGIN,

HETEROGENEITY, AND FUNCTION DURING EXPERIMENTAL CHOROIDDAL

NEOVASCULARIZATION IN MICE. INVESTIGATOR'S SUMMARY: THE PREMISE OF THIS

STUDY IS THAT THERE ARE MACROPHAGE (IMMUNE CELL) SUBTYPES, AND

CLASSICALLY-DERIVED MACROPHAGES PROMOTE WET AGE RELATED MACULAR

DEGENERATION (AMD), WHILE NON-CLASSICAL MACROPHAGES BLOCK WET AMD. THIS

GROUP HAS IDENTIFIED A MACROPHAGE SUBSET THAT EXPRESSES BLOOD VESSEL

GROWTH FACTORS DERIVED FROM CLASSICAL MACROPHAGES AND IS PRESENT IN

PATIENTS WITH WET AMD. THEY FURTHER AIM TO IDENTIFY

NON-CLASSICAL-DERIVED MACROPHAGE SUBSETS AND DEMONSTRATE THAT THEY

INHIBIT EXPERIMENTAL WET AMD. FOR MORE INFORMATION, VISIT THE

BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/M2021016N

NAME OF ORGANIZATION OR GOVERNMENT: BAYLOR COLLEGE OF MEDICINE. (H)

PURPOSE OF GRANT: MACULAR DEGENERATION RESEARCH BY RINKI RATNAPRIYA,

PHD, ENTITLED: (M2021017N) FUNCTIONAL CHARACTERIZATION OF GENETIC

REGULATORY EFFECTS OF AGE-RELATED MACULAR DEGENERATION (AMD) RISK

VARIANTS. INVESTIGATOR'S SUMMARY: IN THIS PROPOSAL, RESEARCHERS WILL

INTEGRATE THE GENOME-WIDE ASSOCIATED STUDIES (GWAS) FINDINGS WITH

TRANSCRIPTOME (PROTEIN CODING REGION) AND EPIGENOME (DNA MODIFICATION

MARKERS) DATA TO IDENTIFY UNDERLYING CAUSAL VARIANTS, REGULATORY

ELEMENTS AND TARGET GENES TO ADDRESS MAJOR GAPS IN MECHANISTIC

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UNDERSTANDING OF AMD. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS

WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/M2021017N

NAME OF ORGANIZATION OR GOVERNMENT: NORTHWESTERN UNIVERSITY. (H)

PURPOSE OF GRANT: MACULAR DEGENERATION RESEARCH BY BENJAMIN THOMSON, PHD, ENTITLED: (M2021018N) ANGIOPOIETIN-TEK SIGNALING IS ESSENTIAL FOR CHORIOCAPILLARIS DEVELOPMENT AND PROTECTS AGAINST POLYPOIDAL CHOROIDAL VASCULOPATHY. INVESTIGATOR'S SUMMARY: TYPICAL WET AGE-RELATED MACULAR DEGENERATION (AMD) IS MOST COMMONLY SEEN IN PATIENTS OF EUROPEAN ANCESTRY, HOWEVER, WET AMD-LIKE DISEASE IN PATIENTS OF ASIAN AND AFRICAN ANCESTRY IS MORE COMMONLY ASSOCIATED WITH POLYPOIDAL CHOROIDAL VASCULOPATHY (PCV). THIS PROPOSAL WILL CHARACTERIZE THE ROLE OF A RECENTLY IDENTIFIED IMPORTANT BLOOD VESSEL REGULATORY SYSTEM (KNOWN AS THE ANGIOPOIETIN SIGNALING PATHWAY) IN PCV, AND TEST NEW DRUG CANDIDATES TARGETING THIS PATHWAY. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/M2021018N

NAME OF ORGANIZATION OR GOVERNMENT: INDIANA UNIVERSITY. (H) PURPOSE OF

GRANT: MACULAR DEGENERATION RESEARCH BY MALLIKA VALAPALA, PHD, ENTITLED: (M2021019N) TRANSCRIPTIONAL REGULATION OF AUTOPHAGY AND LYSOSOMAL FUNCTION IN THE RETINAL PIGMENT EPITHELIUM. INVESTIGATOR'S SUMMARY: THIS PROPOSAL ADDRESSES STRATEGIES BY WHICH THE DEGRADATIVE ABILITY OF LYSOSOMES (CELLULAR ORGANELLE) CAN BE ENHANCED OR RESTORED TO AUGMENT CLEARANCE OF CELLULAR WASTE THAT DECLINES WITH ADVANCED AGE. THESE STRATEGIES HELP KEEP THE INTRACELLULAR ENVIRONMENT OF THE CELL CLEAN AND PROMOTE OVERALL CELLULAR HEALTH. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/M2021019N

