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A For the 2015 calendar year, or tax year beginning 12-01-2015 , and ending 11-30-2016

B Check if applicable

☐ Address change

☐ Name change

☐ Initial return

☐ Final return/terminated

☐ Amended return

☐ Application pending

C Name of organization

VAN ANDEL RESEARCH INSTITUTE

Doing business as

Number and street (or P O box if mail is not delivered to street address) Room/suite

333 BOSTWICK AVENUE NE

City or town, state or province, country, and ZIP or foreign postal code

GRAND RAPIDS, MI 49503

F Name and address of principal officer

TIMOTHY J MYERS

333 BOSTWICK AVENUE NE

GRAND RAPIDS, MI 49503

H(a) Is this a group return for subordinates?

No

H(b) Are all subordinates included?

If "No," attach a list (see instructions)

H(c) Group exemption number

D Employer identification number

52-2000823

E Telephone number

(616) 234-5000

G Gross receipts \$ 61,266,156

I Tax-exempt status

☒ 501(c)(3)

☐ 501(c) ()

☐ (insert no)

☐ 4947(a)(1) or

☐ 527

J Website: WWW VAI ORG

K Form of organization

☐ Corporation

☒ Trust

☐ Association

☐ Other

L Year of formation 1996

M State of legal domicile MI

Part I Summary				
Activities & Governance	1 Briefly describe the organization's mission or most significant activities MEDICAL RESEARCH ORGANIZATION			
	2 Check this box <input type="checkbox"/> if the organization discontinued its operations or disposed of more than 25% of its net assets			
	3 Number of voting members of the governing body (Part VI, line 1a)	3	7	
	4 Number of independent voting members of the governing body (Part VI, line 1b)	4	5	
	5 Total number of individuals employed in calendar year 2015 (Part V, line 2a)	5	424	
Revenue	6 Total number of volunteers (estimate if necessary)	6	0	
	7a Total unrelated business revenue from Part VIII, column (C), line 12	7a	30,949	
	b Net unrelated business taxable income from Form 990-T, line 34	7b	-9,482	
	8 Contributions and grants (Part VIII, line 1h)	Prior Year	Current Year	
		56,036,129	50,933,876	
Expenses		9 Program service revenue (Part VIII, line 2g)	1,466,232	
		10 Investment income (Part VIII, column (A), lines 3, 4, and 7 d)	456,048	
		11 Other revenue (Part VIII, column (A), lines 5, 6d, 8c, 9c, 10c, and 11e)	7,489,858	
		12 Total revenue—add lines 8 through 11 (must equal Part VIII, column (A), line 12)	65,448,267	
Net Assets or Fund Balances	13 Grants and similar amounts paid (Part IX, column (A), lines 1–3)	1,008,183		
		0		
		35,314,051		
		0		
		36,245,067		
	14 Benefits paid to or for members (Part IX, column (A), line 4)	72,643,256		
	15 Salaries, other compensation, employee benefits (Part IX, column (A), lines 5–10)	-3,692,399		
	16a Professional fundraising fees (Part IX, column (A), line 11e)	-13,134,367		
	b Total fundraising expenses (Part IX, column (D), line 25) ▶800,315			
	17 Other expenses (Part IX, column (A), lines 11a–11d, 11f–24e)			
	18 Total expenses Add lines 13–17 (must equal Part IX, column (A), line 25)			
	19 Revenue less expenses Subtract line 18 from line 12			
	20 Total assets (Part X, line 16)	Beginning of Current Year	End of Year	
		250,842,142	247,782,645	
		338,375,403	344,529,031	
		-87,533,261	-96,746,386	

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

Sign Here

Signature of officer

TIMOTHY J MYERS VICE PRESIDENT & CFO

Type or print name and title

2017-10-10

Date

Paid Preparer Use Only

Print/Type preparer's name

ANNE FULTON

Preparer's signature

ANNE FULTON

Date

Check ☐ if self-employed

PTIN P00941863

Firm's name ▶ DELOITTE TAX LLP

Firm's EIN ▶ 86-1065772

Firm's address ▶ 200 RENAISSANCE CENTER STE 3900

DETROIT, MI 48243

Phone no (313) 396-3000

May the IRS discuss this return with the preparer shown above? (see instructions)

☒ Yes ☐ No

For Paperwork Reduction Act Notice, see the separate instructions.

Cat No 11282Y

Form 990(2015)

Part III **Statement of Program Service Accomplishments**

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

1 Briefly describe the organization's mission

MEDICAL RESEARCH ORGANIZATION VAN ANDEL RESEARCH INSTITUTE IS AN INDEPENDENT BIOMEDICAL RESEARCH ORGANIZATION COMMITTED TO IMPROVING THE HEALTH AND ENHANCING THE LIVES OF CURRENT AND FUTURE GENERATIONS


















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** ☒ **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** ☒ **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 \$ 9,640,590 including grants of \$ 290,638) (Revenue \$ 604,010) See Additional Data
4b	(Code) (Expenses \$ 7,238,770 including grants of \$ 655,672) (Revenue \$ 16,619) See Additional Data
4c	(Code) (Expenses \$ 5,197,899 including grants of \$ 61,873) (Revenue \$ 342,945) See Additional Data See Additional Data
4d	Other program services (Describe in Schedule O) (Expenses \$ 28,299,325 including grants of \$) (Revenue \$ 340,244)
4e	Total program service expenses ▶ 50,376,584

Part IV Checklist of Required Schedules

	Yes	No
1 Is the organization described in section 501(c)(3) or 4947(a)(1) (other than a private foundation)? <i>If "Yes," complete Schedule A</i> 	1 Yes	
2 Is the organization required to complete <i>Schedule B, Schedule of Contributors</i> (see instructions)? 	2 Yes	
3 Did the organization engage in direct or indirect political campaign activities on behalf of or in opposition to candidates for public office? <i>If "Yes," complete Schedule C, Part I</i> 	3	No
4 Section 501(c)(3) organizations. Did the organization engage in lobbying activities, or have a section 501(h) election in effect during the tax year? <i>If "Yes," complete Schedule C, Part II</i> 	4 Yes	
5 Is the organization a section 501(c)(4), 501(c)(5), or 501(c)(6) organization that receives membership dues, assessments, or similar amounts as defined in Revenue Procedure 98-19? <i>If "Yes," complete Schedule C, Part III</i> 	5	No
6 Did the organization maintain any donor advised funds or any similar funds or accounts for which donors have the right to provide advice on the distribution or investment of amounts in such funds or accounts? <i>If "Yes," complete Schedule D, Part I</i> 	6	No
7 Did the organization receive or hold a conservation easement, including easements to preserve open space, the environment, historic land areas, or historic structures? <i>If "Yes," complete Schedule D, Part II</i> 	7	No
8 Did the organization maintain collections of works of art, historical treasures, or other similar assets? <i>If "Yes," complete Schedule D, Part III</i> 	8	No
9 Did the organization report an amount in Part X, line 21 for escrow or custodial account liability, serve as a custodian for amounts not listed in Part X, or provide credit counseling, debt management, credit repair, or debt negotiation services? <i>If "Yes," complete Schedule D, Part IV</i> 	9	No
10 Did the organization, directly or through a related organization, hold assets in temporarily restricted endowments, permanent endowments, or quasi-endowments? <i>If "Yes," complete Schedule D, Part V</i> 	10	No
11 If the organization's answer to any of the following questions is "Yes," then complete Schedule D, Parts VI, VII, VIII, IX, or X as applicable		
a Did the organization report an amount for land, buildings, and equipment in Part X, line 10? <i>If "Yes," complete Schedule D, Part VI</i> 	11a Yes	
b Did the organization report an amount for investments—other securities in Part X, line 12 that is 5% or more of its total assets reported in Part X, line 16? <i>If "Yes," complete Schedule D, Part VII</i> 	11b	No
c Did the organization report an amount for investments—program related in Part X, line 13 that is 5% or more of its total assets reported in Part X, line 16? <i>If "Yes," complete Schedule D, Part VIII</i> 	11c	No
d Did the organization report an amount for other assets in Part X, line 15 that is 5% or more of its total assets reported in Part X, line 16? <i>If "Yes," complete Schedule D, Part IX</i> 	11d Yes	
e Did the organization report an amount for other liabilities in Part X, line 25? <i>If "Yes," complete Schedule D, Part X</i> 	11e Yes	
f Did the organization's separate or consolidated financial statements for the tax year include a footnote that addresses the organization's liability for uncertain tax positions under FIN 48 (ASC 740)? <i>If "Yes," complete Schedule D, Part X</i> 	11f Yes	
12a Did the organization obtain separate, independent audited financial statements for the tax year? <i>If "Yes," complete Schedule D, Parts XI and XII</i> 	12a	No
b Was the organization included in consolidated, independent audited financial statements for the tax year? <i>If "Yes," and if the organization answered "No" to line 12a, then completing Schedule D, Parts XI and XII is optional</i> 	12b Yes	
13 Is the organization a school described in section 170(b)(1)(A)(ii)? <i>If "Yes," complete Schedule E</i>	13	No
14a Did the organization maintain an office, employees, or agents outside of the United States?	14a Yes	
b Did the organization have aggregate revenues or expenses of more than \$10,000 from grantmaking, fundraising, business, investment, and program service activities outside the United States, or aggregate foreign investments valued at \$100,000 or more? <i>If "Yes," complete Schedule F, Parts I and IV</i> 	14b Yes	
15 Did the organization report on Part IX, column (A), line 3, more than \$5,000 of grants or other assistance to or for any foreign organization? <i>If "Yes," complete Schedule F, Parts II and IV</i> 	15 Yes	
16 Did the organization report on Part IX, column (A), line 3, more than \$5,000 of aggregate grants or other assistance to or for foreign individuals? <i>If "Yes," complete Schedule F, Parts III and IV</i> 	16	No
17 Did the organization report a total of more than \$15,000 of expenses for professional fundraising services on Part IX, column (A), lines 6 and 11e? <i>If "Yes," complete Schedule G, Part I</i> (see instructions) 	17	No
18 Did the organization report more than \$15,000 total of fundraising event gross income and contributions on Part VIII, lines 1c and 8a? <i>If "Yes," complete Schedule G, Part II</i> 	18 Yes	
19 Did the organization report more than \$15,000 of gross income from gaming activities on Part VIII, line 9a? <i>If "Yes," complete Schedule G, Part III</i> 	19	No
20a Did the organization operate one or more hospital facilities? <i>If "Yes," complete Schedule H</i>	20a	No
b If "Yes" to line 20a, did the organization attach a copy of its audited financial statements to this return?	20b	

Part IV Checklist of Required Schedules (continued)

21	Did the organization report more than \$5,000 of grants or other assistance to any domestic organization or domestic government on Part IX, column (A), line 1? If "Yes," complete Schedule I, Parts I and II	21	Yes	
22	Did the organization report more than \$5,000 of grants or other assistance to or for domestic individuals on Part IX, column (A), line 2? If "Yes," complete Schedule I, Parts I and III	22	Yes	
23	Did the organization answer "Yes" to Part VII, Section A, line 3, 4, or 5 about compensation of the organization's current and former officers, directors, trustees, key employees, and highest compensated employees? If "Yes," complete Schedule J	23	Yes	
24a	Did the organization have a tax-exempt bond issue with an outstanding principal amount of more than \$100,000 as of the last day of the year, that was issued after December 31, 2002? If "Yes," answer lines 24b through 24d and complete Schedule K. If "No," go to line 25a	24a	Yes	
b	Did the organization invest any proceeds of tax-exempt bonds beyond a temporary period exception?	24b		No
c	Did the organization maintain an escrow account other than a refunding escrow at any time during the year to defease any tax-exempt bonds?	24c		No
d	Did the organization act as an "on behalf of" issuer for bonds outstanding at any time during the year?	24d		No
25a	Section 501(c)(3), 501(c)(4), and 501(c)(29) organizations. Did the organization engage in an excess benefit transaction with a disqualified person during the year? If "Yes," complete Schedule L, Part I			
25a		25a		No
b	Is the organization aware that it engaged in an excess benefit transaction with a disqualified person in a prior year, and that the transaction has not been reported on any of the organization's prior Forms 990 or 990-EZ? If "Yes," complete Schedule L, Part I	25b		No
26	Did the organization report any amount on Part X, line 5, 6, or 22 for receivables from or payables to any current or former officers, directors, trustees, key employees, highest compensated employees, or disqualified persons? If "Yes," complete Schedule L, Part II	26		No
27	Did the organization provide a grant or other assistance to an officer, director, trustee, key employee, substantial contributor or employee thereof, a grant selection committee member, or to a 35% controlled entity or family member of any of these persons? If "Yes," complete Schedule L, Part III	27		No
28	Was the organization a party to a business transaction with one of the following parties (see Schedule L, Part IV instructions for applicable filing thresholds, conditions, and exceptions)			
a	A current or former officer, director, trustee, or key employee? If "Yes," complete Schedule L, Part IV	28a		No
b	A family member of a current or former officer, director, trustee, or key employee? If "Yes," complete Schedule L, Part IV	28b		No
c	An entity of which a current or former officer, director, trustee, or key employee (or a family member thereof) was an officer, director, trustee, or direct or indirect owner? If "Yes," complete Schedule L, Part IV	28c		No
29	Did the organization receive more than \$25,000 in non-cash contributions? If "Yes," complete Schedule M	29	Yes	
30	Did the organization receive contributions of art, historical treasures, or other similar assets, or qualified conservation contributions? If "Yes," complete Schedule M	30		No
31	Did the organization liquidate, terminate, or dissolve and cease operations? If "Yes," complete Schedule N, Part I	31		No
32	Did the organization sell, exchange, dispose of, or transfer more than 25% of its net assets? If "Yes," complete Schedule N, Part II	32		No
33	Did the organization own 100% of an entity disregarded as separate from the organization under Regulations sections 301.7701-2 and 301.7701-3? If "Yes," complete Schedule R, Part I	33	Yes	
34	Was the organization related to any tax-exempt or taxable entity? If "Yes," complete Schedule R, Part II, III, or IV, and Part V, line 1	34	Yes	
35a	Did the organization have a controlled entity within the meaning of section 512(b)(13)?	35a	Yes	
b	If "Yes" to line 35a, did the organization receive any payment from or engage in any transaction with a controlled entity within the meaning of section 512(b)(13)? If "Yes," complete Schedule R, Part V, line 2	35b	Yes	
36	Section 501(c)(3) organizations. Did the organization make any transfers to an exempt non-charitable related organization? If "Yes," complete Schedule R, Part V, line 2	36		No
37	Did the organization conduct more than 5% of its activities through an entity that is not a related organization and that is treated as a partnership for federal income tax purposes? If "Yes," complete Schedule R, Part VI	37		No
38	Did the organization complete Schedule O and provide explanations in Schedule O for Part VI, lines 11b and 19? Note. All Form 990 filers are required to complete Schedule O	38	Yes	

