

RESEARCH



# Oakland University Research Report Fiscal Year 2021

#### Cover Art:

**Top:** M.S. Student Liz Parkinson evaluates the impacts of ALAN – Artificial Light at Night. Light is among the most-fundamental environmental parameters, and humans have modified light regimes across the planet through the addition of artificial light at night (ALAN). Here Liz is shown tending to experimental mesocosms to better understand how ALAN modifies predator-prey relationships in freshwaters. Her results were recently published in the journal PLOS1.

**Middle:** Aquatic insects are excellent indicators of water quality. Here students are performing a survey of a river in Costa Rica as part of a field-based tropical ecology course.

**Bottom:** Agriculture and urbanization result in significant increases in concentrations of important nutrients such as nitrogen and phosphorus in freshwaters, with undesired responses including increases in toxic algal blooms, compromised drinking-water quality, and fish kills. Professor Tiegs in the Department of Biological Sciences performs manipulative experiments to better understand nutrient loading. Here he can be seen installing an experiment in the Tagliamento River in northern Italy designed to evaluate nutrient-loading impacts to river carbon cycles.

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#### **Preface**

The Research Office is proud to present the Fiscal Year (FY) 2021 Annual Report describing external funding at Oakland University (OU). This report gives readers a comprehensive overview of the nature and extent of external funding provided to faculty and staff to support their research, instructional, public service, student services, and scholarships & fellowships. Detailed data are also provided for proposals that were submitted in FY 2020.

We always warn against making direct comparisons of numbers or trends from one year to another. As FY 2021 was in no way a normal year for research at OU, that caution is particularly warranted this year – and possibly for the next several years as well. The COVID-19 pandemic forced us to suspend almost all in-person research involving human subjects indefinitely, and to shut down laboratories and research facilities for nearly three months, from March until June. These facts are likely to have influenced the number of awards made by the federal government last year and to affect the number and types of proposals submitted by OU investigators in the last year and in coming years.

Nevertheless, there is much to celebrate about FY 2021 in terms of research and sponsored programs. Despite the necessary restrictions and problems caused by COVID-19, OU researchers have been very productive. Total funding for this year increased by 67% to \$16.1M, research funding also increased by 67% to \$12.8M, and the amount requested in proposals increased slightly to \$91M.

During FY 2021, OU attracted just over \$16 million in external funding for sponsored projects in the areas of research, instruction, public service, student services, and scholarships & fellowships. We also received \$68.6 million in COVID-19 relief funding through the federal CARES Act. As experts and leaders in their fields, OU faculty and staff continue to secure external funding for a broad range of robust research programs, many of which promote strong collaborations with other universities and research institutes, private industry, and regional organizations. These collaborations are vital in a funding climate emphasizing cross-disciplinary collaboration and public-private partnerships for addressing complex societal needs.

Moreover, these sponsored programs support OU's mission to be a student-centered public research university, providing experiential learning opportunities that position our students to become the next generation of scientists, engineers, educators, and performers, while also advancing society through the creation and mobilization of knowledge.

The Research Office deeply appreciates the efforts of the OU faculty and staff who submitted grant and contract proposals during FY 2021, and we extend our warmest congratulations to those who obtained external funding this year.

#### **Technical Notes and Definitions**

#### **Annual Report Reporting Period**

The **fiscal year (FY)** for OU is July 1 to June 30. This report includes data for all awards and proposals processed through the Research Office for FY 2021. An award is considered processed by the Research Office when it has been reviewed, institutionally endorsed (if necessary), and transferred to Accounting for account set up. A proposal is considered processed through the Research Office after the institutional review and sign off process is complete.

#### **Definition of Award**

An **award** is a funded project for which OU has received an official notice of award or executed contract from a sponsor requiring the university to undertake a particular activity and for which a deliverable is expected. Awards that provide full funding in the first year of a multi-year project are included in the fiscal year the award was made. Award dollars received from sponsors that provide funding for specific budget periods within a multi-year project (i.e. incremental awards) are included in the fiscal year for which funding is received. Consequently, funding can fluctuate for a department or college depending on how a project is funded. **Direct year-by-year comparisons should always be made with caution.** 

#### **Definition of Proposal**

A **proposal** is a request for financial support for a particular sponsored activity that is routed through the Research Office. It is important to recognize that there is no correlation between the proposals and awards discussed in this report, as many of the proposals submitted for the previous year are still pending with the sponsors.

