



# Research Survey Report

July 1, 2017 - June 30, 2018

December 2018

# 2017-2018 ASCO Research Survey Report

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## *A note about the 2017-2018 ASCO Research Survey Report . . .*

This survey report covers the period July 1, 2017-June 30, 2018.

In 2016, ASCO's Academic Research Committee rewrote ASCO's Annual Research Survey in order to simplify the data collection process as well as improve the clarity and utility of the resulting report. In this revised survey, only direct costs are included because total costs are dependent on indirect rates individually negotiated by universities and have little bearing on the amount of research funds received or research conducted. Typical indirect cost rates are reported for each school in part I of the report.

The direct costs reported in part II are listed by source and by science, with totals provided for each category as well as for each school. Relevant endnotes and definitions follow each part of the report.

The information from this survey can be used to estimate the total research funds provided to schools and colleges of optometry, estimate the time that optometry faculty use to conduct research and quantify the types of research conducted at the schools and colleges of optometry. Schools can also use the information to benchmark their research portfolio.

All of the information in this report can be used to educate public officials, educators, and administrators about the research conducted in optometry. Researchers must continue to push the frontiers of science in order to expand the scope and ability of optometry. The information that follows assists in quantifying the ability to do so.

Twenty-three of the 23 ASCO active member schools participated in this survey. Data was collected September-November 2018.

Please contact Joanne Zuckerman, ASCO's Manager, Data Services and Special Projects, at [jzuckerman@opted.org](mailto:jzuckerman@opted.org) with any questions about the report.



Abbreviations of ASCO Active Member Institutions  
2017-2018 ASCO Research Survey

<u>Abbreviation</u>	<u>School Name</u>
AZCOPT	Midwestern University – Arizona College of Optometry
CCO	Chicago College of Optometry, Midwestern University
IAUPR	Inter American University of Puerto Rico, School of Optometry
ICO	Illinois College of Optometry
IUSO	Indiana University, School of Optometry
KYCO	University of Pikeville, Kentucky College of Optometry
MCO	Michigan College of Optometry at Ferris State University
MCPHS	MCPHS University, School of Optometry
NECO	New England College of Optometry
NOVA	Nova Southeastern University, College of Optometry
NSUOCO	Northeastern State University – Oklahoma College of Optometry
OSU	The Ohio State University, College of Optometry
PUCO	Pacific University, College of Optometry
Salus/PCO	Salus University Pennsylvania College of Optometry
SCCOMBKU	Southern California College of Optometry at Marshall B. Ketchum University
SCO	Southern College of Optometry
SUNY	State University of New York, State College of Optometry
UABSO	University of Alabama at Birmingham, School of Optometry
UCB	University of California – Berkeley, School of Optometry
UHCO	University of Houston, College of Optometry
UIWRSO	University of the Incarnate Word, Rosenberg School of Optometry
UMSL	University of Missouri at St. Louis, College of Optometry
WUCO	Western University of Health Sciences, College of Optometry

**Association of Schools and Colleges of Optometry**  
**2017-2018 Research Survey - Part I**  
 (July 1, 2017 - June 30, 2018)  
 (Includes 23 of 23 Schools)

	AZCOPT	CCO	IAUPR	ICO	IUSO	KYCO	MCO	MCPHS	NECO	NOVA	NSUOCO	OSU
1. Aggregate full time equivalent (FTE) <sup>1</sup> of all faculty <sup>2</sup> employed by Optometry	23.00	19.00	24.00	60.00	40.00	17.40	21.20	25.30	54.00	45.00	33.00	34.59
2. Aggregate FTE <sup>3</sup> of all faculty <sup>4</sup> participating in research	23.00	19.00	5.00	20.00	21.00	17.40	19.00	14.00	19.00	45.00	18.00	25.59
<i>Proportion of faculty FTE who participate in research (#2/#1)</i>	1.00	1.00	0.21	0.33	0.53	1.00	0.90	0.55	0.35	1.00	0.55	0.74
3. Aggregate FTE <sup>5</sup> of all faculty <sup>6</sup> that is paid for conducting research by external funding	0.00	1.00	0.20	3.00	21.00	0.00	0.00	0.00	1.25	1.60	0.00	6.50
<i>Proportion of total faculty FTE paid by external funding for participating in research (#3/#1)</i>	0.00	0.05	0.01	0.05	0.53	0.00	0.00	0.00	0.02	0.04	0.00	0.19
4. How many students are enrolled in Master's programs <sup>8</sup> that are optometry or vision-related?	0	0	0	0	11	0	0	21	20	14	0	35
5. How many students are enrolled in PhD programs <sup>9</sup> that are optometry or vision-related?	0	0	0	0	18	0	0	0	0	0	0	7
6. How many post-doctoral fellows are in optometry?	0	0	0	0	3	0	0	0	0	3	0	4
7. How many support staff participate in funded research? <sup>10</sup>	3	0	0	2	19	0	1	1	6	0	0	46
8. # square feet of space in optometry used specifically for clinical research <sup>11</sup>	300	480	680	2460	14965	0	1206	3070	1081	2800	0	9413
9. # square feet of space in optometry used specifically for basic science <sup>12</sup> or translational research <sup>13</sup>	750	495	0	1730	13226	2117	606	1400	2374	1500	200	2666
10. How many square feet of space in optometry are used specifically for animal care?	0	0	0	740	1260	0	0	0	1423	0	0	0
11. Federally negotiated on-campus research indirect cost rate <sup>15</sup>	50.0%	50.0%	Not Applicable	52%	57.5%	42.8% for on-campus sites and 10.0% off-campus sites	30.0%	55.0%	78% <sup>16</sup>	50.0%	52.0%	56.0%
12. Typical indirect cost rate <sup>15</sup> for investigator-driven industry-sponsored research	25.0%	30% <sup>18</sup>	Not Applicable	30%	57.5%	42.8% for on-campus sites and 10.0% off-campus sites	Not Applicable	20.0%	35%	Not Applicable	52.0%	26.0%
13. Typical indirect cost rate <sup>15</sup> for contract research (not investigator-driven)	25.0%	30% <sup>18</sup>	Not Applicable	25%	57.5%	42.8% for on-campus sites and 10.0% off-campus sites	Not Applicable	20.0%	35%	Not Applicable	52.0%	26.0%