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

		Yes	No
1a	Enter the number reported in Box 3 of Form 1096. Enter -0- if not applicable.	112	
1b	Enter the number of Forms W-2G included in line 1a. Enter -0- if not applicable.	0	
c	Did the organization comply with backup withholding rules for reportable payments to vendors and reportable gaming (gambling) winnings to prize winners?	1c	
2a	Enter the number of employees reported on Form W-3, Transmittal of Wage and Tax Statements, filed for the calendar year ending with or within the year covered by this return.	424	
b	If at least one is reported on line 2a, did the organization file all required federal employment tax returns? Note. If the sum of lines 1a and 2a is greater than 250, you may be required to e-file (see instructions).	2b	Yes
3a	Did the organization have unrelated business gross income of \$1,000 or more during the year?	3a	Yes
b	If "Yes," has it filed a Form 990-T for this year? If "No" to line 3b, provide an explanation in Schedule O.	3b	Yes
4a	At any time during the calendar year, did the organization have an interest in, or a signature or other authority over, a financial account in a foreign country (such as a bank account, securities account, or other financial account)?	4a	No
b	If "Yes," enter the name of the foreign country: _____ See instructions for filing requirements for FinCEN Form 114, Report of Foreign Bank and Financial Accounts (FBAR).		
5a	Was the organization a party to a prohibited tax shelter transaction at any time during the tax year?	5a	No
b	Did any taxable party notify the organization that it was or is a party to a prohibited tax shelter transaction?	5b	No
c	If "Yes," to line 5a or 5b, did the organization file Form 8886-T?	5c	
6a	Does the organization have annual gross receipts that are normally greater than \$100,000, and did the organization solicit any contributions that were not tax deductible as charitable contributions?	6a	No
b	If "Yes," did the organization include with every solicitation an express statement that such contributions or gifts were not tax deductible?	6b	
7	Organizations that may receive deductible contributions under section 170(c).		
a	Did the organization receive a payment in excess of \$75 made partly as a contribution and partly for goods and services provided to the payor?	7a	No
b	If "Yes," did the organization notify the donor of the value of the goods or services provided?	7b	
c	Did the organization sell, exchange, or otherwise dispose of tangible personal property for which it was required to file Form 8282?	7c	No
d	If "Yes," indicate the number of Forms 8282 filed during the year.	7d	
e	Did the organization receive any funds, directly or indirectly, to pay premiums on a personal benefit contract?	7e	No
f	Did the organization, during the year, pay premiums, directly or indirectly, on a personal benefit contract?	7f	No
g	If the organization received a contribution of qualified intellectual property, did the organization file Form 8899 as required?	7g	
h	If the organization received a contribution of cars, boats, airplanes, or other vehicles, did the organization file a Form 1098-C?	7h	
8	Sponsoring organizations maintaining donor advised funds. Did a donor advised fund maintained by the sponsoring organization have excess business holdings at any time during the year?	8	
9a	Did the sponsoring organization make any taxable distributions under section 4966?	9a	
b	Did the sponsoring organization make a distribution to a donor, donor advisor, or related person?	9b	
10	Section 501(c)(7) organizations. Enter		
a	Initiation fees and capital contributions included on Part VIII, line 12.	10a	
b	Gross receipts, included on Form 990, Part VIII, line 12, for public use of club facilities.	10b	
11	Section 501(c)(12) organizations. Enter		
a	Gross income from members or shareholders.	11a	
b	Gross income from other sources (Do not net amounts due or paid to other sources against amounts due or received from them).	11b	
12a	Section 4947(a)(1) non-exempt charitable trusts. Is the organization filing Form 990 in lieu of Form 1041?	12a	
b	If "Yes," enter the amount of tax-exempt interest received or accrued during the year.	12b	
13	Section 501(c)(29) qualified nonprofit health insurance issuers.		
a	Is the organization licensed to issue qualified health plans in more than one state? Note. See the instructions for additional information the organization must report on Schedule O.	13a	
b	Enter the amount of reserves the organization is required to maintain by the states in which the organization is licensed to issue qualified health plans.	13b	
c	Enter the amount of reserves on hand.	13c	
14a	Did the organization receive any payments for indoor tanning services during the tax year?	14a	No
b	If "Yes," has it filed a Form 720 to report these payments? If "No," provide an explanation in Schedule O.	14b	

Part VI

Governance, Management, and Disclosure

For each "Yes" response to lines 2 through 7b below, and for a "No" response to lines 8a, 8b, or 10b below, describe the circumstances, processes, or changes in Schedule O. See instructions.

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

Section A. Governing Body and Management

			Yes	No
1a	Enter the number of voting members of the governing body at the end of the tax year	1a	7	
	If there are material differences in voting rights among members of the governing body, or if the governing body delegated broad authority to an executive committee or similar committee, explain in Schedule O			
b	Enter the number of voting members included in line 1a, above, who are independent	1b	5	
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?	2	Yes	
3	Did the organization delegate control over management duties customarily performed by or under the direct supervision of officers, directors or trustees, or key employees to a management company or other person?	3		No
4	Did the organization make any significant changes to its governing documents since the prior Form 990 was filed?	4		No
5	Did the organization become aware during the year of a significant diversion of the organization's assets?	5		No
6	Did the organization have members or stockholders?	6		No
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?	7a	Yes	
b	Are any governance decisions of the organization reserved to (or subject to approval by) members, stockholders, or persons other than the governing body?	7b		No
8	Did the organization contemporaneously document the meetings held or written actions undertaken during the year by the following			
a	The governing body?	8a	Yes	
b	Each committee with authority to act on behalf of the governing body?	8b	Yes	
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 in Schedule O	9		No

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

			Yes	No
10a	Did the organization have local chapters, branches, or affiliates?	10a		No
b	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?	10b		
11a	Has the organization provided a complete copy of this Form 990 to all members of its governing body before filing the form?	11a	Yes	
b	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	12a	Yes	
b	Were officers, directors, or trustees, and key employees required to disclose annually interests that could give rise to conflicts?	12b	Yes	
c	Did the organization regularly and consistently monitor and enforce compliance with the policy? If "Yes," describe in Schedule O how this was done	12c	Yes	
13	Did the organization have a written whistleblower policy?	13	Yes	
14	Did the organization have a written document retention and destruction policy?	14	Yes	
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	15a	Yes	
b	Other officers or key employees of the organization	15b	Yes	
	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?	16a		No
b	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?	16b		

Section C. Disclosure

17	List the States with which a copy of this Form 990 is required to be filed	MI
18	Section 6104 requires an organization to make its Form 1023 (or 1024 if applicable), 990, and 990-T (501(c)(3)s only) available for public inspection. Indicate how you made these available. Check all that apply. <input type="checkbox"/> Own website <input type="checkbox"/> Another's website <input checked="" type="checkbox"/> Upon request <input type="checkbox"/> Other (explain in Schedule O)	
19	Describe in 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 TIMOTHY J MYERS VP & CFO 333 BOSTWICK AVENUE NE GRAND RAPIDS, MI 495032518 (616) 234-5368	

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, or 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.

List persons in the following order: individual trustees or directors; institutional trustees; officers; key employees; highest compensated employees; and former such persons.

☐ 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 dotted 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) DAVID VAN ANDEL CHAIRMAN / CEO	36 00 17 00	X		X				460,118	0	97,010
(2) DR GEORGE VANDE WOUDE TRUSTEE/ INVESTIGATOR	45 00 0 00	X						314,025	0	22,903
(3) DR JAMES FAHNER TRUSTEE	1 00 1 00	X						10,000	2,000	0
(4) DR RALPH WEICHSELBAUM TRUSTEE	1 00 0 00	X						8,000	0	0
(5) DR MAX WICHA TRUSTEE	1 00 0 00	X						5,000	0	0
(6) DR MICHELLE LEBEAU TRUSTEE	1 00 0 00	X						0	0	0
(7) DR TOM DEMEESTER TRUSTEE	1 00 0 00	X						0	0	0
(8) DR JANA HALL CHIEF OPERATIONS OFFICER	52 00 3 00			X				376,331	0	88,423
(9) DAVID WHITESCARVER SECRETARY/V P & CHIEF LEGAL OFFICER	50 00 3 00			X				368,119	0	93,443
(10) TIMOTHY MYERS V P & CHIEF FINANCIAL OFFICER	50 00 3 00			X				296,165	0	78,374
(11) DR PETER JONES CHIEF SCIENTIFIC OFFICER & RES DIR	53 00 0 00				X			718,385	0	162,112
(12) KATHY VOGELSANG CHIEF INVESTMENT OFFICER	45 00 0 00					X		448,562	0	166,450
(13) DR PATRIK BRUNDIN VARI ASSOCIATE DIRECTOR OF RESEARCH	45 00 0 00					X		496,115	0	81,487
(14) DR GERALD CALLAHAN V P , INNOVATIONS & COLLABORATIONS	45 00 0 00					X		353,343	0	108,630

Part VII

(A) Name and Title	(B) Average hours per week (list any hours for related organizations below dotted 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				
(15) DR PETER LAIRD	45 00					X			380,163	0	55,398
..... INVESTIGATOR	0 00					X					
(16) DR GERD PFEIFER	45 00					X			345,252	0	37,145
..... INVESTIGATOR	0 00										
1b Sub-Total											
c Total from continuation sheets to Part VII, Section A											
d Total (add lines 1b and 1c)								4,579,578	2,000	991,375	

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 ▶ 68

		Yes	No
3	Did the organization list any former officer, director or trustee, key employee, or highest compensated employee on line 1a? <i>If "Yes," complete Schedule J for such individual</i>	3	No
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? <i>If "Yes," complete Schedule J for such individual</i>	4 Yes	
5	Did any person listed on line 1a receive or accrue compensation from any unrelated organization or individual for services rendered to the organization? <i>If "Yes," complete Schedule J for such person</i>	5	No

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
PRESIDIO INFRASTRUCTURE LLC PO BOX 677638 DALLAS, TX 752677638	CONSULTING SERVICES	380,367
DK SECURITY INC 5160 FALCONVIEW AVE SE KENTWOOD, MI 49512	SECURITY SERVICES	314,391
FEDERAL EXPRESS PO BOX 371461 PITTSBURGH, PA 152512125	SHIPPING	191,243
HONIGMAN MILLER SCHWARTZ LLC 660 WOODWARD AVE DETROIT, MI 48226	LEGAL / CONSULTING	184,580
SECURALARM SYSTEMS INC 112 54TH ST SW GRAND RAPIDS, MI 49548	SECURITY SERVICES	160,117

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 ► 14

Part VIII

Statement of Revenue

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

				(A) Total revenue	(B) Related or exempt function revenue	(C) Unrelated business revenue	(D) Revenue excluded from tax under sections 512-514
Contributions, Gifts, Grants and Other Similar Amounts	1a	Federated campaigns	1a				
	b	Membership dues	1b				
	c	Fundraising events	1c	47,459			
	d	Related organizations	1d	33,586,093			
	e	Government grants (contributions)	1e	13,308,015			
	f	All other contributions, gifts, grants, and similar amounts not included above	1f	3,992,309			
	g	Noncash contributions included in lines 1a-1f \$		517,208			
	h	Total. Add lines 1a-1f			50,933,876		
Program Service Revenue	2a	RESEARCH BILLED REV	Business Code 541700	1,303,818	1,272,869	30,949	
	b						
	c						
	d						
	e						
	f	All other program service revenue					
	g	Total. Add lines 2a-2f			1,303,818		
	Other Revenue	3	Investment income (including dividends, interest, and other similar amounts)		608,563		
4		Income from investment of tax-exempt bond proceeds					
5		Royalties		453,586			453,586
6a		(i) Real					
		Gross rents					
		1,508,467					
		(ii) Personal					
b		Less rental expenses					
c		Rental income or (loss)					
d		Net rental income or (loss)		14,915			14,915
7a		(i) Securities					
		Gross amount from sales of assets other than inventory					
		220,927					
		(ii) Other					
b		Less cost or other basis and sales expenses					
c		Gain or (loss)					
d		Net gain or (loss)		-20,535			-20,535
8a		Gross income from fundraising events (not including \$ 47,459 of contributions reported on line 1c) See Part IV, line 18		9,860			
		a					
		b					
b	Less direct expenses		22,253				
c	Net income or (loss) from fundraising events			-12,393		-12,393	
9a	Gross income from gaming activities See Part IV, line 19						
	a						
	b						
b	Less direct expenses						
c	Net income or (loss) from gaming activities						
10a	Gross sales of inventory, less returns and allowances						
	a						
	b						
b	Less cost of goods sold						
c	Net income or (loss) from sales of inventory						
Miscellaneous Revenue			Business Code				
11a	ALLOCATED ADMIN EXP		561000	5,877,268			5,877,268
b	REIMBURSED EXPENSES		900099	262,382			262,382
c							
d	All other revenue			87,409			87,409
e	Total. Add lines 11a-11d			6,227,059			
12	Total revenue. See Instructions			59,508,889	1,272,869	30,949	7,271,195

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	526,007	526,007		
2	Grants and other assistance to domestic individuals. See Part IV, line 22	328,146	328,146		
3	Grants and other assistance to foreign organizations, foreign governments, and foreign individuals. See Part IV, lines 15 and 16	154,030	154,030		
4	Benefits paid to or for members				
5	Compensation of current officers, directors, trustees, and key employees	2,728,257	1,058,584	1,669,673	
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	25,889,699	15,912,072	9,443,070	534,557
8	Pension plan accruals and contributions (include section 401(k) and 403(b) employer contributions)	2,000,471	1,200,333	754,214	45,924
9	Other employee benefits	3,058,443	1,835,144	1,152,883	70,416
10	Payroll taxes	1,637,181	982,349	618,093	36,739
11	Fees for services (non-employees)				
a	Management				
b	Legal	477,838	46,987	430,851	
c	Accounting	71,808		71,808	
d	Lobbying	124,034		124,034	
e	Professional fundraising services. See Part IV, line 17				
f	Investment management fees				
g	Other (If line 11g amount exceeds 10% of line 25, column (A) amount, list line 11g expenses on Schedule O)	2,432,065	2,077,025	350,277	4,763
12	Advertising and promotion	676,578	58,708	543,136	74,734
13	Office expenses	97,220	56,675	40,487	58
14	Information technology	270,677	125,142	145,343	192
15	Royalties				
16	Occupancy	2,397,521	2,186,723	209,847	951
17	Travel	644,792	429,145	205,200	10,447
18	Payments of travel or entertainment expenses for any federal, state, or local public officials				
19	Conferences, conventions, and meetings	235,222	180,453	52,921	1,848
20	Interest	8,721,337	7,263,246	1,458,091	
21	Payments to affiliates				
22	Depreciation, depletion, and amortization	9,688,993	8,333,054	1,355,939	
23	Insurance	447,507	275,622	171,885	
24	Other expenses. Itemize expenses not covered above (List miscellaneous expenses in line 24e. If line 24e amount exceeds 10% of line 25, column (A) amount, list line 24e expenses on Schedule O)				
a	LAB SUPPLIES & SERVICES	3,546,204	3,546,204		
b	EQUIPMENT & SOFTWARE	2,896,321	1,499,921	1,389,252	7,148
c	OTHER SCIENTIFIC	1,200,387	1,200,387		
d	ALLOCATED EXPENSES	566,458	560,189		6,269
e	All other expenses	1,826,060	540,438	1,279,353	6,269
25	Total functional expenses. Add lines 1 through 24e	72,643,256	50,376,584	21,466,357	800,315
26	Joint costs. Complete this line only if the organization reported in column (B) joint costs from a combined educational campaign and fundraising solicitation. Check here <input type="checkbox"/> if following SOP 98-2 (ASC 958-720)				

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	1	Cash—non-interest-bearing			1	
	2	Savings and temporary cash investments		9,808,077	2	239,338
	3	Pledges and grants receivable, net		2,205,839	3	2,847,628
	4	Accounts receivable, net		2,855,772	4	5,706,021
	5	Loans and other receivables from current and former officers, directors, trustees, key employees, and highest compensated employees. Complete Part II of Schedule L			5	
	6	Loans and other receivables from other disqualified persons (as defined under section 4958(f)(1)), persons described in section 4958(c)(3)(B), and contributing employers and sponsoring organizations of section 501(c)(9) voluntary employees' beneficiary organizations (see instructions). Complete Part II of Schedule L			6	
	7	Notes and loans receivable, net		1,516,647	7	1,744,112
	8	Inventories for sale or use			8	
	9	Prepaid expenses and deferred charges		1,460,528	9	1,072,977
	10a	Land, buildings, and equipment: cost or other basis. Complete Part VI of Schedule D	10a	282,309,232		
	b	Less: accumulated depreciation	10b	92,466,344	188,831,758	10c 189,842,888
	11	Investments—publicly traded securities			11	
	12	Investments—other securities. See Part IV, line 11		1,154,264	12	1,481,372
	13	Investments—program-related. See Part IV, line 11			13	
	14	Intangible assets			14	
	15	Other assets. See Part IV, line 11		43,009,257	15	44,848,309
	16	Total assets. Add lines 1 through 15 (must equal line 34)		250,842,142	16	247,782,645
Liabilities	17	Accounts payable and accrued expenses		51,117,987	17	55,795,065
	18	Grants payable			18	
	19	Deferred revenue		1,092,693	19	767,586
	20	Tax-exempt bond liabilities		220,000,000	20	220,000,000
	21	Escrow or custodial account liability. Complete Part IV of Schedule D			21	
	22	Loans and other payables to current and former officers, directors, trustees, key employees, highest compensated employees, and disqualified persons. Complete Part II of Schedule L			22	
	23	Secured mortgages and notes payable to unrelated third parties			23	
	24	Unsecured notes and loans payable to unrelated third parties			24	
	25	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		66,164,723	25	67,966,380
	26	Total liabilities. Add lines 17 through 25		338,375,403	26	344,529,031
Net Assets or Fund Balances	Organizations that follow SFAS 117 (ASC 958), check here <input checked="" type="checkbox"/> and complete lines 27 through 29, and lines 33 and 34.					
	27	Unrestricted net assets		-90,432,320	27	-100,300,385
	28	Temporarily restricted net assets		2,794,926	28	2,941,222
	29	Permanently restricted net assets		104,133	29	612,777
	Organizations that do not follow SFAS 117 (ASC 958), check here <input type="checkbox"/> and complete lines 30 through 34.					
	30	Capital stock or trust principal, or current funds			30	
	31	Paid-in or capital surplus, or land, building or equipment fund			31	
	32	Retained earnings, endowment, accumulated income, or other funds			32	
	33	Total net assets or fund balances		-87,533,261	33	-96,746,386
	34	Total liabilities and net assets/fund balances		250,842,142	34	247,782,645