#### **Intellectual Credit**

Proposals and awards are credited to the lead principal investigator (PI) and his/her home unit or center, whether academic or otherwise. For proposals or awards that also include co-PIs, the total amount proposed or awarded is credited to the lead PI and his/her home unit. However, the participation of each co-PI named on the project is indicated with a notation under the co-PI's home academic unit or center.

#### Sponsor Types

The Research Office recognizes four categories of **sponsors**: federal, state, corporate, and public/nonprofit. Federal sponsors for proposals and awards include direct federal funding as well as flow-through funding when federal dollars come to OU through a non-federal entity (e.g. state agency or other university). Public/nonprofit sponsors include non-Michigan institutions of higher education, municipalities, civic organizations, as well as nonprofit and non-governmental organizations.

#### Report Layout

This report has seven (7) sections. The first section, award overview, provides a summary of all NEW sponsored awards received by OU through the Research Office for the previous fiscal year. The ensuing three sections include award information separated according to the following activity types: 1) research, 2) instruction, 3) public service, 4) student services, and 5) scholarships & fellowships. The fifth section of the report details proposal submissions for the previous fiscal year. The final sections of the report include listings of the winners of the 2020 Research, Innovation, and Engagement Town Hall and the PI Academy for Research and Engagement Class of 2021.

#### Research

A project is classified as research when it involves a systematic study to gain an understanding of a phenomenon. Research culminates in new knowledge and may be either fundamental or applied. A project that funds the maintenance or creation of research facilities, disseminates project findings, or trains individuals in research techniques or methods would also be classified as research.

#### Instruction

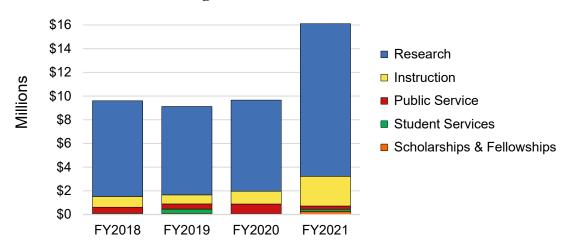
A project is classified as instruction when it incorporates the teaching and training activities of the institution (with the exception of research training, as mentioned above). These projects are intended to elicit some measure of educational change in learners. Instruction includes all teaching and training activities, credit or non-credit.

#### "Other" Academic Unit

The term "Other" is used for sponsored activities that fall outside the formal academic unit structure. This includes, but is not limited to, campus areas such as Academic Affairs Office, Athletics Administration, Campus Police, Campus Recreation, Center for Multicultural Initiatives, Facilities Management, Financial Aid, OU INC, Pre-College Programs, the Research Office, Student Affairs, and Upward Bound.

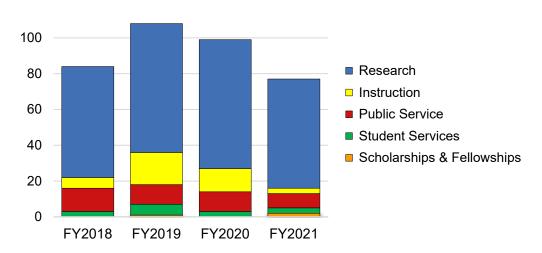
# Amounts and Number of Awards by Purpose