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**Association of Schools and Colleges of Optometry  
2017-2018 Research Survey - Part I**

(July 1, 2017 - June 30, 2018)

(Includes 23 of 23 Schools)

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	PUCO	Salus/PCO	SCCOMBKU	SCO	SUNY	UABSO	UCB	UHCO	UIWRSO	UMSL	WUCO	TOTALS
<b>1. Aggregate full time equivalent (FTE)<sup>1</sup> of all faculty<sup>2</sup> employed by Optometry</b>	27.92	70.85	44.40	57.60	80.50	38.41	77.00	80.10	35.00	21.00	32.40	<b>961.67</b>
<b>2. Aggregate FTE<sup>3</sup> of all faculty<sup>4</sup> participating in research</b>	21.64	8.81	20.00	16.00	27.40	24.30	28.00	47.10	30.00	1.00	6.00	<b>476.24</b>
<i>Proportion of faculty FTE who participate in research (#2/#1)</i>	0.78	0.12	0.45	0.28	0.34	0.63	0.36	0.59	0.86	0.05	0.19	<b>0.50</b>
<b>3. Aggregate FTE<sup>5</sup> of all faculty<sup>6</sup> that is paid for conducting research by external funding</b>	0.70	4.60	0.46	0.00	1.72	5.63	0.00 <sup>7</sup>	9.22	0.00	1.00	0.00	<b>57.88</b>
<i>Proportion of total faculty FTE paid by external funding for participating in research (#3/#1)</i>	0.03	0.06	0.01	0.00	0.02	0.15	0.00	0.12	0.00	0.05	0.00	<b>0.06</b>
<b>4. How many students are enrolled in Master's programs<sup>8</sup> that are optometry or vision-related?</b>	26	10	8	0	15	6	0	14	0	0	0	<b>180</b>
<b>5. How many students are enrolled in PhD programs<sup>9</sup> that are optometry or vision-related?</b>	7	8	0	0	14	23	40	30	1	0	0	<b>148</b>
<b>6. How many post-doctoral fellows are in optometry?</b>	2	0	0	0	7	5	25	12	0	0	0	<b>61</b>
<b>7. How many support staff participate in funded research?<sup>10</sup></b>	6	4	2	0	20	17	15	17	1	1	0	<b>144</b>
<b>8. # square feet of space in optometry used specifically for clinical research<sup>11</sup></b>	4538	2775	1998	3200	1500	2500	3000	4750	34000	1100	1108	<b>96924</b>
<b>9. # square feet of space in optometry used specifically for basic science<sup>12</sup> or translational research<sup>13</sup></b>	4538	3484	1500	0	13800	18700	20000	18000	2000	1000	858	<b>110944</b>
<b>10. How many square feet of space in optometry are used specifically for animal care?</b>	0	2277	0	0	4200	0 <sup>14</sup>	500	0 <sup>14</sup>	0	0	160	<b>10560</b>
<b>11. Federally negotiated on-campus research indirect cost rate<sup>15</sup></b>	38.0%	42.0%	60.0%	Not Applicable	62.0%	49.0%	57.0%	53.0%	60.0%	55.0%	43.0%	<b>52.5%<sup>17</sup></b>
<b>12. Typical indirect cost rate<sup>15</sup> for investigator-driven industry-sponsored research</b>	25.0%	Not Applicable	50.0%	Not Applicable	30.0%	30.0%	26.0%	26%-53%	60.0%	33.0%	10%-20%	<b>35.3%<sup>17</sup></b>
<b>13. Typical indirect cost rate<sup>15</sup> for contract research (not investigator-driven)</b>	Not Applicable	Not Applicable	50.0%	Not Applicable	30.0%	30.0%	26.0%	26.0%	60.0%	33.0%	10%-20%	<b>35.0%<sup>17</sup></b>