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	59,508,889
2	Total expenses (must equal Part IX, column (A), line 25)	2	72,643,256
3	Revenue less expenses Subtract line 2 from line 1	3	-13,134,367
4	Net assets or fund balances at beginning of year (must equal Part X, line 33, column (A))	4	-87,533,261
5	Net unrealized gains (losses) on investments	5	64,944
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 in Schedule O)	9	3,856,298
10	Net assets or fund balances at end of year Combine lines 3 through 9 (must equal Part X, line 33, column (B))	10	-96,746,386

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? 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		No
2b	Were the organization's financial statements audited by an independent accountant? 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	Yes	
2c	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? If the organization changed either its oversight process or selection process during the tax year, explain in Schedule O	Yes	
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?	Yes	
3b	If "Yes," did the organization undergo the required audit or audits? If the organization did not undergo the required audit or audits, explain why in Schedule O and describe any steps taken to undergo such audits	Yes	

Additional Data

Software ID:
Software Version:
EIN: 52-2000823
Name: VAN ANDEL RESEARCH INSTITUTE

Form 990, Part III, Line 4a

4a (Code) (Expenses \$ 9,640,590 including grants of \$ 290,638) (Revenue \$ 604,010)

CENTER FOR CANCER AND CELL BIOLOGY SCHEDULE O PROVIDES FURTHER INFORMATION REGARDING THIS PROGRAM'S ACCOMPLISHMENTS

Form 990, Part III, Line 4b

4b (Code) (Expenses \$ 7,238,770 including grants of \$ 655,672) (Revenue \$ 16,619)

CENTER FOR EPIGENETICSSCHEDULE O PROVIDES FURTHER INFORMATION REGARDING THIS PROGRAM'S ACCOMPLISHMENTS

Form 990, Part III, Line 4c

4c (Code) (Expenses \$ 5,197,899 including grants of \$ 61,873) (Revenue \$ 342,945)

CENTER FOR NEURODEGENERATIVE SCIENCESEE SCHEDULE O FOR FURTHER INFORMATION ABOUT THIS PROGRAM'S ACCOMPLISHMENTS

Form 990, Part III - 4 Program Service Accomplishments (See the Instructions)

(Code) (Expenses \$	28,299,325	including grants of \$) (Revenue \$	340,244)
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SCHEDULE A
(Form 990 or 990EZ)

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.
▶ Information about Schedule A (Form 990 or 990-EZ) and its instructions is at www.irs.gov/form990.

OMB No 1545-0047

2015

Open to Public Inspection

Name of the organization
VAN ANDEL RESEARCH INSTITUTE

Employer identification number
52-2000823

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 11, 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

SPECTRUM HEALTH,
/
GRAND RAPIDS, MI

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 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)

10

☐

An organization organized and operated exclusively to test for public safety See **section 509(a)(4).**

11

☐

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 11a through 11d that describes the type of supporting organization and complete lines 11e, 11f, and 11g

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 - 9 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		
Total						

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)2011	(b)2012	(c)2013	(d)2014	(e)2015	(f)Total
1 Gifts, grants, contributions, and membership fees received (Do not include any unusual grants)						
2 Tax revenues levied for the organization's benefit and either paid to or expended on its behalf						
3 The value of services or facilities furnished by a governmental unit to the organization without charge						
4 Total. Add lines 1 through 3						
5 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)						
6 Public support. Subtract line 5 from line 4						

Section B. Total Support						
Calendar year (or fiscal year beginning in) ►	(a)2011	(b)2012	(c)2013	(d)2014	(e)2015	(f)Total
7 Amounts from line 4						
8 Gross income from interest, dividends, payments received on securities loans, rents, royalties and income from similar sources						
9 Net income from unrelated business activities, whether or not the business is regularly carried on						
10 Other income Do not include gain or loss from the sale of capital assets (Explain in Part VI)						
11 Total support. Add lines 7 through 10						
12 Gross receipts from related activities, etc (see instructions)					12	
13 First five 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						
14 Public support percentage for 2015 (line 6, column (f) divided by line 11, column (f))		14				
15 Public support percentage for 2014 Schedule A , Part II, line 14		15				
16a 33 1/3% support test—2015.If the organization did not check the box on line 13, and line 14 is 33 1/3% or more, check this box and stop here. The organization qualifies as a publicly supported organization						►
b 33 1/3% support test—2014.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 stop here. The organization qualifies as a publicly supported organization						►
17a 10%-facts-and-circumstances test—2015.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 stop here. Explain in Part VI how the organization meets the "facts-and-circumstances" test The organization qualifies as a publicly supported organization						►
b 10%-facts-and-circumstances test—2014.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 stop here. Explain in Part VI how the organization meets the "facts-and-circumstances" test The organization qualifies as a publicly supported organization						►
18 Private foundation.If the organization did not check a box on line 13, 16a, 16b, 17a, or 17b, check this box and see instructions						►

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

(Complete only if you checked the box on line 9 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)2011	(b)2012	(c)2013	(d)2014	(e)2015	(f)Total
1 Gifts, grants, contributions, and membership fees received (Do not include any "unusual grants.")						
2 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						
3 Gross receipts from activities that are not an unrelated trade or business under section 513						
4 Tax revenues levied for the organization's benefit and either paid to or expended on its behalf						
5 The value of services or facilities furnished by a governmental unit to the organization without charge						
6 Total. Add lines 1 through 5						
7a Amounts included on lines 1, 2, and 3 received from disqualified persons						
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						
c Add lines 7a and 7b						
8 Public support. (Subtract line 7c from line 6.)						

Section B. Total Support

Calendar year (or fiscal year beginning in) ►	(a)2011	(b)2012	(c)2013	(d)2014	(e)2015	(f)Total
9 Amounts from line 6						
10a Gross income from interest, dividends, payments received on securities loans, rents, royalties and income from similar sources						
b Unrelated business taxable income (less section 511 taxes) from businesses acquired after June 30, 1975						
c Add lines 10a and 10b						
11 Net income from unrelated business activities not included in line 10b, whether or not the business is regularly carried on						
12 Other income. Do not include gain or loss from the sale of capital assets (Explain in Part VI.)						
13 Total support. (Add lines 9, 10c, 11, and 12.)						
14 First five 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 ► <input type="checkbox"/>						

Section C. Computation of Public Support Percentage

15 Public support percentage for 2015 (line 8, column (f) divided by line 13, column (f))	15	
16 Public support percentage from 2014 Schedule A, Part III, line 15	16	

Section D. Computation of Investment Income Percentage

17 Investment income percentage for 2015 (line 10c, column (f) divided by line 13, column (f))	17	
18 Investment income percentage from 2014 Schedule A, Part III, line 17	18	
19a 33 1/3% support tests—2015. 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 ► <input type="checkbox"/>		
b 33 1/3% support tests—2014. 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 ► <input type="checkbox"/>		
20 Private foundation. If the organization did not check a box on line 14, 19a, or 19b, check this box and see instructions ► <input type="checkbox"/>		

Part IV Supporting Organizations

(Complete only if you checked a box on line 11 of Part I. If you checked 11a of Part I, complete Sections A and B. If you checked 11b of Part I, complete Sections A and C. If you checked 11c of Part I, complete Sections A, D, and E. If you checked 11d of Part I, complete Sections A and D, and complete Part V.)

Section A. All Supporting Organizations

	Yes	No
1 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>		
2 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>		
3a Did the organization have a supported organization described in section 501(c)(4), (5), or (6)? <i>If "Yes," answer (b) and (c) below.</i>		
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>		
c 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>		
4a Was any supported organization not organized in the United States ("foreign supported organization")? <i>If "Yes" and if you checked 11a or 11b in Part I, answer (b) and (c) below.</i>		
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>		
c 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>		
5a Did the organization add, substitute, or remove any supported organizations during the tax year? <i>If "Yes," answer (b) and (c) 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 Type I or Type II only. Was any added or substituted supported organization part of a class already designated in the organization's organizing document?		
c Substitutions only. Was the substitution the result of an event beyond the organization's control?		
6 Did the organization provide support (whether in the form of grants or the provision of services or facilities) to anyone other than (a) its supported organizations, (b) individuals that are part of the charitable class benefited by one or more of its supported organizations, or (c) 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>		
7 Did the organization provide a grant, loan, compensation, or other similar payment to a substantial contributor (defined in IRC 4958(c)(3)(C)), a family member of a substantial contributor, or a 35-percent controlled entity with regard to a substantial contributor? <i>If "Yes," complete Part I of Schedule L (Form 990).</i>		
8 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 II of Schedule L (Form 990).</i>		
9a 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 Did one or more disqualified persons (as defined in line 9(a)) hold a controlling interest in any entity in which the supporting organization had an interest? <i>If "Yes," provide detail in Part VI.</i>		
c Did a disqualified person (as defined in line 9(a)) 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>		
10a Was the organization subject to the excess business holdings rules of IRC 4943 because of IRC 4943(f) (regarding certain Type II supporting organizations, and all Type III non-functionally integrated supporting organizations)? <i>If "Yes," answer b below.</i>		
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>		
11 Has the organization accepted a gift or contribution from any of the following persons?		
a A person who directly or indirectly controls, either alone or together with persons described in (b) and (c) below, the governing body of a supported organization?		
b A family member of a person described in (a) above?		
c A 35% controlled entity of a person described in (a) or (b) above? <i>If "Yes" to a, b, or c, provide detail in Part VI.</i>		

Part IV

Supporting Organizations (continued)

Section B. Type I Supporting Organizations

	Yes	No
<div>1</div> <div>Did the directors, trustees, or membership of one or more supported organizations have the power to regularly appoint or elect at least a majority of the organization's 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 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></div>		
<div>2</div> <div>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></div>		

Section C. Type II Supporting Organizations

	Yes	No
<div>1</div> <div>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></div>		

Section D. All Type III Supporting Organizations

	Yes	No
<div>1</div> <div>Did the organization provide to each of its supported organizations, by the last day of the fifth month of the organization's tax year, (1) a written notice describing the type and amount of support provided during the prior tax year, (2) a copy of the Form 990 that was most recently filed as of the date of notification, and (3) copies of the organization's governing documents in effect on the date of notification, to the extent not previously provided?</div>		
<div>2</div> <div>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></div>		
<div>3</div> <div>By reason of the relationship described in (2), 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></div>		

Section E. Type III Functionally-Integrated Supporting Organizations

	Yes	No
<div>1</div> <div>Check the box next to the method that the organization used to satisfy the Integral Part Test during the year (see instructions)</div> <div><div><div><input type="checkbox"/></div><div>The organization satisfied the Activities Test. Complete line 2 below.</div></div><div><div><input type="checkbox"/></div><div>The organization is the parent of each of its supported organizations. Complete line 3 below.</div></div><div><div><input type="checkbox"/></div><div>The organization supported a governmental entity. Describe in Part VI how you supported a government entity (see instructions).</div></div></div>		
<div>2</div> <div>Activities Test. Answer (a) and (b) below.</div> <div><div><div>2a</div><div>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></div></div><div><div>2b</div><div>Did the activities described in (a) 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></div></div></div>		
<div>3</div> <div>Parent of Supported Organizations. Answer (a) and (b) below.</div> <div><div><div>3a</div><div>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>Provide details in Part VI.</i></div></div><div><div>3b</div><div>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></div></div></div>		

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. **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	Adjusted Net Income (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)	1	
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	Total (add lines 1a, 1b, and 1c)	1d	
e	Discount 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 1-1/2% 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 .035	6	
7	Recoveries of prior-year distributions	7	
8	Minimum Asset Amount (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 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	Distributable Amount. Subtract line 5 from line 4, unless subject to emergency temporary reduction (see instructions)	6	
7	Check here if the current year is the organization's first as a non-functionally-integrated Type III supporting organization (see instructions). <input type="checkbox"/>		

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

Section D - Distributions	Current Year
1 Amounts paid to supported organizations to accomplish exempt purposes	
2 Amounts paid to perform activity that directly furthers exempt purposes of supported organizations, in excess of income from activity	
3 Administrative expenses paid to accomplish exempt purposes of supported organizations	
4 Amounts paid to acquire exempt-use assets	
5 Qualified set-aside amounts (prior IRS approval required)	
6 Other distributions (describe in Part VI) See instructions	
7 Total annual distributions. Add lines 1 through 6	
8 Distributions to attentive supported organizations to which the organization is responsive (provide details in Part VI) See instructions	
9 Distributable amount for 2015 from Section C, line 6	
10 Line 8 amount divided by Line 9 amount	

Section E - Distribution Allocations (see instructions)	(i) Excess Distributions	(ii) Underdistributions Pre-2015	(iii) Distributable Amount for 2015
1 Distributable amount for 2015 from Section C, line 6			
2 Underdistributions, if any, for years prior to 2015 (reasonable cause required--see instructions)			
3 Excess distributions carryover, if any, to 2015			
a			
b			
c			
d From 2013.			
e From 2014.			
f Total of lines 3a through e			
g Applied to underdistributions of prior years			
h Applied to 2015 distributable amount			
i Carryover from 2010 not applied (see instructions)			
j Remainder Subtract lines 3g, 3h, and 3i from 3f			
4 Distributions for 2015 from Section D, line 7 \$			
a Applied to underdistributions of prior years			
b Applied to 2015 distributable amount			
c Remainder Subtract lines 4a and 4b from 4			
5 Remaining underdistributions for years prior to 2015, if any Subtract lines 3g and 4a from line 2 (if amount greater than zero, see instructions)			
6 Remaining underdistributions for 2015 Subtract lines 3h and 4b from line 1 (if amount greater than zero, see instructions)			
7 Excess distributions carryover to 2016. Add lines 3j and 4c			
8 Breakdown of line 7			
a			
b			
c Excess from 2013.			
d From 2014.			
e From 2015.			

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).

Facts And Circumstances Test

SCHEDULE C
(Form 990 or 990-EZ)

Department of the Treasury
Internal Revenue Service

Political Campaign and Lobbying Activities

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.
▶Information about Schedule C (Form 990 or 990-EZ) and its instructions is at www.irs.gov/form990.

OMB No 1545-0047

2015

Open to Public Inspection

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 the organization VAN ANDEL RESEARCH INSTITUTE	Employer identification number 52-2000823
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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 expenditures ▶ \$
- 3 Volunteer hours

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 fileForm 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-
2				
3				
4				
5				
6				

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

Limits on Lobbying Expenditures (The term "expenditures" means amounts paid or incurred.)		(a) Filing organization's totals	(b) Affiliated group totals												
1a	Total lobbying expenditures to influence public opinion (grass roots lobbying)														
b	Total lobbying expenditures to influence a legislative body (direct lobbying)	238,376													
c	Total lobbying expenditures (add lines 1a and 1b)	238,376													
d	Other exempt purpose expenditures	72,404,880													
e	Total exempt purpose expenditures (add lines 1c and 1d)	72,643,256													
f	Lobbying nontaxable amount Enter the amount from the following table in both columns	1,000,000													
<table><tr><th>If the amount on line 1e, column (a) or (b) is:</th><th>The lobbying nontaxable amount is:</th></tr><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></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														
g	Grassroots nontaxable amount (enter 25% of line 1f)	250,000													
h	Subtract line 1g from line 1a If zero or less, enter -0-	0													
i	Subtract line 1f from line 1c If zero or less, enter -0-	0													
j	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"/> Y e s	<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.)