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NAME OF ORGANIZATION OR GOVERNMENT: UNIVERSITY OF CALIFORNIA, SAN FRANCISCO. (H) PURPOSE OF GRANT: MACULAR DEGENERATION RESEARCH BY APARNA. LAKKARAJU, PHD, ENTITLED: (M2021020I) DOES ABERRANT MECHANOTRANSDUCTION TRIGGER RPE ATROPHY IN AGE-RELATED MACULAR DEGENERATION? INVESTIGATOR'S SUMMARY: IN THIS STUDY, RESEARCHERS WILL USE ADVANCED LIVE IMAGING OF THE RETINA ALONG WITH GENETIC AND MOLECULAR APPROACHES TO STUDY HOW INSOLUBLE AGGREGATES CAUSE MECHANICAL STRESS ON THE RPE AND HOW THIS CAUSES ATROPHY AND DETACHMENT OF RPE CELLS LEADING TO PERMANENT VISION LOSS. AT EACH STEP, THEY WILL EVALUATE DRUGS THAT CAN PRESERVE THE HEALTH OF THE RPE AND PREVENT RPE LOSS IN DISEASE MODELS. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/M2021020I

NAME OF ORGANIZATION OR GOVERNMENT: UNIVERSITY OF CALIFORNIA, IRVINE. (H) PURPOSE OF GRANT: MACULAR DEGENERATION RESEARCH BY DOROTA SKOWRONSKA-KRAWCZYK, PHD, ENTITLED: (M2020271) ROLE OF ELOVL2 IN AGE RELATED CHANGES IN THE EYE. EMERGENCY RELIEF SUPPLEMENT DUE TO COVID-19. FOR MORE INFORMATION, VISIT THE BRIGHTFOCUS WEBSITE: WWW.BRIGHTFOCUS.ORG/GRANT/M2020271

**SCHEDULE R  
(Form 990)**

Department of the Treasury  
Internal Revenue Service

**Related Organizations and Unrelated Partnerships**

▶ Complete if the organization answered "Yes" on Form 990, Part IV, line 33, 34, 35b, 36, or 37.  
▶ Attach to Form 990.

▶ Go to [www.irs.gov/Form990](http://www.irs.gov/Form990) for instructions and the latest information.

OMB No. 1545-0047

**2020**

Open to Public  
Inspection

Name of the organization

**BRIGHTFOCUS FOUNDATION**

Employer identification number  
**23-7337229**

**Part I Identification of Disregarded Entities.** Complete if the organization answered "Yes" on Form 990, Part IV, line 33.

(a) Name, address, and EIN (if applicable) of disregarded entity	(b) Primary activity	(c) Legal domicile (state or foreign country)	(d) Total income	(e) End-of-year assets	(f) Direct controlling entity
NATIONAL DEVELOPMENT, LLC - 23-7337229 22512 GATEWAY CENTER DRIVE CLARKSBURG, MD 20871	PROPERTY RENTAL AND MANAGEMENT	MARYLAND	549,238.	4,009,566.	BRIGHTFOCUS FOUNDATION
AMERICAN HEALTH ASSISTANCE, LLC - 23-7337229 22512 GATEWAY CENTER DRIVE CLARKSBURG, MD 20871	OWNER OF BRIGHTFOCUS HEADQUARTERS	MARYLAND	0.	3,455,831.	BRIGHTFOCUS FOUNDATION

**Part II Identification of Related Tax-Exempt Organizations.** Complete if the organization answered "Yes" on Form 990, Part IV, line 34, because it had one or more related tax-exempt organizations during the tax year.

(a) Name, address, and EIN of related organization	(b) Primary activity	(c) Legal domicile (state or foreign country)	(d) Exempt Code section	(e) Public charity status (if section 501(c)(3))	(f) Direct controlling entity	(g) Section 512(b)(13) controlled entity?	
						Yes	No

**For Paperwork Reduction Act Notice, see the Instructions for Form 990.** Schedule R (Form 990) 2020

**Part III Identification of Related Organizations Taxable as a Partnership.** Complete if the organization answered "Yes" on Form 990, Part IV, line 34, because it had one or more related organizations treated as a partnership during the tax year.