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**Part I Endnotes**

<sup>1</sup>FTE is during the faculty member's working period, regardless of whether the faculty member is on a 9 or 12 month appointment. Does not include faculty from other institutions who collaborate on research projects. Aggregate FTE in this question means the sum of the total FTE of each faculty member, regardless of whether the faculty member conducts administrative, clinical, didactic, or research duties.

<sup>2</sup>All faculty include tenure track, clinical track, and research track faculty who are paid by optometry.

<sup>3</sup>This is the FTE of the faculty who participate in research, not the FTE that they *use* to participate in research. FTE is during the faculty member's working period, regardless of whether the faculty member is on a 9 or 12 month appointment. Does not include faculty from other institutions who collaborate on research projects. Aggregate FTE in this question means the sum of the total FTE of each faculty member that participates in research, regardless of whether the faculty member conducts administrative, clinical, didactic, or research duties.

<sup>4</sup>Includes all tenure track, clinical track, and research track faculty who are optometry personnel who participate in research as a PI, masked examiner, statistician, etc. Does not include faculty from outside units who collaborate on research projects.

<sup>5</sup>FTE is the amount of FTE that a faculty member receives from external funds to participate in research. Does not include faculty from other institutions who collaborate.

<sup>6</sup>Includes all tenure track, clinical track, and research track faculty who are optometry personnel who receive external funding to participate in research as a PI, masked examiner, statistician, etc.

<sup>7</sup>UC does not allow except for summer salary

<sup>8</sup>Includes students enrolled in programs at the institution both within and outside of the school of optometry. Includes students enrolled in combined OD/MS programs.

<sup>9</sup>Includes students enrolled in programs at the institution both within and outside of the school of optometry. Includes students enrolled in combined OD/PhD programs.

<sup>10</sup>Includes staff members who are paid from sponsored research projects who work in research for any amount of time.

<sup>11</sup>Clinical research = healthcare science that determines the safety and efficacy of medications, devices, diagnostic products and treatment regimens intended for human use; they may be used for prevention, treatment, diagnosis or relieving symptoms.

<sup>12</sup>Basic research = scientific research to improve scientific theories for improved understanding or prediction of phenomena.

<sup>13</sup>Translational research = applied findings from basic science to enhance human health and well-being; translation of fundamental research findings into meaningful health outcomes.

<sup>14</sup>For UABSO, all animal care space is outside of optometry. For UHCO, animals are housed in the UH Animal Care Operations 31,000 sq ft of vivariums in one of the buildings in which optometry resides.

<sup>15</sup>These are costs incurred by the university due to a research project, such as departmental accounting, network support, equipment depreciation, building and facilities operation and maintenance, library, and sponsored projects administration. These costs are charged as a percent of some of the direct cost elements. For example, if the indirect rate is 50%, then the sponsor pays an additional \$50,000 on a \$100,000 project. "Not Applicable" indicates that an institution does not have a standard indirect cost rate.

<sup>16</sup>For NECO, the federally negotiated on-campus research indirect cost rate of 78% is based on salaries and wages.

<sup>17</sup>Ranges/multiple percentages are not included in the overall average.

<sup>18</sup>For CCO, 30% is the average: 50% when direct costs (DCs) are >\$100K; 25% when DCs are \$50K-\$99,999; 15% when DCs are <\$50K.

**Association of Schools and Colleges of Optometry**  
**2017-2018 Research Survey - Part II**  
(Includes Direct Costs Awarded July 1, 2017 - June 30, 2018)  
(Includes 18 of 23 schools; 5 had no awards)