# Funding Amount of New Awards

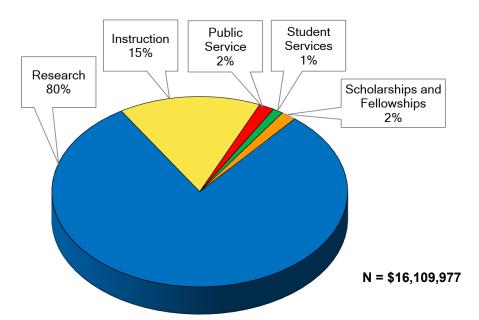


Purpose of Funding	FY2018	FY2019	FY2020	FY2021	Total
Research	8,074,392	7,465,280	7,696,442	12,887,052	36,123,166
Instruction	910,416	762,032	1,080,497	2,502,714	5,255,659
Public Service	524,894	443,298	820,721	270,094	2,059,007
Student Services	88,910	346,347	65,923	182,495	683,675
Scholarships & Fellowships	0	104,772	0	267,622	372,394
Total	\$9,598,612	\$9,121,729	\$9,663,583	\$16,109,977	\$44,493,901

#### Number of Awards



Purpose of Funding	FY2018	FY2019	FY2020	FY2021	Total
Research	62	72	72	61	267
Instruction	6	18	13	3	40
Public Service	13	11	11	8	43
Student Services	3	6	3	3	15
Scholarships & Fellowships	0	1	0	2	3
Total	84	108	99	77	368



**FY2021 • Funding Amount Percentages** 

Purpose of Funding	FY2021	Total
Research	61	12,887,052
Instruction	3	2,502,714
Public Services	8	270,094
Student Services	3	182,495
Scholarships & Fellowships	2	267,622
Total	77	\$16,109,977

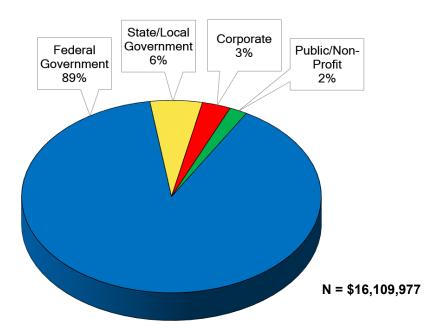
Research 79%

Public Services 10%

Scholarships and Fellowships 3%

N = 77

FY2021 • Number of Awards Percentage



**FY2021 • Funding Amount Percentages** 

Source of Funding	Number of Awards	Total
Federal Government	42	14,478,606
State/Local Government	13	914,052
Corporate Sponsors	8	405,667
Public/Nonprofit Sponsors	14	311,652
Total	77	\$16,109,977

State/Local Government 17%

Federal Government 55%

Public/Non-Profit 18%

N = 77

FY2021 • Number of Awards Percentage

SOM 16%

SEHS 11%

SEHS 11%

SECS 14%

CAS 37%

FY2021 • Funding Amount Percentages by Academic Unit

N = \$16,109,977

Academic Unit	FY2018	FY2019	FY2020	FY2021	Total
College of Arts and Sciences	5,075,991	4,409,055	4,954,137	5,976,664	20,415,847
Eye Research Institute	63,677	37,500	134,997	1,967,042	2,203,216
School of Business Administration	16,350	6,420	0	0	22,770
School of Engineering and Computer Science	2,604,175	2,741,069	1,947,994	2,298,215	9,591,453
School of Education and Human Services	97,590	143,090	100,032	95,800	436,512
School of Health Sciences	522,524	599,529	588,977	137,938	1,848,968
School of Medicine	0	6,000	209,554	2,497,150	2,712,704
School of Nursing	62,304	236,354	290,606	2,493,667	3,082,931
Other	1,156,001	942,712	1,437,286	643,501	4,179,500
Total	\$9,598,612	\$9,121,729	\$9,663,583	\$16,109,977	\$44,493,901

# FY 2021 Department Rankings – Total Funding

	Department/Unit	Dollars	Parent Unit
1	Chemistry	4,119,796	College of Arts and Sciences
2	Foundational Medical Studies	2,497,150	School of Medicine
3	Nursing	2,493,667	School of Nursing
4	Eye Research Institute	1,967,042	Eye Research Institute
5	Mechanical Engineering	1,434,391	College of Engineering & Computer Science

# FY 2021 Department Rankings – Research Dollars

	Department/Unit	Dollars	Parent Unit
1	Chemistry	4,089,796	College of Arts and Sciences
2	Foundational Medical Studies	2,497,150	School of Medicine
3	Eye Research Institute	1,967,042	Eye Research Institute
4	Mechanical Engineering	1,434,391	College of Engineering & Computer Science
5	Biological Sciences	882,603	College of Arts and Sciences