Lobbying Expenditures During 4-Year Averaging Period					
Calendar year (or fiscal year beginning in)	(a)2012	(b)2013	(c)2014	(d)2015	(e) Total
2a Lobbying nontaxable amount	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
b Lobbying ceiling amount (150% of line 2a, column(e))					6,000,000
c Total lobbying expenditures	85,680	367,563	165,579	238,376	857,198
d Grassroots nontaxable amount	250,000	250,000	250,000	250,000	1,000,000
e Grassroots ceiling amount (150% of line 2d, column (e))					1,500,000
f Grassroots lobbying expenditures					

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

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

1	Dues, assessments and similar amounts from members	1	
2	Section 162(e) nondeductible lobbying and political expenditures (do not include amounts of political expenses for which the section 527(f) tax was paid).		
a	Current year	2a	
b	Carryover from last year	2b	
c	Total	2c	
3	Aggregate amount reported in section 6033(e)(1)(A) notices of nondeductible section 162(e) dues	3	
4	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?	4	
5	Taxable amount of lobbying and political expenditures (see instructions)	5	

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.		
Return Reference	Explanation	

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.
Information about Schedule D (Form 990) and its instructions is at www.irs.gov/form990.

OMB No 1545-0047

2015

Open to Public Inspection

Name of the organization
VAN ANDEL RESEARCH INSTITUTE

Employer identification number
52-2000823

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.

1

Total number at end of year

(a) Donor advised funds

(b) Funds and other accounts

2

Aggregate value of contributions to (during year)

3

Aggregate value of grants from (during year)

4

Aggregate value at end of year

5

Did the organization inform all donors and donor advisors in writing that the assets held in donor advised funds are the organization's property, subject to the organization's exclusive legal control?

☐ Yes

☐ No

6

Did the organization inform all grantees, donors, and donor advisors in writing that grant funds can be used only for charitable purposes and not for the benefit of the donor or donor advisor, or for any other purpose conferring impermissible private benefit?

☐ Yes

☐ No

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

1

Purpose(s) of conservation easements held by the organization (check all that apply)
☐ Preservation of land for public use (e g , recreation or education)
☐ Protection of natural habitat
☐ Preservation of open space
☐ Preservation of an historically important land area
☐ Preservation of a certified historic structure

2

Complete lines 2a through 2d if the organization held a qualified conservation contribution in the form of a conservation easement on the last day of the tax year

a

Total number of conservation easements

b

Total acreage restricted by conservation easements

c

Number of conservation easements on a certified historic structure included in (a)

d

Number of conservation easements included in (c) acquired after 8/17/06, and not on a historic structure listed in the National Register

2a

Held at the End of the Year

2b

2c

2d

3

Number of conservation easements modified, transferred, released, extinguished, or terminated by the organization during the tax year ▶

4

Number of states where property subject to conservation easement is located ▶

5

Does the organization have a written policy regarding the periodic monitoring, inspection, handling of violations, and enforcement of the conservation easements it holds?

☐ Yes

☐ No

6

Staff and volunteer hours devoted to monitoring, inspecting, handling of violations, and enforcing conservation easements during the year
▶

7

Amount of expenses incurred in monitoring, inspecting, handling of violations, and enforcing conservation easements during the year
▶ \$

8

Does each conservation easement reported on line 2(d) above satisfy the requirements of section 170(h)(4) (B)(i) and section 170(h)(4)(B)(ii)?

☐ Yes

☐ No

9

In Part XIII, describe how the organization reports conservation easements in its revenue and expense statement, and balance sheet, and include, if applicable, the text of the footnote to the organization's financial statements that describes the organization's accounting for conservation easements

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.

1a

If the organization elected, as permitted under SFAS 116 (ASC 958), not to report in its revenue statement and balance sheet works of art, historical treasures, or other similar assets held for public exhibition, education, or research in furtherance of public service, provide, in Part XIII, the text of the footnote to its financial statements that describes these items

b

If the organization elected, as permitted under SFAS 116 (ASC 958), to report in its revenue statement and balance sheet works of art, historical treasures, or other similar assets held for public exhibition, education, or research in furtherance of public service, provide the following amounts relating to these items

(i)

Revenue included on Form 990, Part VIII, line 1

▶ \$

(ii)

Assets included in Form 990, Part X

▶ \$

2

If the organization received or held works of art, historical treasures, or other similar assets for financial gain, provide the following amounts required to be reported under SFAS 116 (ASC 958) relating to these items

a

Revenue included on Form 990, Part VIII, line 1

▶ \$

b

Assets included in Form 990, Part X

▶ \$

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

Cat No 52283D

Schedule D (Form 990) 2015

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 are a 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 programs

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

c

Beginning balance

d

Additions during the year

e

Distributions during the year

f

Ending balance

	Amount
1c	
1d	
1e	
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 in Part XIII

☐

Part V

Endowment Funds.

Complete if the organization answered "Yes" to Form 990, Part IV, line 10.

	(a)Current year	(b)Prior year	b (c)Two years back	(d)Three years back	(e)Four years back
1a Beginning of year balance					
b Contributions	596,343				
c Net investment earnings, gains, and losses	18,408				
d Grants or scholarships					
e Other expenditures for facilities and programs	1,974				
f Administrative expenses					
g End of year balance	612,777				

2

Provide the estimated percentage of the current year end balance (line 1g, column (a)) held as

a

Board designated or quasi-endowment

b

Permanent endowment 100 000 %

c

Temporarily restricted endowment

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

(i) unrelated organizations

(ii) related organizations

	Yes	No
3a(i)		No
3a(ii)	Yes	
3b	Yes	

b

If "Yes" on 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' to 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)	Accumulated (c)depreciation	(d)Book value
1a Land		5,288,315		5,288,315
b Buildings		224,716,844	55,003,310	169,713,534
c Leasehold improvements				
d Equipment		48,068,135	37,439,932	10,628,203
e Other		4,235,938	23,102	4,212,836
Total. Add lines 1a through 1e (Column (d) must equal Form 990, Part X, column (B), line 10(c))				189,842,888

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.

1	Total revenue, gains, and other support per audited financial statements	1	55,212,370
2	Amounts included on line 1 but not on Form 990, Part VIII, line 12		
a	Net unrealized gains (losses) on investments	2a	64,944
b	Donated services and use of facilities	2b	
c	Recoveries of prior year grants	2c	
d	Other (Describe in Part XIII)	2d	1,515,805
e	Add lines 2a through 2d	2e	1,580,749
3	Subtract line 2e from line 1	3	53,631,621
4	Amounts included on Form 990, Part VIII, line 12, but not on line 1 :		
a	Investment expenses not included on Form 990, Part VIII, line 7b	4a	
b	Other (Describe in Part XIII)	4b	5,877,268
c	Add lines 4a and 4b	4c	5,877,268
5	Total revenue. Add lines 3 and 4c . (This must equal Form 990, Part I, line 12)	5	59,508,889

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.

1	Total expenses and losses per audited financial statements	1	64,425,495
2	Amounts included on line 1 but not on Form 990, Part IX, line 25		
a	Donated services and use of facilities	2a	
b	Prior year adjustments	2b	
c	Other losses	2c	
d	Other (Describe in Part XIII)	2d	-2,340,493
e	Add lines 2a through 2d	2e	-2,340,493
3	Subtract line 2e from line 1	3	66,765,988
4	Amounts included on Form 990, Part IX, line 25, but not on line 1 :		
a	Investment expenses not included on Form 990, Part VIII, line 7b	4a	
b	Other (Describe in Part XIII)	4b	5,877,268
c	Add lines 4a and 4b	4c	5,877,268
5	Total expenses. Add lines 3 and 4c . (This must equal Form 990, Part I, line 18)	5	72,643,256

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.

Return Reference	Explanation
See Additional Data Table	

Part XIII **Supplemental Information** *(continued)*

Return Reference	Explanation

Additional Data

Software ID:
Software Version:
EIN: 52-2000823
Name: VAN ANDEL RESEARCH INSTITUTE

Supplemental Information

Return Reference	Explanation
PART X, LINE 2	PART X, LINE 1(1) AND LINE 2 THERE ARE NO UNCERTAIN TAX POSITIONS RELATED TO VARI

Supplemental Information

Return Reference	Explanation
PART XI, LINE 2D - OTHER ADJUSTMENTS	RENTAL EXPENSES 1,493,552 FUNDRAISING EVENT EXPENSE 22,253

Supplemental Information

Return Reference	Explanation
PART XI, LINE 4B - OTHER ADJUSTMENTS	NET ALLOCATED 5,877,268

Supplemental Information

Return Reference	Explanation
PART XII, LINE 2D - OTHER ADJUSTMENTS	RENTAL EXPENSES 1,493,552 FUNDRAISING EVENT EXPENSE 22,253 GAIN ON INTEREST RATE SWAP - 3,856,298

Supplemental Information

Return Reference	Explanation
PART XII, LINE 4B - OTHER ADJUSTMENTS	NET ALLOCATED 5,877,268

Supplemental Information

Return Reference	Explanation
PART V	VAN ANDEL INSTITUTE (A RELATED ORGANIZATION) MAINTAINS ENDOWED FUNDS FOR THE BENEFIT OF BO TH VARI AND VAN ANDEL EDUCATION INSTITUTE (A RELATED ORGANIZATION) TO FUND OPERATING EXPEN SES

Supplemental Information

Return Reference	Explanation
PART XI AND XII, LINE 4B	EXPENSE ALLOCATIONS PRESENTED WITHIN REVENUE

**SCHEDULE F
(Form 990)**

Statement of Activities Outside the United States

OMB No 1545-0047

2015

**Open to Public
Inspection**

► **Complete if the organization answered "Yes" to Form 990,
Part IV, line 14b, 15, or 16.**
► **Attach to Form 990.**

► **Information about Schedule F (Form 990) and its instructions is at www.irs.gov/form990.**

Department of the Treasury
Internal Revenue Service

Name of the organization
VAN ANDEL RESEARCH INSTITUTE

Employer identification number
52-2000823

Part I General Information on Activities Outside the United States.

Complete if the organization answered "Yes" to Form 990, Part IV, line 14b.

- 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**
- For grantmakers.** Describe in Part V the organization's procedures for monitoring the use of its grants and other assistance outside the United States
- 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 region	(d) Activities conducted in region (by type) (e g , 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 region	(f) Total expenditures for and investments in region
(1) EAST ASIA & THE PACIFIC	0	0	PROGRAM SERVICES	RESEARCH COLLABORATION - RESEARCH SERVICES	138,582
(2) EUROPE	0	0	GENERAL EXPENSES	SOFTWARE LICENSING FEES	1,065
(3) EUROPE	0	0	PROGRAM SERVICES	RESEARCH COLLABORATION - RESEARCH SERVICES	12,882
(4) EUROPE	0	0	RESEARCH SERVICES	LICENSING FEES	
(5)					
3a Sub-total	0	0			152,529
b Total from continuation sheets to Part I	0	0			0
c Totals (add lines 3a and 3b)	0	0			152,529

Part II **Grants and Other Assistance to Organizations or Entities Outside the United States.**

Complete if the organization answered "Yes" to 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 non-cash assistance	(h) Description of non-cash assistance	(i) Method of valuation (book, FMV, appraisal, other)
(1)			EUROPE	RESEARCH COLLABORATION	154,507	WIRE TRANSFER			
(2)									
(3)									
(4)									

2 Enter total number of recipient organizations listed above that are recognized as charities by the foreign country, recognized as tax-exempt by the IRS, or for which the grantee or counsel has provided a section 501(c)(3) equivalency letter ▶ 1

3 Enter total number of other organizations or entities ▶

Part III **Grants and Other Assistance to Individuals Outside the United States.** Complete if the organization answered "Yes" to Form 990, Part IV, line 16.
Part III can be duplicated if additional space is needed.

(a) Type of grant or assistance	(b) Region	(c) Number of recipients	(d) Amount of cash grant	(e) Manner of cash disbursement	(f) Amount of non-cash assistance	(g) Description of non-cash assistance	(h) Method of valuation (book, FMV, appraisal, other)
(1)							
(2)							
(3)							
(4)							
(5)							
(6)							
(7)							
(8)							
(9)							
(10)							
(11)							
(12)							
(13)							
(14)							
(15)							
(16)							
(17)							
(18)							

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 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, do not 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 file Form 5713, International Boycott Report (see Instructions for Form 5713, do not file with Form 990)*

☐

Yes

☒

No

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).

990 Schedule F, Supplemental Information

Return Reference	Explanation
PART I, LINE 2	GRANT FUNDS ARE MONITORED BY QUARTERLY EXPENDITURE REPORTS BEFORE DISBURSING INCREMENTAL FUNDING PROGRESS REPORTS ARE REQUIRED ANNUALLY AND REVIEWED BY VAN ANDEL RESEARCH INSTITUTE AND A THIRD PARTY

990 Schedule F, Supplemental Information

Return Reference	Explanation
SCHEDULE F, PART II, LINE 1	ORGANIZATION PROVIDED ASSISTANCE IS MONITORED WITH QUARTERLY EXPENDITURE REPORTING

SCHEDULE G
(Form 990 or 990-EZ)

Department of the Treasury
Internal Revenue Service

Supplemental Information Regarding
Fundraising or Gaming Activities

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

Attach to Form 990 or Form 990-EZ

Information about Schedule G (Form 990 or 990-EZ) and its instructions is at www.irs.gov/form990

OMB No 1545-0047

2015

Open to Public Inspection

Name of the organization
VAN ANDEL RESEARCH INSTITUTE

Employer identification number
52-2000823

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

e ☐ Solicitation of non-government grants

b ☐ Internet and email solicitations

f ☐ Solicitation of government grants

c ☐ Phone solicitations

g ☐ Special fundraising events

d ☐ In-person solicitations
- 2a 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 ten 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			
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
Total						

- 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.
-
-

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)
		5K RACE (event type)	GRIFFINS (event type)	(total number)	Total events (add col (a) through col (c))
Revenue	1 Gross receipts	30,770	26,549		57,319
	2 Less Contributions	22,210	25,249		47,459
	3 Gross income (line 1 minus line 2)	8,560	1,300		9,860
Direct Expenses	4 Cash prizes				
	5 Noncash prizes				
	6 Rent/facility costs				
	7 Food and beverages				
	8 Entertainment				
	9 Other direct expenses	9,193	13,060		22,253
	10 Direct expense summary Add lines 4 through 9 in column (d) ▶				22,253
	11 Net income summary Subtract line 10 from line 3, column (d) ▶				-12,393

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))
Revenue	1 Gross revenue				
Direct Expenses	2 Cash prizes				
	3 Noncash prizes				
	4 Rent/facility costs				
	5 Other direct expenses				
	6 Volunteer labor	<input type="checkbox"/> Yes _____ % <input type="checkbox"/> No	<input type="checkbox"/> Yes _____ % <input type="checkbox"/> No	<input type="checkbox"/> Yes _____ % <input type="checkbox"/> No	
	7 Direct expense summary Add lines 2 through 5 in column (d) ▶				
	8 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 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 complete this part to provide any additional information (see instructions).

Return Reference	Explanation
------------------	-------------

2015

**Open to Public
Inspection**

52-2000823

☒ Yes ☐ No

(h) Purpose of grant or assistance

Schedule I (Form 990) 2015

Part IIIGrants 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 non-cash assistance
GRADUATE STUDENT STIPENDS FOR MICHIGAN STATE UNIVERSITY (1) STUDENTS	4	180,902			
(2) GRADUATE STUDENT STIPENDS VAN ANDEL INSTITUTE GRADUATE SCHOOL	3	69,320			
(3) FOREIGN NATIONAL STIPENDS	6	77,924			

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

Return Reference	Explanation
PART I, LINE 2	STUDENTS RECEIVE A STIPEND FOR LIVING EXPENSE AND INSURANCE GRANT FUNDS TO INSTITUTIONS ARE MONITORED BY QUARTERLY EXPENDITURE REPORTS BEFORE DISBURSING INCREMENTAL FUNDING PROGRESS REPORTS ARE REQUIRED ANNUALLY AND REVIEWED BY VAN ANDEL RESEARCH INSTITUTE AND A THIRD PARTY

Additional Data

Software ID:
Software Version:
EIN: 52-2000823
Name: VAN ANDEL RESEARCH INSTITUTE

Form 990,Schedule I, Part II, Grants and Other Assistance to Domestic Organizations and Domestic Governments.