	<b>AZCOPT</b>	<b>IAUPR</b>	<b>ICO</b>	<b>IUSO</b>	<b>MCO</b>	<b>MCPHS</b>	<b>NECO</b>	<b>NOVA</b>	<b>OSU</b>	<b>PUCO</b>
<i><b>By Source:</b></i>										
<b>Federal, NEI:</b>	\$32,188	\$0	\$0	\$148,346	\$2,619	\$0	\$669,700	\$137,000	\$1,292,702	\$1,583
<b>Federal, NIH:</b>	\$0	\$0	\$34,800	\$2,155,194	\$0	\$0	\$0	\$0	\$0	\$0
<b>Federal, Other:</b>	\$0	\$0	\$0	\$36,946	\$0	\$0	\$0	\$0	\$0	\$0
<b>State:</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Private Foundation:</b>	\$74,000	\$30,000	\$16,900	\$145,000	\$0	\$8,450	\$63,800	\$22,500	\$199,000	\$1,757
<b>Industry:</b>	\$7,500	\$0	\$9,272	\$1,068,428	\$0	\$0	\$149,940	\$50,000	\$294,695	\$79,947
<b>Other, Including Subawards:</b>	\$0	\$0	\$0	\$0	\$0	\$2,410	\$0	\$111,306	\$441,141	\$0
<i><b>By Science:</b></i>										
<b>Clinical:</b>	\$39,688	\$30,000	\$60,972	\$1,056,583	\$0	\$0	\$213,740	\$131,306	\$1,495,586	\$3,340
<b>Translational:</b>	\$0	\$0	\$0	\$0	\$2,619	\$2,800	\$212,553	\$0	\$376,082	\$73,608
<b>Basic:</b>	\$72,200	\$0	\$0	\$2,450,465	\$0	\$5,650	\$400,099	\$189,500	\$310,000	\$0
<b>Training Grant:</b>	\$0	\$0	\$0	\$46,866	\$0	\$2,410	\$57,048	\$0	\$45,870	\$0
<b>Other:</b>	\$1,800	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,339
<b>Total</b>	<b>\$113,688</b>	<b>\$30,000</b>	<b>\$60,972</b>	<b>\$3,553,914</b>	<b>\$2,619</b>	<b>\$10,860</b>	<b>\$883,440</b>	<b>\$320,806</b>	<b>\$2,227,538</b>	<b>\$83,287</b>

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**Association of Schools and Colleges of Optometry**

**2017-2018 Research Survey - Part II**

(Includes Direct Costs Awarded July 1, 2017 - June 30, 2018)