# FY 2021 Non-Academic and Other Unit Rankings

	Department/Unit	Dollars
1	Upward Bound	206,979
2	Pre-College Programs	182,495
3	Student Affairs and Diversity	100,483
4	Macomb-OU Incubator	98,663
5	OU Incubator	54,881

#### Comparison of FY 2020 and FY 2021

#### Amounts Awarded by Academic Unit and Other Administrative Units

College of Arts and Sciences	FY2020 Awards	FY2021 Awards
Art and Art History	20,290	7,100
Biological Sciences	1,005,699	882,603
Chemistry	1,313,163	4,119,796
Mathematics and Statistics	0	198,305
Physics	2,582,665	743,786
Political Science	4,000	0
Psychology	28,320	18,320
Sociology, Anthropology, Social Work and Criminal Justice	0	6,754
CAS Total	\$4,954,137	\$5,976,664

Eye Research Institute		FY2020 Awards	FY2021 Awards
1	ERI Total	\$134.997	\$1,967,042

School of Engineering and Computer Science	FY2020 Awards	FY2021 Awards
Computer Science and Engineering	925,247	386,746
Electrical and Computer Engineering	592,063	477,078
Industrial and Systems Engineering	79,852	0
Mechanical Engineering	350,832	1,434,391
SECS Total	\$1,947,994	\$2,298,215

# Comparison of FY2020 and FY2021, continued

School of Education and Human Services	FY2020 Awards	FY2021 Awards
Human Development and Child Studies	50,290	85,800
Organizational Leadership	39,418	0
Reading and Language Arts	10,324	10,000
SEHS Total	\$100,032	\$95,800

School of Health Sciences	FY2020 Awards	FY2021 Awards	
Clinical and Diagnostic Sciences		0	4,884
Human Movement Science		0	500
Interdisciplinary Health Sciences		522,818	121,154
Public and Environmental Wellness		66,159	11,400
	SHS Total	\$588,977	\$137,938

School of Medicine	FY2020 Awards	FY2021 Awards
SOM To	al \$209,554	\$2,497,150

School of Nursing	FY2020 Awards	FY2021 Awards	
SON Total	\$290,606	\$2,493,667	

Other	FY2020 Awards	FY2021 Awards
Center for Multicultural Initiatives	100,483	0
Diversity, Equity and Inclusion	49,890	0
Environmental Health and Safety	174,430	0
International Education	433,793	0
Library	9,943	0
Macomb-OU Incubator	30,000	98,663
OU Incubator	80,000	54,881
Pre-College Programs	55,350	182,495
Research Office	503,397	0
Student Affairs and Diversity	0	100,483
Upward Bound	0	206,979
Other Total	\$1,437,286	\$643,501

Oakland University Total		FY2020 Awards	FY2021 Awards
	<b>Grand Total</b>	\$9,663,583	\$16,109,977

# FY 2021 Amount Awarded by Unit and Purpose

College of Arts and Sciences	Research	Instruction	Public Service	Student Services	Scholarships Fellowships
Art and Art History	6,350	0	750	0	0
Biological Sciences	882,603	0	0	0	0
Chemistry	4,089,796	0	30,000	0	0
Mathematics and Statistics	198,305	0	0	0	0
Physics	743,786	0	0	0	0
Psychology	18,320	0	0	0	0
Sociology, Anthropology, Social Work and Criminal Justice	6,754	0	0	0	0
CAS Total	\$5,945,914	\$0	\$30,750	\$0	\$0

Eye Research Institute	Research	Instruction	Public Service		Scholarships Fellowships
ERI Total	\$1,967,042	\$0	\$0	\$0	\$0

School of Engineering and Computer Science	Research	Instruction	Public Service	Student Services	Scholarships Fellowships
Computer Science and Engineering	386,746	0	0	0	0
Electrical and Computer Engineering	477,078	0	0	0	0
Industrial and Systems Engineering	0	0	0	0	0
Mechanical Engineering	1,434,391	0	0	0	0
SECS Total	\$2,298,215	\$0	\$0	\$0	\$0