(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
JOHNS HOPKINS UNIVERSITY 3400 N CHARLES STREET BALTIMORE,MD 21218	52-0595110	501C3	154,309				RESEARCH COLLABORATION
UNIVERSITY OF SOUTHERN CALIFORNIA 1450 BIGGY STREET LOS ANGELES,CA 90089	95-1642394	501C3	172,898				RESEARCH COLLABORATION
MEMORIAL SLOAN-KETTERING CANCER CENTER 1275 YORK AVENUE NEW YORK,NY 10065	13-1924236	501C3	198,388				RESEARCH COLLABORATION

Schedule J
(Form 990)

Department of the Treasury
Internal Revenue Service

Compensation Information

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.
▶ Information about Schedule J (Form 990) and its instructions is at www.irs.gov/form990.

OMB No 1545-0047

2015

Open to Public Inspection

Name of the organization
VAN ANDEL RESEARCH INSTITUTE

Employer identification number
52-2000823

Part I Questions Regarding Compensation

	Yes	No
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. <div><div><input checked="" type="checkbox"/> First-class or charter travel</div><div><input type="checkbox"/> Housing allowance or residence for personal use</div><div><input type="checkbox"/> Travel for companions</div><div><input type="checkbox"/> Payments for business use of personal residence</div><div><input type="checkbox"/> Tax indemnification and gross-up payments</div><div><input type="checkbox"/> Health or social club dues or initiation fees</div><div><input type="checkbox"/> Discretionary spending account</div><div><input type="checkbox"/> Personal services (e.g., maid, chauffeur, chef)</div></div>		
b If any of the boxes in 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	1b Yes	
2 Did the organization require substantiation prior to reimbursing or allowing expenses incurred by all directors, trustees, officers, including the CEO/Executive Director, regarding the items checked in line 1a?	2 Yes	
3 Indicate which, if any, of the following the filing 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. <div><div><input checked="" type="checkbox"/> Compensation committee</div><div><input checked="" type="checkbox"/> Written employment contract</div><div><input checked="" type="checkbox"/> Independent compensation consultant</div><div><input checked="" type="checkbox"/> Compensation survey or study</div><div><input type="checkbox"/> Form 990 of other organizations</div><div><input checked="" type="checkbox"/> Approval by the board or compensation committee</div></div>		
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?	4a	No
b Participate in, or receive payment from, a supplemental nonqualified retirement plan?	4b	No
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.	4c	No
Only 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?	5a	No
b Any related organization? If "Yes," on line 5a or 5b, describe in Part III.	5b	No
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?	6a	No
b Any related organization? If "Yes," on line 6a or 6b, describe in Part III.	6b	No
7 For persons listed on Form 990, Part VII, Section A, line 1a, did the organization provide any non-fixed payments not described in lines 5 and 6? If "Yes," describe in Part III.	7	No
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.	8	No
9 If "Yes" on line 8, did the organization also follow the rebuttable presumption procedure described in Regulations section 53.4958-6(c)?	9	

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 are not 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.

(A) Name and Title	(B) Breakdown of W-2 and/or 1099-MISC 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
	(i) Base compensation	(ii) Bonus & incentive compensation	(iii) Other reportable compensation				
See Additional Data Table							

Part III **Supplemental Information**

Provide the information, explanation, or descriptions required for Part I, lines 1a, 1b, 3, 4a, 4b, 4c, 5a, 5b, 6a, 6b, 7, and 8, and for Part II. Also complete this part for any additional information.

Return Reference	Explanation
PART I, LINE 1A	VARI ALLOWS FOR FIRST-CLASS OR CHARTER TRAVEL FOR OFFICERS AND TRUSTEES

Additional Data

Software ID:
Software Version:
EIN: 52-2000823
Name: VAN ANDEL RESEARCH INSTITUTE

Form 990, Schedule J, Part II - Officers, Directors, Trustees, Key Employees, and Highest Compensated Employees

(A) Name and Title		(B) Breakdown of W-2 and/or 1099-MISC 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
		(i) Base Compensation	(ii) Bonus & incentive compensation	(iii) Other reportable compensation				
1DAVID VAN ANDEL CHAIRMAN / CEO	(i)	327,115	110,250	22,753	96,150	860	557,128	110,250
	(ii)	0	0	0	0	- 0	- 0	0
1DR GEORGE VANDE WOUDE TRUSTEE/ INVESTIGATOR	(i)	293,553	0	20,472	21,200	1,703	336,928	0
	(ii)	0	0	0	0	- 0	- 0	0
2DR JANA HALL CHIEF OPERATIONS OFFICER	(i)	314,424	58,343	3,564	77,711	10,712	464,754	58,343
	(ii)	0	0	0	0	- 0	- 0	0
3DAVID WHITESCARVER SECRETARY/V P & CHIEF LEGAL OFFICER	(i)	290,393	57,422	20,304	82,731	10,712	461,562	57,422
	(ii)	0	0	0	0	- 0	- 0	0
4TIMOTHY MYERS V P & CHIEF FINANCIAL OFFICER	(i)	253,080	42,300	785	67,662	10,712	374,539	42,300
	(ii)	0	0	0	0	- 0	- 0	0
5DR PETER JONES CHIEF SCIENTIFIC OFFICER & RES DIR	(i)	546,027	147,500	24,858	151,400	10,712	880,497	147,500
	(ii)	0	0	0	0	- 0	- 0	0
6KATHY VOGELSANG CHIEF INVESTMENT OFFICER	(i)	242,938	185,400	20,224	155,739	10,712	615,013	185,400
	(ii)	0	0	0	0	- 0	- 0	0
7DR PATRIK BRUNDIN VARI ASSOCIATE DIRECTOR OF RESEARCH	(i)	427,161	58,000	10,954	70,775	10,712	577,602	58,000
	(ii)	0	0	0	0	- 0	- 0	0
8DR GERALD CALLAHAN V P , INNOVATIONS & COLLABORATIONS	(i)	257,557	78,107	17,679	97,919	10,712	461,974	78,107
	(ii)	0	0	0	0	- 0	- 0	0
9DR PETER LAIRD INVESTIGATOR	(i)	371,424	6,417	2,322	44,686	10,712	435,561	0
	(ii)	0	0	0	0	- 0	- 0	0
10DR GERD PFEIFER INVESTIGATOR	(i)	342,930	0	2,322	26,434	10,712	382,398	0
	(ii)	0	0	0	0	- 0	- 0	0

Schedule K
(Form 990)

Department of the Treasury
Internal Revenue Service
Name of the organization
VAN ANDEL RESEARCH INSTITUTE

Supplemental Information on Tax Exempt Bonds

▶ Complete if the organization answered "Yes" to Form 990, Part IV, line 24a. Provide descriptions, explanations, and any additional information in Part VI.
▶ Attach to Form 990.
▶ Information about Schedule K (Form 990) and its instructions is at www.irs.gov/form990.

OMB No 1545-0047

2015

Open to Public Inspection

Employer identification number

52-2000823

Part I Bond Issues											
(a) Issuer name	(b) Issuer EIN	(c) CUSIP #	(d) Date issued	(e) Issue price	(f) Description of purpose	(g) Defeased		(h) On behalf of issuer		(i) Pool financing	
						Yes	No	Yes	No	Yes	No
A MICHIGAN STRATEGIC FUND	52-1417332		04-01-2013	220,000,000	REFUND BOND ISSUE 4/10/08		X		X		X

Part II		Proceeds									
		A		B		C		D			
1	Amount of bonds retired										
2	Amount of bonds legally defeased										
3	Total proceeds of issue	220,000,000									
4	Gross proceeds in reserve funds										
5	Capitalized interest from proceeds										
6	Proceeds in refunding escrows										
7	Issuance costs from proceeds										
8	Credit enhancement from proceeds										
9	Working capital expenditures from proceeds										
10	Capital expenditures from proceeds										
11	Other spent proceeds	220,000,000									
12	Other unspent proceeds										
13	Year of substantial completion										
		Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
14	Were the bonds issued as part of a current refunding issue?	X									
15	Were the bonds issued as part of an advance refunding issue?		X								
16	Has the final allocation of proceeds been made?	X									
17	Does the organization maintain adequate books and records to support the final allocation of proceeds?	X									

Part III Private Business Use									
		A		B		C		D	
		Yes	No	Yes	No	Yes	No	Yes	No
1	Was the organization a partner in a partnership, or a member of an LLC, which owned property financed by tax-exempt bonds?		X						
2	Are there any lease arrangements that may result in private business use of bond-financed property?		X						

Part III Private Business Use (Continued)

		A		B		C		D	
		Yes	No	Yes	No	Yes	No	Yes	No
3a	Are there any management or service contracts that may result in private business use of bond-financed property?	X							
b	If "Yes" to line 3a, does the organization routinely engage bond counsel or other outside counsel to review any management or service contracts relating to the financed property?	X							
c	Are there any research agreements that may result in private business use of bond-financed property?	X							
d	If "Yes" to line 3c, does the organization routinely engage bond counsel or other outside counsel to review any research agreements relating to the financed property?	X							
4	Enter the percentage of financed property used in a private business use by entities other than a section 501(c)(3) organization or a state or local government ▶								
5	Enter the percentage of financed property used in a private business use as a result of unrelated trade or business activity carried on by your organization, another section 501(c)(3) organization, or a state or local government ▶	0 660 %							
6	Total of lines 4 and 5	0 660 %							
7	Does the bond issue meet the private security or payment test?		X						
8a	Has there been a sale or disposition of any of the bond-financed property to a nongovernmental person other than a 501(c)(3) organization since the bonds were issued?.		X						
b	If "Yes" to line 8a, enter the percentage of bond-financed property sold or disposed of								
c	If "Yes" to line 8a, was any remedial action taken pursuant to Regulations sections 1.141-12 and 1.145-2?.								
9	Has the organization established written procedures to ensure that all nonqualified bonds of the issue are remediated in accordance with the requirements under Regulations sections 1.141-12 and 1.145-2?.	X							

Part IV Arbitrage

		A		B		C		D	
		Yes	No	Yes	No	Yes	No	Yes	No
1	Has the issuer filed Form 8038-T, Arbitrage Rebate, Yield Reduction and Penalty in Lieu of Arbitrage Rebate?		X						
2	If "No" to line 1, did the following apply?								
a	Rebate not due yet?		X						
b	Exception to rebate?		X						
c	No rebate due?	X							
	If "Yes" to line 2c, provide in Part VI the date the rebate computation was performed								
3	Is the bond issue a variable rate issue?	X							
4a	Has the organization or the governmental issuer entered into a qualified hedge with respect to the bond issue?		X						
b	Name of provider								
c	Term of hedge								
d	Was the hedge superintegrated?								
e	Was the hedge terminated?								

Part IV

Arbitrage (Continued)

		A		B		C		D	
		Yes	No	Yes	No	Yes	No	Yes	No
5a	Were gross proceeds invested in a guaranteed investment contract (GIC)?		X						
b	Name of provider								
c	Term of GIC								
d	Was the regulatory safe harbor for establishing the fair market value of the GIC satisfied?								
6	Were any gross proceeds invested beyond an available temporary period?		X						
7	Has the organization established written procedures to monitor the requirements of section 148?	X							

Part V

Procedures To Undertake Corrective Action

		A		B		C		D	
		Yes	No	Yes	No	Yes	No	Yes	No
Has the organization established written procedures to ensure that violations of federal tax requirements are timely identified and corrected through the voluntary closing agreement program if self-remediation is not available under applicable regulations?		X							

Part VI

Supplemental Information. Provide additional information for responses to questions on Schedule K (see instructions).

Return Reference	Explanation
DATE REBATE COMPUTATION PERFORMED	ISSUER NAME MICHIGAN STRATEGIC FUND DATE THE REBATE COMPUTATION WAS PERFORMED 11/30/2014

SCHEDULE M
(Form 990)

Noncash Contributions

OMB No 1545-0047

2015

Open to Public Inspection

▶Complete if the organizations answered "Yes" on Form 990, Part IV, lines 29 or 30.

▶ Attach to Form 990.

▶Information about Schedule M (Form 990) and its instructions is at www.irs.gov/form990

Department of the Treasury
Internal Revenue Service

Name of the organization
VAN ANDEL RESEARCH INSTITUTE

Employer identification number
52-2000823

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	3	510,684	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	X	3	5,124	COST
20 Drugs and medical supplies				
21 Taxidermy				
22 Historical artifacts				
23 Scientific specimens				
24 Archeological artifacts				
25 Other ▶ (<u>VARIOUS</u>)	X	3	1,400	COST
26 Other ▶ (<u> </u>)				
27 Other ▶ (<u> </u>)				
28 Other ▶ (<u> </u>)				

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

29

0

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 is not required to be used for exempt purposes for the entire holding period?

30a

No

b If "Yes," describe the arrangement in Part II

31 Does the organization have a gift acceptance policy that requires the review of any non-standard contributions?

31

No

32a Does the organization hire or use third parties or related organizations to solicit, process, or sell noncash contributions?

32a

No

b If "Yes," describe in Part II

33 If the organization did not 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.

Return Reference	Explanation
PART I, COLUMN (B)	VARI IS REPORTING THE NUMBER OF CONTRIBUTIONS RECEIVED DURING THE TAX YEAR

**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.

► Information about Schedule O (Form 990 or 990-EZ) and its instructions is at
www.irs.gov/form990.