(Includes 18 of 23 schools; 5 had no awards )

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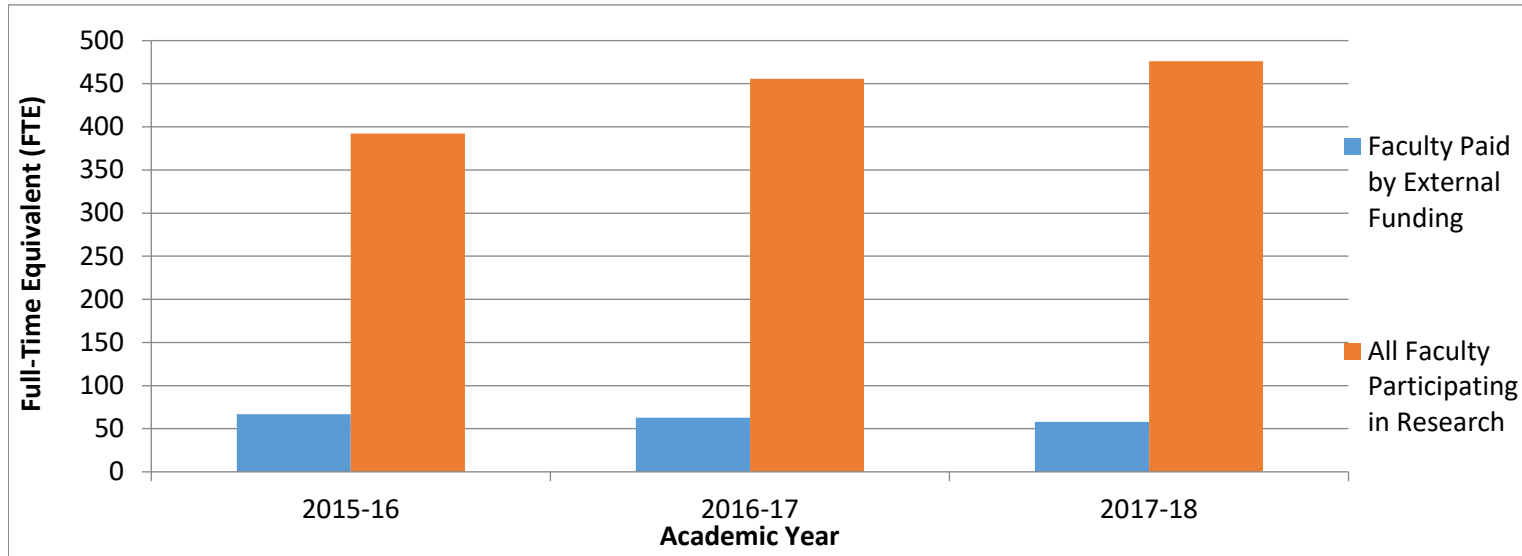
	Salus/PCO	SCCOMBKU	SCO	SUNY	UABSO	UCB	UHCO	WUCO	GRAND TOTALS
<b><i>By Source:</i></b>									
<b>Federal, NEI:</b>	\$451,914	\$99,498	\$15,093	\$2,061,325	\$2,045,434	\$6,174,365	\$2,427,458	\$8,760	<b>\$15,567,985</b>
<b>Federal, NIH:</b>	\$0	\$18,750	\$0	\$0	\$250,000	\$0	\$0	\$0	<b>\$2,458,744</b>
<b>Federal, Other:</b>	\$0	\$0	\$0	\$0	\$96,219	\$686,828	\$43,855	\$0	<b>\$863,848</b>
<b>State:</b>	\$29,310	\$0	\$0	\$224,947	\$0	\$0	\$2,032,534	\$0	<b>\$2,286,791</b>
<b>Private Foundation:</b>	\$0	\$0	\$0	\$2,500	\$0	\$184,055	\$179,354	\$24,975	<b>\$952,291</b>
<b>Industry:</b>	\$31,833	\$212,582	\$100,722	\$1,523,473	\$610,452	\$1,739,125	\$281,884	\$223,430	<b>\$6,383,283</b>
<b>Other, Including Subawards:</b>	\$228,739	\$0	\$8,828	\$30,618	\$0	\$578,058	\$0	\$0	<b>\$1,401,100</b>
<b><i>By Science:</i></b>									
<b>Clinical:</b>	\$267,735	\$330,830	\$124,643	\$1,188,895	\$745,865	\$1,457,857	\$851,319	\$257,165	<b>\$8,255,524</b>
<b>Translational:</b>	\$0	\$0	\$0	\$0	\$426,526	\$1,316,715	\$1,612,189	\$0	<b>\$4,023,092</b>
<b>Basic:</b>	\$474,061	\$0	\$0	\$2,344,066	\$1,562,305	\$5,528,474	\$2,423,136	\$0	<b>\$15,759,956</b>
<b>Training Grant:</b>	\$0	\$0	\$0	\$309,902	\$267,409	\$596,604	\$78,441	\$0	<b>\$1,404,550</b>
<b>Other:</b>	\$0	\$0	\$0	\$0	\$0	\$462,781	\$0	\$0	<b>\$470,920</b>
<b>Total</b>	<b>\$741,796</b>	<b>\$330,830</b>	<b>\$124,643</b>	<b>\$3,842,863</b>	<b>\$3,002,105</b>	<b>\$9,362,431</b>	<b>\$4,965,085</b>	<b>\$257,165</b>	<b>\$29,914,042</b>