School of Education and Human Services	Research	Instruction	Public Service	Student Services	Scholarships Fellowships
Human Development & Child Studies	0	0	85,800	0	0
Organizational Leadership	0	0	0	0	0
Reading and Language Arts	10,000	0	0	0	0
SEHS Total	\$10,000	\$0	\$85,800	\$0	\$0

School of Health Sciences	Research	Instruction	Public Service	Student Services	Scholarships Fellowships
Clinical and Diagnostic Sciences	4,884	0	0	0	0
Human Movement Science	500	0	0	0	0
Interdisciplinary Health Sciences	121,154	0	0	0	0
Public and Environmental Wellness	11,400	0	0	0	0
SHS Total	\$137,938	\$0	\$0	\$0	\$0

# FY 2021 Amount Awarded by Unit and Purpose, continued

School of Medicine	Research	Instruction	Public Service		Scholarships Fellowships
SOM Total	\$2,497,150	\$0	\$0	\$0	\$0

School of Nursing		Research	Instruction	Public Service		Scholarships Fellowships
	SON Total	\$30,793	\$2,195,252	\$0	\$0	\$267,622

Other	Research	Instruction	Public Service	Student Services	Scholarships Fellowships
Macomb-OU Incubator	0	0	98,663	0	0
OU Incubator	0	0	54,881	0	0
Pre-College Programs	0	0	0	182,495	0
Student Affairs and Diversity	0	100,483	0	0	0
Upward Bound	0	206,979	0	0	0
Other	\$0	\$307,462	\$153,544	\$182,495	\$0

Oakland University Total	Research	Instruction	Public Service		Scholarships Fellowships
Grand Total	\$12,887,052	\$2,502,714	\$270,094	\$182,495	\$267,622

# FY 2021 Amount Awarded by Unit and Source

College of Arts and Sciences	Federal	State/Local	Corporate	Public/ Nonprofit
Art and Art History	0	750	0	6,350
Biological Sciences	879,603	0	3,000	
Chemistry	3,684,405	405,391	30,000	0
Mathematics and Statistics	198,305	0	0	0
Physics	684,515	0	0	59,271
Psychology	7,000	0	0	11,320
Sociology, Anthropology, Social Work and Criminal Justice	0	0	0	6,754
CAS Total	\$5,453,828	\$406,141	\$33,000	\$83,695

Eye Research Institute	Federal	State/Local	Corporate	Public/ Nonprofit
ERI Total	\$1,967,042	\$0	\$0	\$0

School of Engineering and Computer Science	Federal	State/Local	Corporate	Public/ Nonprofit
Computer Science and Engineering	175,982	0	46,984	163,780
Electrical and Computer Engineering	477,078	0	0	0
Mechanical Engineering	1,198,589	88,735	147,067	0
SECS Total	\$1,851,649	\$88,735	\$194,051	\$163,780

School of Education and Human Services	Federal	State/Local	Corporate	Public/ Nonprofit
Human Development & Child Studies	85,800	0	0	0
Reading and Language Arts	0	0	0	10,000
SEHS Total	\$85,800	\$0	\$0	\$10,000

School of Health Sciences	Federal	State/Local	Corporate	Public/ Nonprofit
Clinical and Diagnostic Sciences	0	0	0	4,884
Human Movement Science	0	0	0	500
Interdisciplinary Health Sciences	104,404	16,750	0	0
Public and Environmental Wellness	11,400	0	0	0
SHS Total	\$115,804	\$16,750	\$0	\$5,384

FY 2021 Amount Awarded by Unit and Source, continued

School of Medicine	Federal	State/Local	Corporate	Public/ Nonprofit
SOM Tota	\$2,222,485	\$93,049	\$178,616	\$3,000

School of Nursing	Federal	State/Local	Corporate	Public/ Nonprofit
SON Total	\$2,472,874	\$0	\$0	\$20,793