OMB No 1545-0047

2015

**Open to Public
Inspection**

Name of the organization
VAN ANDEL RESEARCH INSTITUTE

Employer identification number

52-2000823

990 Schedule O, Supplemental Information

Return Reference	Explanation
FORM 990, PART VI, SECTION A, LINE 2	VARI, VAI, VAEI, AND VAIGS SHARE COMMON MANAGEMENT DAVID VAN ANDEL, DR JANA HALL, TIMOTHY MYERS AND DAVID WHITESCARVER ARE ALSO OFFICERS OF VAI, AND DAVID VAN ANDEL, TIMOTHY MYERS AND DAVID WHITESCARVER (THROUGH 8/31/16) ARE OFFICERS OF VAEI AND VAIGS

990 Schedule O, Supplemental Information

Return Reference	Explanation
FORM 990, PART VI, SECTION A, LINE 7A	THE TRUSTEES OF VAN ANDEL INSTITUTE HAVE THE AUTHORITY TO ELECT ONE OR MORE MEMBERS OF VARI'S GOVERNING BODY

990 Schedule O, Supplemental Information

Return Reference	Explanation
FORM 990, PART VI, SECTION B, LINE 11	FOLLOWING COMPLETION OF THE FINANCIAL STATEMENT AUDIT, THE FORM 990 IS PREPARED AND REVIEWED BY MANAGEMENT IT IS THEN CIRCULATED TO THE FULL BOARD FOR REVIEW AND COMMENTS PRIOR TO FILING WITH THE IRS

990 Schedule O, Supplemental Information

Return Reference	Explanation
FORM 990, PART VI, SECTION B, LINE 12C	<p>VARI HAS WRITTEN CONFLICT OF INTEREST ("COI") POLICIES AND PROCEDURES WHICH ADMINISTER AND ENFORCE A PROCESS TO IDENTIFY, EVALUATE, AND MANAGE POTENTIAL CONFLICTS OF INTEREST. THESE POLICIES HAVE BEEN APPROVED BY THE BOARD OF TRUSTEES. VAI ADMINISTERS COI POLICIES AND PROCEDURES THROUGH TWO STANDING COMMITTEES: THE CONFLICTS COMMITTEE ("CC") AND THE INSTITUTIONAL COI COMMITTEE ("ICOIC"). COI POLICIES AND PROCEDURES APPLY TO AND SERVE AS A GUIDE FOR EVERYONE IN THE ORGANIZATION. IN PARTICULAR, THEY PROVIDE A USEFUL RESOURCE FOR DEVELOPING ACTIVITIES OR RELATIONSHIPS WITH OUTSIDE ENTITIES OR PERSONS, AND ESTABLISH A PROCESS FOR COMMITTEES TO REVIEW AND MANAGE POTENTIAL CONFLICTS OF INTEREST AS THEY MAY ARISE. THE CC AND ICOIC ARE CHAIRED BY THE GENERAL COUNSEL. THE CC REQUIRES ANNUAL AND UPDATED DISCLOSURES BY COVERED PERSONS AND REVIEWS AND APPROVES MANAGEMENT PLANS. ICOIC POLICIES AND PROCEDURES SERVE AS A GUIDE FOR BOARDS OF TRUSTEES AND SENIOR EXECUTIVES. IN THE EVENT A POTENTIAL COI ARISES AT THE BOARD OR SENIOR EXECUTIVE LEVEL, THE ICOIC MEETS TO REVIEW AND DETERMINE HOW TO MANAGE SUCH A POTENTIAL CONFLICT OF INTEREST IN ACCORDANCE WITH THE COI POLICIES AND PROCEDURES.</p>

990 Schedule O, Supplemental Information

Return Reference	Explanation
FORM 990, PART VI, SECTION B, LINE 15	COMPARABILITY DATA FROM EXPERT THIRD PARTY IS OBTAINED AND REVIEWED BY THE INDEPENDENT, JOINT COMPENSATION COMMITTEE OF VAN ANDEL RESEARCH INSTITUTE AND RELATED ORGANIZATIONS TO DETERMINE APPROPRIATE COMPENSATION FOR THE CEO, EXECUTIVE MANAGEMENT OFFICIALS, OFFICERS, AND KEY EMPLOYEES, ON BEHALF OF VAN ANDEL RESEARCH INSTITUTE

990 Schedule O, Supplemental Information

Return Reference	Explanation
FORM 990, PART VI, SECTION C, LINE 19	ALL DOCUMENTS REQUIRED TO BE MADE AVAILABLE TO THE PUBLIC ARE AVAILABLE FOR PUBLIC INSPECTION UPON WRITTEN REQUEST

990 Schedule O, Supplemental Information

Return Reference	Explanation
FORM 990, PART XI, LINE 9	GAIN ON INTEREST RATE SWAP 3,856,298

990 Schedule O, Supplemental Information

Return Reference	Explanation
FORM 990, PART III, LINE 2	<p>VAN ANDEL RESEARCH INSTITUTE (VARI) IS DEDICATED TO DETERMINING THE EPIGENETIC, GENETIC, MOLECULAR, AND CELLULAR ORIGINS OF CANCER, PARKINSON'S DISEASE, AND OTHER ILLNESSES AND TO TRANSLATING THOSE FINDINGS INTO EFFECTIVE THERAPIES. THE INSTITUTE'S SCIENTISTS WORK IN ON-SITE LABORATORIES AND PARTICIPATE IN COLLABORATIONS THAT SPAN THE GLOBE. WITH EPIGENETICS AS ITS COMMON THREAD, VARI IS ORGANIZED INTO THREE CENTERS-THE CENTER FOR CANCER AND CELL BIOLOGY, THE CENTER FOR EPIGENETICS, AND THE CENTER FOR NEURODEGENERATIVE SCIENCE-AS WELL AS A CORE TECHNOLOGIES AND SERVICES GROUP, WHICH PROVIDES A VIVARIUM, A BIOREPOSITORY, AND VALUABLE ON-SITE CAPABILITIES IN CRYO-ELECTRON MICROSCOPY (CRYO-EM), IMAGING, PATHOLOGY, BIOINFORMATICS, GENOMICS, AND FLOW CYTOMETRY. RESEARCH BY VARI SCIENTISTS IS PUBLISHED IN MAJOR PEER-REVIEWED JOURNALS, INCLUDING, IN 2016, CELL, CELL DISCOVERY, MOLECULAR CELL, NEW ENGLAND JOURNAL OF MEDICINE, SCIENCE TRANSLATIONAL MEDICINE, NATURE REVIEWS GENETICS, SCIENTIFIC REPORTS, CANCER, CANCER CELL, GENOME BIOLOGY, BONE RESEARCH, CANCER RESEARCH, PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA, CLINICAL CANCER RESEARCH, JOURNAL OF BONE AND MINERAL RESEARCH, JOURNAL OF BIOLOGICAL CHEMISTRY, MOLECULAR BIOLOGY OF THE CELL, JOURNAL OF AFFECTIVE DISORDERS, ONCOGENE, JOURNAL OF CHEMICAL PHYSICS, NEUROPATHOLOGY AND APPLIED NEUROBIOLOGY, SARCOMA, MOLECULAR CANCER RESEARCH, JOURNAL OF MEDICINAL CHEMISTRY, PLOS ONE, BMJ OPEN, JOURNAL OF EXPERIMENTAL MEDICINE, EPIGENETICS AND CHROMATIN, CELLULAR AND MOLECULAR GASTROENTEROLOGY AND HEPATOLOGY, FEBS JOURNAL, JOURNAL OF PARKINSON'S DISEASE, VIROLOGY JOURNAL, PEDIATRIC CARDIOLOGY, AND PSYCHONEUROENDOCRINOLOGY.</p>

Return Reference	Explanation
FORM 990, PART III, LINE 4A	<p>LINE 4A - PROGRAM SERVICE ACTIVITY #1 CENTER FOR CANCER AND CELL BIOLOGY THE CENTER FOR CANCER AND CELL BIOLOGY, DIRECTED BY BART WILLIAMS, PH D, COMPRISES 12 LABORATORIES ENGAGED IN BASIC RESEARCH IN MOLECULAR AND STRUCTURAL BIOLOGY AND IN TRANSLATIONAL RESEARCH ON CANCERS, THE TUMOR MICROENVIRONMENT, AND SKELETAL DISEASES DR H ERIC XU, A STRUCTURAL BIOLOGIST IN THE CENTER, RECEIVED THE PRESTIGIOUS HANS NEURATH AWARD FROM THE PROTEIN SOCIETY IN AUGUST OF 2016 FOR CONTRIBUTIONS OF EXCEPTIONAL MERIT TO PROTEIN RESEARCH CENTER INVESTIGATORS RECEIVED THREE NIH AWARDS IN 2016 ADDITIONAL AWARDS AND LICENSE REVENUE WERE RECEIVED FROM THE DEPARTMENT OF DEFENSE, THE TUBEROUS SCLEROSIS ALLIANCE, THE AMERICAN ASTHMA FOUNDATION, THE BREAST CANCER RESEARCH FOUNDATION, THE MICHAEL J. FOX FOUNDATION, AND BOLLAAU MEDICINE. TWO NEW RESEARCH CONTRACTS WERE SIGNED IN 2016 STUDIES OF THREE-DIMENSIONAL MOLECULAR STRUCTURES AND THEIR PHYSICAL INTERACTIONS HAVE BEEN PROCEEDING ON SEVERAL FRONTS IN 2016 THE XU AND MELCHER LABORATORIES DESIGNED AND DEVELOPED A HIGHLY POTENT GLUCOCORTICOID, VSGC12, THAT DEMONSTRATED A HIGHER EFFICACY AND POTENCY THAN FLUTICASONE FUROATE, A COMMON ASTHMA TREATMENT, IN REPRESSING MOST ASTHMA SYMPTOMS VSGC12 ALSO SHOWED A BETTER SIDE-EFFECT PROFILE AT THE EFFECTIVE DOSES, GIVING THIS NEW MOLECULE PROMISE AS A NEW ASTHMA TREATMENT (HE ET AL, CELL DISCOVERY 1 15035) ANOTHER STUDY INVOLVED THE AMYLOID PRECURSOR PROTEIN AND ITS ASSOCIATION WITH ALZHEIMER'S DISEASE MUTATIONS IN THIS PROTEIN CAN CHANGE ITS SUSCEPTIBILITY TO CLEAVAGE INTO AN AGGREGATION-PRONE FORM, WHICH IS FOUND IN ALZHEIMER'S PATIENTS THIS WORK IDENTIFIED WHICH MUTATIONS INCREASE THE TENDENCY TOWARD AGGREGATION, AND THIS RESULT CAN BE EXTENDED TO THE CLEAVAGE OF THE PROTEINS CALLED NOTCH RECEPTORS, WHICH ARE CELL-SURFACE SIGNALING PROTEINS (XU ET AL, CELL DISCOVERY 2 16026) IN STRUCTURAL WORK ADDRESSING MORE BASIC QUESTIONS, THE XU AND MELCHER LABS STUDIED NANOBODIES, WHICH ARE FRAGMENTS OF HUMAN ANTIBODIES, SPECIFICALLY THE VARIABLE ANTIBODY DOMAIN THEY ISOLATED A NANOBODY CALLED NTV1 AGAINST VEGFR2, A CELLULAR RECEPTOR IMPORTANT IN BLOOD VESSEL GROWTH AND DEVELOPMENT, AND ALSO IN THE GROWTH OF TUMORS THE NTV1 NANOBODY HAS POTENTIAL AS A BLOCKER OF VEGFR2 AND THUS AS A CANCER THERAPEUTIC (MA ET AL, ACTA PHARMACOLOGICA SINICA 37(6) 857-864) THE TWO LABS ALSO STUDIED CLASS B G-PROTEIN-COUPLED RECEPTORS (GPCRS), WHICH PLAY AN INTEGRAL ROLE IN CELLULAR COMMUNICATION AND ARE MAJOR DRUG TARGETS, AN ESTIMATED ONE-THIRD TO ONE-HALF OF DRUGS CURRENTLY ON THE MARKET WORK BY INTERACTING WITH GPCRS XU AND MELCHER SHOWED THAT SUCH RECEPTORS VARY WIDELY IN THEIR NEED FOR THE RECEPTOR'S EXTRACELLULAR DOMAIN IN ORDER TO ACTIVATE THE RECEPTOR THIS WORK SUGGESTS A NEW MODEL OF HOW THESE RECEPTORS FUNCTION AND HOW THEY CAN BE FURTHER TARGETED TO TREAT DISEASE (ZHAO ET AL, JOURNAL OF BIOLOGICAL CHEMISTRY 291(29) 15119-15130) THE XU AND MELCHER LABS HAVE SHOWN A DOMINANT</p>

Return Reference	Explanation
FORM 990, PART III, LINE 4A	<p>ROLE FOR THE EXTRA CELLULAR DOMAIN OF THE GLUCAGON-LIKE PEPTIDE-1 RECEPTOR, WHICH IS A MAJ OR TARGET FOR DIABETES THERAPY THE DATA SUPPORT A MODEL IN WHICH BINDING OF A PEPTIDE TO THE RECEPTOR SWITCHES IT FROM AUTOINHIBITED TO AUTOACTIVATED, BY RELEASING THE INTRINSIC A GONIST ACTIVITY OF THE EXTRA CELLULAR DOMAIN (YIN ET AL , CELL DISCOVERY 2 10642) PROGRES S CONTINUES IN STUDIES OF PANCREATIC CANCER THE HAAB LABORATORY HAS IDENTIFIED SUGAR MOLE CULES THAT ATTACH TO MUC5AC, A PROTEIN FOUND IN PRECANCEROUS (MUCINOUS CYSTS), IN A CHARA CTERISTIC WAY, PROVIDING A MEANS TO DETERMINE WHETHER PANCREATIC CYSTS CARRY A FUTURE RISK OF CANCER (SINHA ET AL , PLOS ONE 11(12) E0167070) THE LAB ALSO DEVELOPED A NEW METHOD OF OBTAINING DATA ON SUGAR-MODIFIED PROTEINS USING AS LITTLE AS 11 NANOGRAMS OF PROTEIN T HIS METHOD WAS EFFECTIVE IN ANALYZING THE SUGARS ATTACHED TO THE MUC5AC PROTEIN FROM A SAM PLE OF ONLY 20 MICROLITERS OF PLASMA (REATINI ET AL , ANALYTICAL CHEMISTRY 88(23) 11584-1 1592) A THIRD STUDY LOOKED AT THE CA 19-9 CANCER MARKER IN SAMPLES FROM OVER 200 PATIENTS WITH EITHER PANCREATIC CANCER OR BENIGN PANCREATIC DISEASE THIS STUDY SHOWED THAT TWO SUG AR ANTIGENS IMPROVED THE IDENTIFICATION OF SUBTYPES OF PANCREATIC CANCER RELATIVE TO THE U SE OF THE CA 19-9 ANTIGEN ALONE (TANG ET AL, CELLULAR AND MOLECULAR GASTROENTEROLOGY AND HE PATOLOGY 2(2) 210-221) IN CLINICALLY RELATED RESEARCH, A STUDY FROM THE STEENSMA LABORAT ORY SHOWED THAT A COMBINATION OF TRADITIONAL CHEMOTHERAPY DRUGS PLUS MET AND EGFR INHIBITO RS WERE EFFECTIVE AGAINST TRIPLE-NEGATIVE BREAST CANCER IN TERMS OF DECREASING TUMOR GROWT H AND IMPROVING CONSISTENT RESPONSE TO TREATMENT THIS RESULT SUGGESTS A PROMISING NEW THE RAPEUTIC STRATEGY AGAINST THIS AGGRESSIVE AND DIFFICULT TO TREAT CANCER (LINKLATER ET AL , ONCOTARGET 7(43) 69903) THE GROHAR LABORATORY PUBLISHED THREE PAPERS FROM ITS RESEARCH ON EWING SARCOMA, A RARE CANCER THAT MAINLY STRIKES TEENAGERS AND YOUNG ADULTS IN ONE STU DY, THE LAB LOOKED FOR BETTER VARIANTS OF MITHRAMYCIN AS A THERAPEUTIC DRUG A COMPOUND CALLED EC-8105 WAS THE MOST POTENT, SUPPRESSING ACTIVITY OF THE EWS-FLI TRANSCRIPTION FACTOR AT CONCENTRATIONS THAT WERE NOT TOXIC TO OTHER CELL TYPES, WHILE ANOTHER, EC-8042, WAS SU BSTANTIALLY LESS TOXIC THAN MITHRAMYCIN AND EQUALLY EFFECTIVE BOTH MARKEDLY SUPPRESSED EW ING SARCOMA XENOGRAFT GROWTH (OSGOOD ET AL , CLINICAL CANCER RESEARCH 22(16) 4105-4118) A SECOND STUDY BY THE LAB INVESTIGATED THE USE OF POSITRON EMISSION TOMOGRAPHY USING FLUORINE-18 (18-F-PET) TO SHOW THE ACTIVITY OF EWS-FLI1, WHICH IS ESSENTIAL FOR SURVIVAL OF EWING SARCOMA CELLS 18-F-PET CAN BE A COMPANION BIOMARKER FOR EWS-FLI1 AND PROVIDES A NOVEL IMAGING APPROACH FOR EWING SARCOMA (OSGOOD ET AL SCIENTIFIC REPORTS 6 33926C) IN THE TH IRD STUDY, THE SMALL MOLECULE LURBINECTEDIN INACTIVATED THE EWS-FLI1 PROTEIN USED IN COMB INATION WITH IRINOTECAN, AN APPROVED CANCER DRUG THE NET RESULT WAS A COMPLETE REVERSAL O F EWS-FLI1 ACTIVITY AND ELIMIN</p>