**Association of Schools and Colleges of Optometry**  
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**Part II Definitions**

Clinical	Healthcare science that determines safety & efficacy of medications, devices, and treatments for human use.
Translational	Applied findings from basic science to enhance human health and well-being.
Basic	Scientific research to improve understanding or prediction of phenomena.  If science is basic and translational, then it is called translational.  If science is translational and clinical, then it is called clinical.  These definitions were adapted from several sources.
Federal: NIH	All other NIH institutes except National Eye Institute.
Federal: Other	National Science Foundation, Department of Defense, etc.

## Aggregate FTE of Faculty Participating in Research U.S. Schools and Colleges of Optometry, Including Puerto Rico 2015-2018



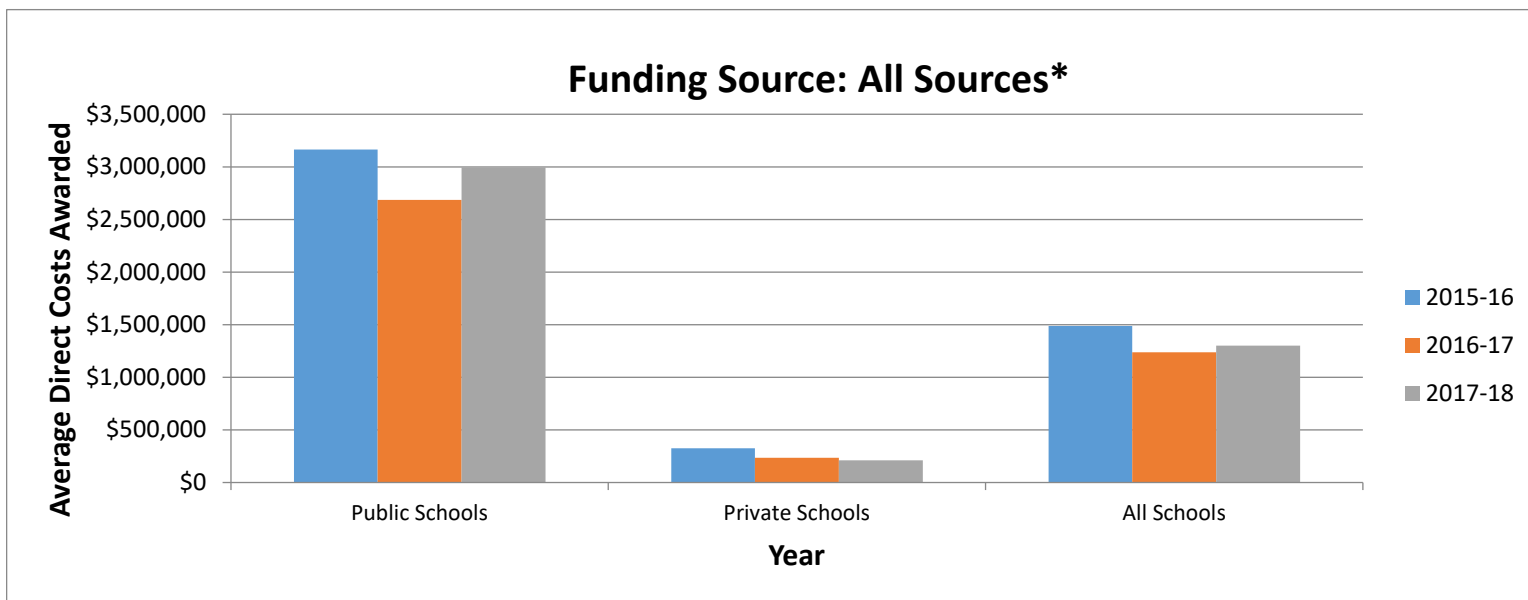
	2015-16 <sup>1</sup>	2016-17 <sup>1</sup>	2017-18
<b>Aggregate FTE of All Faculty Paid by External Funding for Conducting Research<sup>2</sup></b>	66.73	62.69	57.88
<b>Aggregate FTE of All Faculty Participating in Research<sup>3</sup></b>	392.21	455.74	476.24

<sup>1</sup>Data collected from 22 out of 23 schools. 2017-18 includes all schools.

<sup>2</sup>FTE (Full-Time Equivalent) is the amount of FTE that a faculty member receives from external funds to participate in research. Does not include faculty from other institutions who collaborate. Includes all tenure track, clinical track, and research track faculty who are optometry personnel who receive external funding to participate in research as a PI, masked examiner, statistician, etc.

<sup>3</sup>This is the FTE of the faculty who participate in research, not the FTE that they use to participate in research. FTE is during the faculty member's working period, regardless of whether the faculty member is on a 9 or 12 month appointment. Does not include faculty from other institutions who collaborate on research projects. Aggregate FTE in this question means the sum of the total FTE of each faculty member that participates in research, regardless of whether the faculty member conducts administrative, clinical, didactic, or research duties. Includes all tenure track, clinical track, and research track faculty who are optometry personnel who participate in research as a PI, masked examiner, statistician, etc. Does not include faculty from outside units who collaborate on research projects.

**Average Research Funding, Public & Private Schools**  
**U.S. Schools and Colleges of Optometry Including Puerto Rico**  
**Direct Costs Awarded 2015-2018**