(a) Name, address, and EIN of related organization	(b) Primary activity	(c) Legal domicile (state or foreign country)	(d) Direct controlling entity	(e) Predominant income (related, unrelated, excluded from tax under sections 512-514)	(f) Share of total income	(g) Share of end-of-year assets	(h) Disproportionate allocations?		(i) Code V-UBI amount in box 20 of Schedule K-1 (Form 1065)	(j) General or managing partner?	(k) Percentage ownership
							Yes	No			

**Part IV Identification of Related Organizations Taxable as a Corporation or Trust.** Complete if the organization answered "Yes" on Form 990, Part IV, line 34, because it had one or more related organizations treated as a corporation or trust during the tax year.

(a) Name, address, and EIN of related organization	(b) Primary activity	(c) Legal domicile (state or foreign country)	(d) Direct controlling entity	(e) Type of entity (C corp, S corp, or trust)	(f) Share of total income	(g) Share of end-of-year assets	(h) Percentage ownership	(i) Section 512(b)(13) controlled entity?	
								Yes	No



**Part V Transactions With Related Organizations.** Complete if the organization answered "Yes" on Form 990, Part IV, line 34, 35b, or 36.

**Note:** Complete line 1 if any entity is listed in Parts II, III, or IV of this schedule.

**1** During the tax year, did the organization engage in any of the following transactions with one or more related organizations listed in Parts II-IV?

	Yes	No
<b>a</b> Receipt of (i) interest, (ii) annuities, (iii) royalties, or (iv) rent from a controlled entity		
<b>b</b> Gift, grant, or capital contribution to related organization(s)		
<b>c</b> Gift, grant, or capital contribution from related organization(s)		
<b>d</b> Loans or loan guarantees to or for related organization(s)		
<b>e</b> Loans or loan guarantees by related organization(s)		
<b>f</b> Dividends from related organization(s)		
<b>g</b> Sale of assets to related organization(s)		
<b>h</b> Purchase of assets from related organization(s)		
<b>i</b> Exchange of assets with related organization(s)		
<b>j</b> Lease of facilities, equipment, or other assets to related organization(s)		
<b>k</b> Lease of facilities, equipment, or other assets from related organization(s)		
<b>l</b> Performance of services or membership or fundraising solicitations for related organization(s)		
<b>m</b> Performance of services or membership or fundraising solicitations by related organization(s)		
<b>n</b> Sharing of facilities, equipment, mailing lists, or other assets with related organization(s)		
<b>o</b> Sharing of paid employees with related organization(s)		
<b>p</b> Reimbursement paid to related organization(s) for expenses		
<b>q</b> Reimbursement paid by related organization(s) for expenses		
<b>r</b> Other transfer of cash or property to related organization(s)		
<b>s</b> Other transfer of cash or property from related organization(s)		

**2** If the answer to any of the above is "Yes," see the instructions for information on who must complete this line, including covered relationships and transaction thresholds.

	(a) Name of related organization	(b) Transaction type (a-s)	(c) Amount involved	(d) Method of determining amount involved
(1)				
(2)				
(3)				
(4)				
(5)				
(6)				

**Part VI Unrelated Organizations Taxable as a Partnership.** Complete if the organization answered "Yes" on Form 990, Part IV, line 37.

Provide the following information for each entity taxed as a partnership through which the organization conducted more than five percent of its activities (measured by total assets or gross revenue) that was not a related organization. See instructions regarding exclusion for certain investment partnerships.

(a) Name, address, and EIN of entity	(b) Primary activity	(c) Legal domicile (state or foreign country)	(d) Predominant income (related, unrelated, excluded from tax under sections 512-514)	(e) <small>Are all partners sec. 501(c)(3) orgs.?</small>		(f) Share of total income	(g) Share of end-of-year assets	(h) <small>Dispropor- tionate allocations?</small>		(i) Code V-UBI amount in box 20 of Schedule K-1 (Form 1065)	(j) <small>General or managing partner?</small>		(k) Percentage ownership
				Yes	No			Yes	No		Yes	No	



**Part VII** Supplemental Information

Provide additional information for responses to questions on Schedule R. See instructions.

Multiple horizontal lines for providing supplemental information.