990 Schedule O, Supplemental Information

Return Reference	Explanation
FORM 990, PART III, LINE 4A	<p>ACTION OF ESTABLISHED TUMORS IN 30-70% OF MICE AFTER ONLY 11 DAYS OF THERAPY THIS WORK SHOWS THE PRECLINICAL SAFETY AND EFFICACY OF A NOVEL, DISEASE-SPECIFIC THERAPY TARGETING THE MAIN MOLECULAR DRIVER OF EWING SARCOMA (HARLOW ET AL , CANCER RESEARCH 76(22) 6657-6668) RESEARCH ON THE METABOLISM OF BOTH NORMAL AND PATHOLOGICAL BONE TISSUES CONTINUED IN 2016 THE FAILURE OF A BONE FRACTURE TO HEAL, WHICH OCCURS IN 10%-20% OF FRACTURES, IS A COSTLY AND DEBILITATING CLINICAL PROBLEM THE WNT/BETA-CATENIN PATHWAY IS CRUCIAL IN BONE DEVELOPMENT AND FRACTURE HEALING, AND VARIANTS OF THE LRP6 PROTEIN, A WNT-BINDING RECEPTOR, HAVE BEEN ASSOCIATED WITH LOWER BONE MINERAL DENSITY AND FRAGILITY FRACTURES THE RESULTS OF ONE STUDY SUGGEST THAT LRP6 HAS A ROLE IN FRACTURE HEALING (BURGERS ET AL , BONE RESEARCH 4 16025) IN OTHER WORK, MICE HAVING CONDITIONAL LOSS OF BOTH THE LRP5 AND LRP6 GENES SHOWED SEVERE DEFECTS IN SKELETAL DEVELOPMENT DURING EMBRYOGENESIS ADULT MICE CARRYING DELETIONS OF LRP5 AND/OR LRP6 HAD LOW BONE MASS, SUGGESTING THAT IN BOTH EMBRYONIC SKELETAL DEVELOPMENT AND ESTABLISHMENT OF ADULT BONE MASS, LRP5 AND LRP6 CARRY OUT REDUNDANT FUNCTIONS (SCHUMACHER ET AL , BONE RESEARCH 4 15042) THE MIRANTI LABORATORY FOUND THAT LOSS OF MET PROTEIN EXPRESSION, BUT NOT INHIBITION OF MET KINASE ACTIVITY, INDUCED CELL DEATH VIA APOPTOSIS BY REDUCING INTEGRIN ALPHA3-BETA1 LEVELS, AMONG OTHER FACTORS THE REEXPRESSION OF WILD-TYPE MET, KINASE-DEAD MET, OR INTEGRIN ALPHA3 WAS SUFFICIENT TO PREVENT CELLS THAT HAD NO MET EXPRESSION FROM DYING (TESFAY ET AL , MOLECULAR BIOLOGY OF THE CELL 27(15) 2493 -2504)</p>

Return Reference	Explanation
FORM 990, PART III, LINE 4B	<p>LINE 4B - PROGRAM SERVICE ACTIVITY #2 CENTER FOR EPIGENETICS THE CENTER, ESTABLISHED IN 20 14 AND DIRECTED BY THE INSTITUTE'S CHIEF SCIENTIFIC OFFICER PETER JONES, PH D , D SC , COM PRIZES NINE LABORATORIES STUDYING EPIGENETICS AND EPIGENOMICS AND THE ROLE OF EPIGENETIC D YSFUNCTION IN CANCER AND NEURODEGENERATIVE DISEASE, CARDIOVASCULAR DISEASE, AND VIRAL TRAN SCRIPTIO N STEPHEN BAYLIN, M D , A PROFESSOR AT JOHNS HOPKINS UNIVERSITY, HOLDS A 25% APPO INTMENT IN THE CENTER HUILIN LI, PH D , WAS RECRUITED TO THE CENTER IN 2016 AS A PROFESSO R IN 2016, CENTER RESEARCHERS RECEIVED THREE NIH AWARDS AS WELL AS AWARDS FROM THE MICHA E L J FOX FOUNDATION AND THE OVARIAN CANCER RESEARCH FUND THE VARI-SU2C EPIGENETICS DREAM TEAM, LED BY PETER JONES AND STEPHEN BAYLIN, CONTINUED ITS WORK IN 2016, WITH THE AIMS OF DEVELOPING NEW COMBINATION THERAPIES TO COMBAT CANCER AND MOVING PROMISING THERAPIES INTO CLINICAL TRIALS THE TEAM FOCUSES ON EPIGENETIC MECHANISMS IN CELLS, WHICH HELP CONTROL WH ETHER GENES ARE TURNED ON OR OFF WITHOUT CHANGING THE DNA SEQUENCE ITSELF ONE STUDY, LED BY PETER JONES AND UNIVERSITY OF COPENHAGEN'S KIRSTEN GRONBAEK, M D , D MSC , SHOWED THAT MANY PATIENTS WITH BLOOD CANCERS (MYELOID DYSPLASTIC SYNDROME AND ACUTE MYELOID LEUKEMIA) ARE MARKEDLY DEFICIENT IN VITAMIN C THE DATA SUGGESTS THAT CORRECTION OF VITAMIN C DEFICI ENCY IN PATIENTS WITH HEMA TOLOGICAL AND OTHER CANCERS MAY IMPROVE THEIR RESPONSE TO EPIGEN ETIC THERAPY COMBINED WITH THE USE OF INHIBITORS OF DNA METHYLTRANSFERASES (LIU ET AL , PR OCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 113(37) 10238-10244) ANOTHER STUDY BY TEAM MEMBERS AT JOHNS HOPKINS UNIVERISTY AND UNIVERSITY OF MARYLAND DESCRIBES A MECHANISM TO ENHANCE THE ANTICANCER EFFICACY OF INHIBITORS OF POLY (ADP-RIBOSE) POLYMERASE (PARP), WHICH ARE EFFECTIVE AGENTS AGAINST SOME BREAST CANCERS LOW DOSES OF DNA METHYLTRANSFERASE INHIBITORS PLUS PARP INHIBITORS CAN INCREASE PARPI EFFICACY IN TERMS OF INCREASED DNA DAMA GE AND OTHER ANTICANCER EFFECTS SUCH TREATMENT MAY BE USEFUL AGAINST SOME SUBTYPES OF ACUTE MYELOID LEUKEMIA AND OF BREAST CANCERS (MUVARAK ET AL , CANCER CELL 30(4) 637-650) AT THE END OF 2016, FOUR VARI -SU2C EPIEGNETICS DREAM TEAM-SUPPORTED CLINICAL TRIALS WERE UN DERWAY AT SITES ACROSS THE COUNTRY AND IN COPENHAGEN, DENMARK PETER JONES AND COLLABORATO R GANGNING LIANG, M D , PH D , REPORTED THE DEVELOPMENT OF A COST-EFFECTIVE AND COMPUTATIO NALLY SIMPLE ASSAY CALLED "ACCESSSIBLE" TO SIMULTANEOUSLY DETERMINE DNA METHYLATION AND CH ROMATIN ACCESSIBILITY CHANGES IN PRIMARY HUMAN CLEAR CELL RENAL CELL CARCINOMA THIS ASSAY FOUND SIGNIFICANT CHANGES TO THE EPIGENOME OF CLEAR CELL RENAL CELL CARCINOMA AS WELL AS GENE EXPRESSION CHANGES SPECIFICALLY ATTRIBUTED TO CHROMATIN ACCESSIBILITY (BECKET ET AL , CANCER RESEARCH 76(7) 1954-1964) THE LAIRD LABORATORY IS HEAVILY INVOLVED IN THE WORK OF THE CANCER GENOME ATLAS RESEARCH NETWORK, A NIH-FUNDED MULTI INSTITUTIONAL EFFORT TO MOLE CULARLY MAP CANCER AMONG THE</p>

Return Reference	Explanation
FORM 990, PART III, LINE 4B	<p>SEVERAL PUBLICATIONS PRODUCED IN 2016 WAS A COMPREHENSIVE MOLECULAR CHARACTERIZATION OF 16 1 PRIMARY PAPILLARY RENAL-CELL CARCINOMAS TYPE 1 AND TYPE 2 PAPILLARY RENAL-CELL CARCINOMAS ARE CLINICALLY AND BIOLOGICALLY DISTINCT, AND TYPE 2 CONSISTS OF AT LEAST THREE SUBTYPES THIS KNOWLEDGE MAY AID IN SELECTING APPROPRIATE TREATMENTS FOR INDIVIDUAL PATIENTS BASE D ON DISEASE SUBTYPE (CANCER GENOME ATLAS RESEARCH NETWORK, NEW ENGLAND JOURNAL OF MEDICIN E 374(2) 135-145) OTHER RESEARCH DEFINED THE COMPLETE SET OF GENES ASSOCIATED WITH DIFFU SE GRADE II-III-IV GLIOMAS (1122 SAMPLES) FROM THE CANCER GENOME ATLAS THE MOLECULAR PROF ILES DEFINED WILL BE USED TO IMPROVE DISEASE CLASSIFICATION, IDENTIFY MOLECULAR CORRELATIO NS, AND PROVIDE INSIGHTS INTO THE PROGRESSION FROM LOW- TO HIGH-GRADE DISEASE (CECCARELLI ET AL , CELL 164(3) 550-563) THE ROTHBART LABORATORY REPORTED THE FIRST DEMONSTRATION OF A DNA-PROTEIN INTERACTION AND AN EPIGENETIC MODIFICATION DIRECTLY REGULATING THE ENZYME A CTIVITY OF E3 UBIQUITIN LIGASE THE LIGASE, CALLED UHRF1, RECOGNIZES DNA THAT IS METHYLATED ON ONLY ONE STRAND, AND THE INTERACTION OF SUCH DNA AND THIS ENZYME IS REQUIRED FOR FURT HER METHYLATION OF THE DNA (HARRISON ET AL , ELIFE 5 17101) THE LAB ALSO UNDERTOOK A SYS TEMATIC COMPARISON OF MONOCLONAL VS POLYCLONAL ANTIBODIES FOR USE IN MAPPING HISTONE PROT EIN MODIFICATIONS THE CONSISTENT PERFORMANCE OF ANTIBODIES IS CRUCIAL IN MAPPING EPIGENETIC MARKERS BY THE CHIP-SEQ METHOD THE STUDY FOUND THAT MONOCLONAL ANTIBODIES AS A CLASS P ERFORM JUST AS WELL AS THE POLYCLONAL IN BOTH MOUSE AND HUMAN CELLS (BUSBY ET AL , EPIGENE TICS AND CHROMATIN 9 49) THE PFEIFER AND SZABO LABS DEMONSTRATED THAT THE PROTEIN TET3FL MAY ACT AS A GUARDIAN AGAINST NEURODEGENERATION BY STOPPING DISRUPTIONS IN CELLULAR "HOUSE KEEPING" FUNCTIONS, THEREBY ENSURING THAT CELLS CAN REMOVE HARMFUL ABNORMAL PROTEINS AND O THER CELLULAR WASTE THESE FINDINGS OPEN A NEW AVENUE TO EXPLORE NOVEL WAYS TO PREVENT AND TREAT DISEASES SUCH AS PARKINSON'S (JIN ET AL , CELL REPORTS 14(3) 493-505) THE PFEIFER AND SHEN LABS REPORTED A STUDY IN 2016 OF A TUMOR SUPPRESSOR GENE CALLED RASSF1A, WHICH I S EPIGENETICALLY SILENCED IN MOST HUMAN CANCERS IN ANALYZING THE LOSS OF THIS GENE, THEY FOUND THAT LIVER TUMORS RESULTED IN THE SUBJECT MICE, WITH VARYING EFFICIENCY DEPENDING ON THE GENETIC CIRCUMSTANCES THIS STUDY SUGGESTS A MULTIPLE ROLES FOR RASSF1A IN SUPPRESSIN G LIVER CARCINOGENESIS (ZHANG ET AL , CANCER RESEARCH 76(9) 2824-2835) THE SHEN LABORATO RY TOOK PART IN A GLOBAL ANALYSIS OF THE WHOLE-BLOOD DNA METHYLOMES OF 137 HIV+ INDIVIDUAL S UNDER SUSTAINED THERAPY ALONG WITH 44 MATCHED HIV+ INDIVIDUALS DECREAS ED METHYLATION OF THE HUMAN LEUCOCYTE ANTIGEN (HLA) LOCUS PREDICTED A LOWER CD4/CD8 T CELL RATIO, AND THIS RESULT LINKS MOLECULAR AGING, EPIGENETIC REGULATION, AND DISEASE PROGRESSION (GROSS ET AL , MOLECULAR CELL 62(2) 157-168) THE LAB ALSO HELPED TO DEVELOP A COMPUTATIONAL APPROACH TO STUDY TUMOR-INFILTRATING IM</p>

990 Schedule O, Supplemental Information

Return Reference	Explanation
FORM 990, PART III, LINE 4B	MUNE CELLS AND THEIR INTERACTIONS WITH CANCER CELLS THIS WORK ESTABLISHED IMMUNE-INFILTRATE LEVELS, CLINICAL ASSOCIATIONS, AND PREDICTED THERAPEUTIC MARKERS, WHICH TOGETHER MAY AID IN THE PURSUIT OF EFFECTIVE CANCER VACCINES AND CHECKPOINT BLOCKADE THERAPIES (LI ET AL , GENOME BIOLOGY 17 174)

990 Schedule O, Supplemental Information

Return Reference	Explanation
FORM 990, PART III, LINE 4C	<p>LINE 4C - PROGRAM SERVICE ACTIVITY #3 CENTER FOR NEURODEGENERATIVE SCIENCE THE CENTER WAS ESTABLISHED IN 2011 UNDER PATRIK BRUNDIN, M D , PH D , WHO IS ALSO VARI'S ASSOCIATE DIRECT OR. THE CENTER HAS SEVEN LABORATORIES STUDYING PARKINSON'S DISEASE, AGING, PRIONS, ALZHEIMER'S DISEASE, AND THE RELATIONSHIP BETWEEN DEPRESSION, SUICIDE, AND BRAIN INFLAMMATION JEFFREY KORDOWER, PH D , A PROFESSOR AT RUSH UNIVERSITY, HOLDS A 25% APPOINTMENT IN THE CENTER VIVIANE LABRIE, PH D , JOINED THE CENTER IN 2016 AS AN ASSISTANT PROFESSOR. CENTER RESEARCHERS IN 2016 RECEIVED R01 AND R21 AWARDS FROM NIH AS WELL AS AWARDS FROM THE BRAIN AND BEHAVIOR RESEARCH FOUNDATION, THE EAST TENNESSEE FOUNDATION, FIVE GRANTS FROM THE MICHAEL J. FOX FOUNDATION, ONE GRANT FROM PINE REST CHRISTIAN MENTAL HEALTH SERVICES, AND AN INDUSTRY CONTRACT AWARD FROM HOFFMAN-LA ROCHE. PRIONS, WHICH CAUSE NEURODEGENERATIVE DISEASES, ARE THE MAIN FOCUS OF RESEARCH IN THE LABORATORY OF JIYAN MA, PH D. ONE STUDY EXPLORED THE ROLE OF A STRING OF FOUR THREONINES IN THE CONVERSION OF NORMAL PRION PROTEIN INTO THE DISEASE-CAUSING FORM. THE RESULTS SUGGESTED A THEORY FOR THE CONTRADICTORY RESEARCH RESULTS THAT HAVE BEEN PREVIOUSLY PUBLISHED. THEY ALSO GAVE NEW INSIGHTS INTO THE RELATIONSHIPS BETWEEN PRION STABILITY, STRUCTURE, AND SEEDING CONFORMATIONAL CHANGES, WHICH WILL AID IN UNDERSTANDING PRION INFECTIVITY (ABSKHARON ET AL , SCIENTIFIC REPORTS 6 38877). ANOTHER STUDY FOUND THAT PRION PROTEIN EXPRESSION IN GASTRIC CANCER WAS SIGNIFICANTLY LESS FREQUENT THAN IN NONCANCEROUS GASTRIC TISSUE AND WAS ASSOCIATED WITH TNM STAGE, SURVIVAL STATUS, AND SURVIVAL TIME. PATIENTS AT HIGHER TNM STAGES HAD SIGNIFICANTLY LOWER EXPRESSION OF PRION PROTEIN IN THEIR TUMORS (TANG ET AL , JOURNAL OF CANCER 7(8) 984-990). IN A SEPARATE PROJECT ON PARKINSON'S DISEASE, THE LAB FOUND THAT HYDROXYTYROSOL (HT), A MAJOR COMPONENT OF OLIVE OIL, PROTECTED DOPAMINERGIC SH-SY5Y CELLS AGAINST DOPAMINE-INDUCED CELL DEATH. IT ALSO EFFICIENTLY INDUCED EXPRESSION OF DETOXYFIFYING ENZYMES SUCH AS NAD(P)H QUINONE OXIDOREDUCTASE 1, WHICH CONTRIBUTED TO THE PROTECTIVE EFFECT AGAINST CELL DEATH. THIS RESULT SUPPORTS THE BENEFICIAL EFFECT OF OLIVE OIL ON DOPAMINERGIC NEURONS (YU, ET AL , NEUROCHEMISTRY INTERNATIONAL 96 113-120). THE QUESTION OF WHETHER PARKINSON'S DISEASE SPREADS IN A PRION-LIKE MANNER WAS ADDRESSED IN 2016 IN TWO REVIEWS. ONE REVIEW FOCUSED ON THE POSSIBLE MECHANISMS BY WHICH ALPHA-SYNUCLEIN MISFOLDING MIGHT PROPAGATE THROUGHOUT THE BRAIN VIA A PRION-LIKE SPREADING (TYSON ET AL , JOURNAL OF NEUROCHEMISTRY 139(S1) 275-289). A SECOND REVIEW DESCRIBES EVIDENCE OF ALPHA-SYNUCLEIN'S DISEASE-PROPAGATING PROPERTIES. THE FINDING THAT ALPHA-SYNUCLEIN PATHOLOGY CAN SPREAD BETWEEN BRAIN REGIONS IN NEURODEGENERATIVE DISEASE HAS EXPANDED OUR THINKING ABOUT NEW DIAGNOSTIC TOOLS AND THERAPIES THAT MAY BENEFIT PATIENTS SUFFERING FROM PARKINSON'S DISEASE (BRUNDIN ET AL , CURRENT OPINION IN NEUROLOGY 29(4) 459-466). THE COETZEE LABORATOR</p>