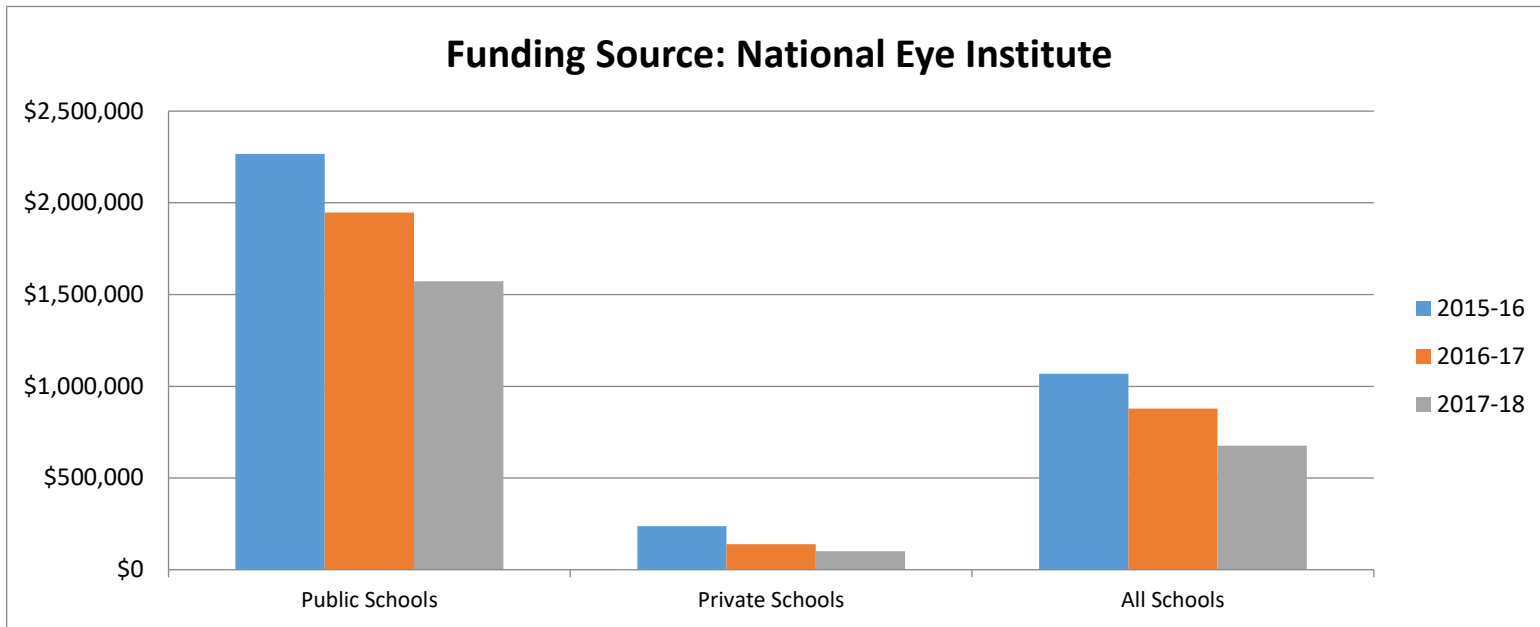


Average Funding per School

	Public Schools	Private Schools	All Schools
2015-16 (22 of 23 schools)	\$3,163,844	\$325,694	\$1,486,755
2016-17 (22 of 23 schools)	\$2,684,680	\$234,973	\$1,237,126
2017-18 (23 of 23 schools)	\$2,995,173	\$211,249	\$1,300,611

\*Includes Federal NEI, Federal NIH, Federal Other, State, Private Foundation, Industry, Other Including SubAwards

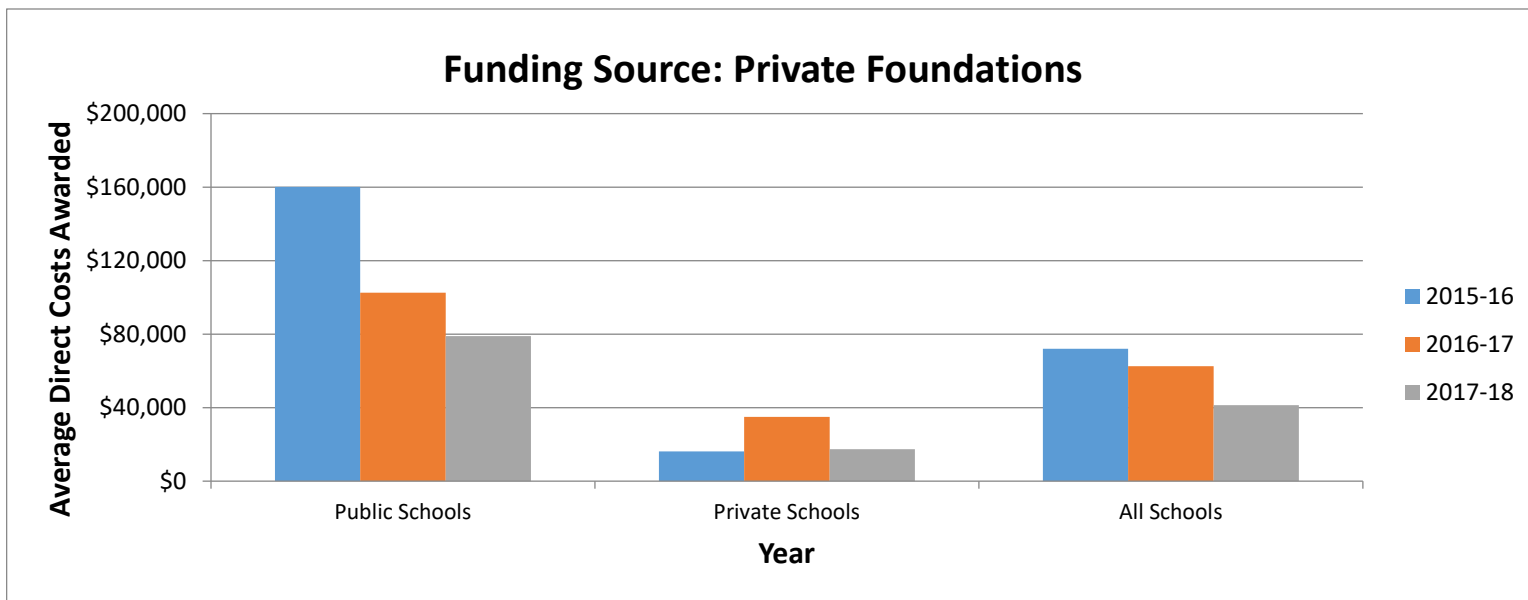
**Average Research Funding, Public & Private Schools**  
**U.S. Schools and Colleges of Optometry Including Puerto Rico**  
**Direct Costs Awarded 2015-2018**



**Average Funding per School**

	Public Schools	Private Schools	All Schools
2015-16 (22 of 23 schools)	\$2,267,163	\$237,013	\$1,067,529
2016-17 (22 of 23 schools)	\$1,947,040	\$138,989	\$878,646
2017-18 (23 of 23 schools)	\$1,572,472	\$101,124	\$676,869

**Average Research Funding, Public & Private Schools**  
**U.S. Schools and Colleges of Optometry Including Puerto Rico**  
**Direct Costs Awarded 2015-2018**



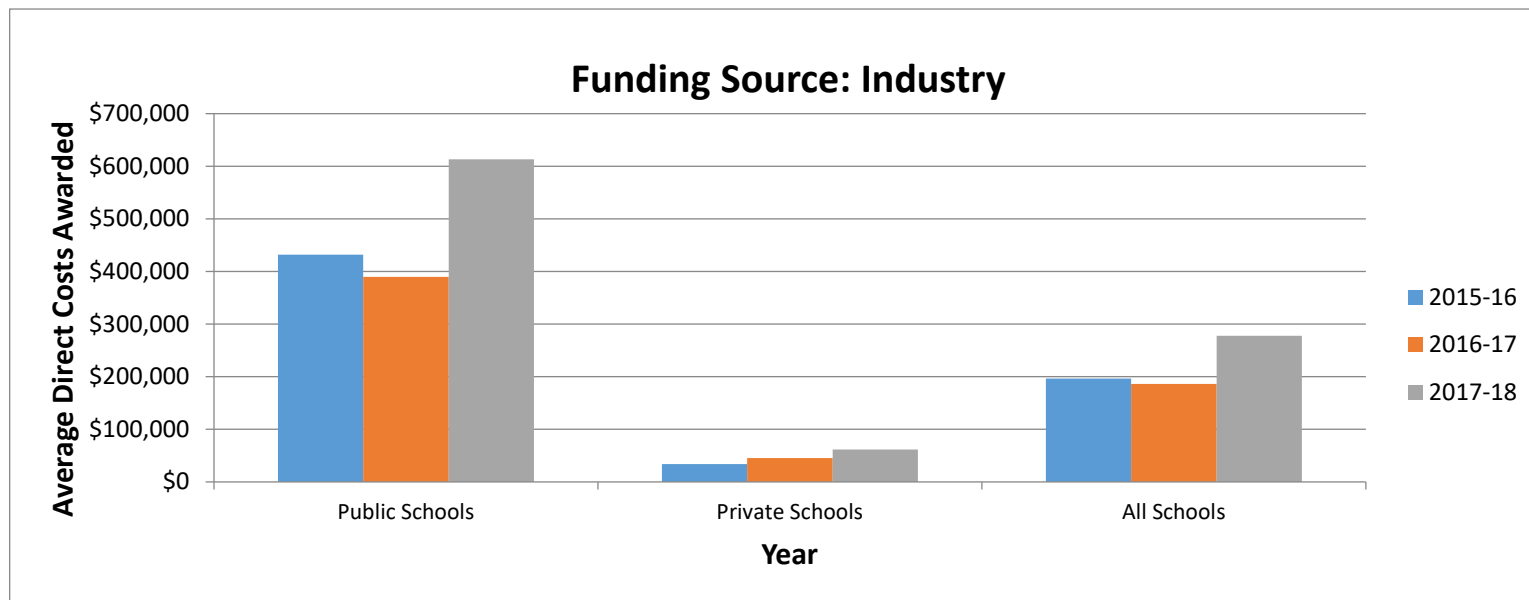
Average Funding per School

	Public Schools	Private Schools	All Schools
2015-16 (22 of 23 schools)	\$160,051	\$16,143	\$72,015
2016-17 (22 of 23 schools)	\$102,542	\$34,972	\$62,614
2017-18 (23 of 23 schools)	\$78,879	\$17,313	\$41,404

## Average Research Funding, Public & Private Schools

U.S. Schools and Colleges of Optometry Including Puerto Rico

Direct Costs Awarded 2015-2018



Average Funding per School

	Public Schools	Private Schools	All Schools
2015-16 (22 of 23 schools)	\$431,817	\$33,900	\$196,684
2016-17 (22 of 23 schools)	\$389,913	\$45,285	\$186,269
2017-18 (23 of 23 schools)	\$613,117	\$61,802	\$277,534