Return Reference	Explanation
FORM 990, PART III, LINE 4C	<p>Y ASSESSED GENETIC RISK FOR PARKINSON'S DISEASE IN 77 CELL TYPES. THE FINDINGS SHOWED RISK LOCI UNEXPECTEDLY PRESENT IN NON-NEURONAL CELL TYPES INCLUDING LYMPHOCYTES, MESENODERM, LIVER CELLS, AND FAT CELLS, INDICATING THAT CELL TYPES OUTSIDE THE BRAIN ARE INVOLVED IN THE GENETIC PREDISPOSITION TO PARKINSON'S DISEASE (COETZEE ET AL , SCIENTIFIC REPORTS 6 30 509) ANOTHER STUDY INVOLVING THE LABORATORY OF PATRIK BRUNDIN IDENTIFIED GENETIC LOCI THAT LINKED SUSCEPTIBILITY TO PARKINSON'S-LIKE NEURODEGENERATIVE CHANGES TO THE LOSS OF ONE ALLELE OF THE EN1 GENE. THESE LOCI SHOULD BE OF PRIME INTEREST FOR STUDIES OF PARKINSON'S-LIKE DAMAGE IN RODENT MODELS AND IN CLINICAL ASSOCIATION STUDIES OF PARKINSON'S DISEASE (KUROWSKA ET AL , SCIENTIFIC REPORTS 6 31701) A STUDY FOUND THAT ALPHA-SYNUCLEIN FIBRILS INJECTED INTO THE OLFACTORY BULB OF MICE RECRUITED ENDOGENOUS ALPHA-SYNUCLEIN INTO AGGREGATES THAT SUBSEQUENTLY SPREAD THROUGH THE OLFACTORY NETWORK AND THEN TO DISTANT BRAIN REGIONS. THE SPREADING PATHOLOGY CAUSED PROGRESSIVE, SPECIFIC OLFACTORY DEFICITS, SHOWING THAT THE SPREAD IS DETRIMENTAL, AND INDICATING THIS IS A USEFUL MOUSE MODEL OF PARKINSON'S DISEASE (REY ET AL , JOURNAL OF EXPERIMENTAL MEDICINE 213(9) 1759-1778) RESEARCH ON THE MITOCHONDRIAL PYRUVATE CARRIER PROTEIN (MPC) FOUND THAT ITS LONG-TERM TARGETING PRESERVED MOTOR FUNCTION, RESCUED THE NIGROSTRIATAL PATHWAY, AND REDUCED NEUROINFLAMMATION IN THE EN1 +/- MOUSE MODEL OF PARKINSON'S DISEASE. THE RESULTING CHANGES IN METABOLIC SIGNALING WERE NEUROPROTECTIVE AND ANTI-INFLAMMATORY IN SEVERAL MODELS, SUGGESTING THAT THE MPC MAY BE A USEFUL THERAPEUTIC TARGET (GHOSH ET AL , SCIENCE TRANSLATIONAL MEDICINE 368 368RA174) A STUDY BY THE MOORE LABORATORY ON THE DROSOPHILA BRAIN PROVIDED A SYSTEMATIC ANALYSIS OF THE EFFECTS OF HUMAN LRRK2 PROTEIN EXPRESSED IN DROSOPHILA NEURONS, MODELING HUMAN PARKINSON'S DISEASE. THE RESEARCH SHOWED FOR THE FIRST TIME THAT THE R1441C MUTATION, LOCATED WITHIN THE LRRK2 GTPASE DOMAIN, PRODUCES INCREASED PHOSPHORYLATION OF SYNAPTIC VESICLE PROTEINS IN THE BRAIN (ISLAM ET AL , HUMAN MOLECULAR GENETICS 25(24) 5365-5382) IN A STUDY OF HUNTINGTON'S DISEASE, THE VAN RAAMSDONK LABORATORY EXAMINED THE EFFECT OF DELETING INDIVIDUAL SUPEROXIDE DISMUTASE GENES IN A WORM MODEL. THE RESULTS SUGGESTED THAT THE RESULTING INCREASE IN OXIDATIVE STRESS DID NOT CONTRIBUTE TO THE DISEASE SYMPTOMS IN THESE WORMS, AND THIS FACT MAY EXPLAIN THE FAILURE OF ANTIOXIDANTS IN HUNTINGTON'S DISEASE CLINICAL TRIALS (MICHIELA ET AL , NEUROBIOLOGY OF DISEASE 96 11) IN 2016, THE LABORATORY OF LENA BRUNDIN, M.D., PH.D., PUBLISHED SEVERAL STUDIES ON THE MOLECULAR ASPECTS OF DEPRESSION AND SUICIDE, PARTICULARLY THE KYNURENINE PATHWAY AND ITS COMPONENTS. RESULTS FROM ONE STUDY SUGGEST THAT INCREASED QUINOLINIC ACID LEVELS MAY RESULT FROM REDUCED ACTIVITY OF A CMS DECARBOXYLASE IN SUICIDAL SUBJECTS. THE POSSIBILITIES THAT MEASURES OF KYNURENINE METABOLITES MAY BE BIOMARKERS OF SUICIDE RISK, AND</p>

990 Schedule O, Supplemental Information

Return Reference	Explanation
FORM 990, PART III, LINE 4C	<p>THAT ACMS DECARBOXYLASE IS A POTENTIAL THERAPEUTIC TARGET, ARE BEING EXPLORED (BRUNDIN ET AL , TRANSLATIONAL PSYCHIATRY 6 E865) IN ANOTHER STUDY , THE DATA DID NOT SUPPORT THE HYPOTHESIS THAT HIGHER AMOUNTS OF KYNURENINE METABOLITES WOULD BE FOUND IN THE PLASMA OF PATIENTS HAVING INTERMITTENT EXPLOSIVE DISORDER AND WOULD BE ASSOCIATED WITH PLASMA INFLAMMATION HOWEVER, THE RESULT POINTS TO A DYSREGULATION OF THE KYNURENINE PATHWAY METABOLITES, AND FURTHER WORK IS NEEDED TO EXPLORE THEIR ROLE IN INFLAMMATION AND AGGRESSION IN THESE PATIENTS (COCCARO ET AL , PSYCHONEUROENDOCRINOLOGY 71 189-196) A THIRD STUDY FOUND THAT CHRONIC TOXOPLASMA GONDII INFECTION AND ELEVATED KYNURENINE ARE INDIVIDUALLY ASSOCIATED WITH NON-FATAL SUICIDAL SELF-DIRECTED VIOLENCE (NF-SSDV) T GONDII AND KYNURENINE MAY HAVE A NONLINEAR, CUMULATIVE EFFECT ON THE RISK OF NF-SSDV AMONG THOSE WITH SCHIZOPHRENIA CONFIRMATION OF THESE RESULTS WOULD HAVE IMPLICATIONS FOR PREVENTING AND TREATING SUICIDAL BEHAVIOR (OKUSAGA ET AL , JOURNAL OF PSYCHIATRIC RESEARCH 72(1) 74-81) OTHER RESEARCH FROM THE THE L BRUNDIN LABORATORY MEASURED THE CEREBROSPINAL FLUID LEVELS OF HYALURONIC ACID AND THE CD44 MOLECULE IN SUICIDE ATTEMPTERS AND IN HEALTHY CONTROLS SUICIDE ATTEMPTERS HAD HIGHER LEVELS OF HYALURONIC ACID, AND CD44 LEVELS CORRELATED WITH THE MMP9 ENZYME THE INCREASE IN HYALURONIC ACID MIGHT RESULT FROM NEUROINFLAMMATION AND PLAY A ROLE IN THE PATHOLOGY OF SUICIDAL BEHAVIOR, AND THE CD44 SIGNALING PATHWAY MIGHT BE A NOVEL TARGET FOR INTERVENTION IN MOOD DISORDERS (VENTORP ET AL , JOURNAL OF AFFECTIVE DISORDERS 193 349-354)</p>

990 Schedule O, Supplemental Information

Return Reference	Explanation
FORM 990, PART IX, COLUMN D	FUNDRAISING EXPENSES AT VARI WERE INCURRED TO SUPPORT THE MISSION OF THE RESEARCH INSTITUTE THROUGH DONOR SOLICITATION, GRANT SOLICITATION AND EXTRAMURAL PROPOSAL PREPARATION

990 Schedule O, Supplemental Information

Return Reference	Explanation
FORM 990, PART X, LINE 33	VARI NET ASSETS ARE CONSIDERED ON A CONSOLIDATED BASIS WITH VAN ANDEL INSTITUTE (VAI), VAN ANDEL EDUCATION INSTITUTE (VAEI), AND RELATED PARTIES ON A CONSOLIDATED BASIS, NET ASSETS ARE \$1,417,500,000 PER AUDITED FINANCIAL STATEMENTS THE NEGATIVE NET ASSET BALANCE AT VARI IS DUE TO VAI FUNDING EXPENSES ON A CASH BASIS AND THE UNREALIZED LOSS RECORDED IN ASSOCIATION WITH THE INTEREST RATE SWAP

SCHEDULE R
(Form 990)

Related Organizations and Unrelated Partnerships

OMB No 1545-0047

2015

Open to Public Inspection

Department of the Treasury
Internal Revenue Service

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

► Attach to Form 990. ► Information about Schedule R (Form 990) and its instructions is at www.irs.gov/form990.

Name of the organization VAN ANDEL RESEARCH INSTITUTE	Employer identification number 52-2000823
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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
(1) VAI INNOVATIONS LLC 333 BOSTWICK AVENUE NE GRAND RAPIDS, MI 495032518 52-2000823	LICENSING INTELLECTUAL PROPERTY OF VARI	MI	0	0	VAN ANDEL RESEARCH INSTITUTE
(2) BOSTWICK EVENT MANAGEMENT 333 BOSTWICK AVENUE NE GRAND RAPIDS, MI 495032518 52-2000823	EVENT MANAGEMENT	MI	29,524	118,903	VAN ANDEL RESEARCH INSTITUTE

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
(1) VAN ANDEL INSTITUTE 333 BOSTWICK AVENUE NE GRAND RAPIDS, MI 495032518 52-2000820	SUPPORTING ORGANIZATION FOR VARI AND VAEI	MI	501(C)(3)	11C	N/A		No
(2) VAN ANDEL EDUCATION INSTITUTE 333 BOSTWICK AVENUE NE GRAND RAPIDS, MI 495032518 52-2000824	OPERATING A SCIENCE EDUCATION PROGRAM	MI	501(C)(3)	2	VAN ANDEL INSTITUTE	Yes	
(3) VAN ANDEL INSTITUTE GRADUATE SCHOOL 333 BOSTWICK AVENUE NE GRAND RAPIDS, ME 495032518 20-3340886	OPERATING A GRADUATE SCHOOL	MI	501(C)(3)	2	VAN ANDEL EDUCATION INSTITUTE	Yes	

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		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?

a

Receipt of (i) interest, (ii) annuities, (iii) royalties, or (iv) rent from a controlled entity

1a

No

b

Gift, grant, or capital contribution to related organization(s)

1b

No

c

Gift, grant, or capital contribution from related organization(s)

1c

Yes

d

Loans or loan guarantees to or for related organization(s)

1d

No

e

Loans or loan guarantees by related organization(s)

1e

Yes

f

Dividends from related organization(s)

1f

No

g

Sale of assets to related organization(s)

1g

No

h

Purchase of assets from related organization(s)

1h

No

i

Exchange of assets with related organization(s)

1i

No

j

Lease of facilities, equipment, or other assets to related organization(s)

1j

No

k

Lease of facilities, equipment, or other assets from related organization(s)

1k

No

l

Performance of services or membership or fundraising solicitations for related organization(s)
.

1l

No

m

Performance of services or membership or fundraising solicitations by related organization(s)

1m

No

n

Sharing of facilities, equipment, mailing lists, or other assets with related organization(s)

1n

Yes

o

Sharing of paid employees with related organization(s)

1o

Yes

p

Reimbursement paid to related organization(s) for expenses

1p

Yes

q

Reimbursement paid by related organization(s) for expenses

1q

Yes

r

Other transfer of cash or property to related organization(s)

1r

No

s

Other transfer of cash or property from related organization(s)

1s

No

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
See Additional Data Table			

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.

[illegible]

Part VII **Supplemental Information**

Provide additional information for responses to questions on Schedule R (see instructions)

Return Reference	Explanation
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Additional Data

Software ID:
Software Version:
EIN: 52-2000823
Name: VAN ANDEL RESEARCH INSTITUTE

Form 990, Schedule R, Part V - Transactions With Related Organizations

(a) Name of related organization		(b) Transaction type(a-s)	(c) Amount Involved	(d) Method of determining amount involved
(1)	VAN ANDEL INSTITUTE	C	33,586,093	ACTUAL AMOUNT PAID
(1)	VAN ANDEL INSTITUTE	E	44,560,000	TOTAL RECORDED
(2)	VAN ANDEL INSTITUTE	N	295,693	ALLOCATION BASED ON SQ FOOTAGE
(3)	VAN ANDEL INSTITUTE	P	405,018	ACTUAL AMOUNT PAID
(4)	VAN ANDEL INSTITUTE	N	131,353	ALLOCATION BASED ON EFFORT
(5)	VAN ANDEL INSTITUTE	O	1,132,566	ALLOCATION BASED ON EFFORT
(6)	VAN ANDEL EDUCATION INSTITUTE	P	106,010	ACTUAL AMOUNT PAID
(7)	VAN ANDEL EDUCATION INSTITUTE	Q	491,705	ACTUAL AMOUNT RECEIVED
(8)	VAN ANDEL EDUCATION INSTITUTE	N	33,145	ALLOCATION BASED ON EFFORT
(9)	VAN ANDEL EDUCATION INSTITUTE	O	285,788	ALLOCATION BASED ON EFFORT
(10)	VAN ANDEL INSTITUTE GRADUATE SCHOOL	O	77,272	APPORTIONED FY15 COMPENSATION
(11)	VAN ANDEL INSTITUTE GRADUATE SCHOOL	N	15,959	ALLOCATION BASED ON EFFORT
(12)	VAN ANDEL INSTITUTE GRADUATE SCHOOL	N	166,327	ALLOCATION BASED ON SQ FOOTAGE
(13)	VAN ANDEL INSTITUTE GRADUATE SCHOOL	Q	200,838	ACTUAL AMOUNT RECEIVED
(14)	VAN ANDEL INSTITUTE GRADUATE SCHOOL	O	137,601	ALLOCATION BASED ON EFFORT
(15)	VAN ANDEL INSTITUTE	Q	3,441,326	ACTUAL AMOUNT PAID