Other	Federal	State/Local	Corporate	Public/ Nonprofit
Macomb-OU Incubator	0	98,663	0	0
OU Incubator	0	54,881	0	0
Pre-College Programs	102,145	55,350	0	25,000
Student Affairs and Diversity	0	100,483	0	0
Upward Bound	206,979	0	0	0
Other Total	\$309,124	\$309,377	\$0	\$25,000

Oakland University Total	Federal	State/Local	Corporate	Public/ Nonprofit
Grand Total	\$14,478,606	\$914,052	\$405,667	\$311,652

# Amount Awarded by Federal Agency \*

Agency/Sponsor	FY2018	FY2019	FY2020	FY2021
Army Educational Outreach Program	4,000	0	0	0
Binational Science Foundation	0	0	320,000	0
Centers for Disease Control and Prevention	455,524	0	0	0
Cooperative Invasive Species Management	0	0	1,767	0
Defense Advanced Research Projects Agency	0	0	0	291,515
Environmental Protection Agency	90,544	0	0	0
Health Resources and Services Administration	26,992	224,233	217,606	2,472,874
Los Alamos National Laboratory	2,700	0	0	0
Michigan Council for Arts & Cultural Affairs	0	10,000	0	0
Michigan Department of Health & Human Services	0	0	0	2,483,851
Michigan Department of Labor/Economic Growth	0	0	0	102,145
USAID	56,844	0	0	0
National Advanced Mobility Consortium	0	75,000	0	0
National Aeronautics and Space Administration	41,500	70,000	72,488	32,500
National Center for Manufacturing Sciences	853,372	0	0	990,000
National Endowment for the Humanities	6,410	0	9,943	0
National Institutes of Health	3,003,797	1,494,402	855,562	5,080,980
National Network of Libraries of Medicine	0	0	18,071	0
National Science Foundation	994,350	3,289,388	2,140,022	1,685,010
National Security Agency	200,000	97,050	99,992	0
Pacific Northwest National Laboratory	78,085	0	174,430	0
Partners of Americas Foundation	0	0	24,998	0
United States Air Force	0	0	1,375,547	461,078
United States Army-TACOM	240,985	0	0	0
United States Army-TARDEC	79,550	79,550	0	0
United States Army	0	2,000	2,000	0
United States Council for Automotive Research	0	0	5,391	0
United States Department of Agriculture	0	83,281	0	0
United States Department of Commerce	0	0	117,704	0
United States Department of Defense	749,803	678,039	938,837	271,909
United States Department of Education	0	113,935	0	304,179
United States Department of Energy	0	234,621	40,000	302,565
United States Department of Labor	0	0	3,200	0
United States Department of State	0	0	408,795	0
Virginia Polytechnic Institute & State University	240,000	0	0	0
Oakland University Grand Total	\$7,124,456	\$6,451,499	\$6,826,353	\$14,478,606

# Amount Awarded by State and Local Agency

Agency/Sponsor	FY2018	FY2019	FY2020	FY2021
Advancing Macomb	0	0	4,000	0
Department of State, Oakland County	0	0	7,000	0
Department of Environment, Great Lakes and	0	0	0	405,391
Grand Valley State University	0	84,000	110,000	0
Macomb County Public Works	0	0	3,130	0
Macomb Intermediate School District	65,090	67,347	20,290	0
Michigan Council for Arts and Cultural Affairs	0	0	7,500	0
Michigan Department of Education	0	22,168	0	72,100
Michigan Department of Health & Human Services	32,500	50,000	0	89,549
Michigan Department of Labor & Economic Growth	62,680	17,600	0	0
Michigan Economic Development Corporation	442,521	310,355	374,297	153,544
Michigan Humanities Council	0	0	0	750
Michigan State Police	0	16,355	49,890	0
Michigan Technological University	10,000	0	0	0
Oakland County Health Division	6,000	7,000	0	3,500
Oakland Parks and Recreation	0	0	4,000	0
State of Michigan	734,125	505,376	255,964	189,218
Oakland University Grand Total	\$1,352,916	1,080,201	836,071	\$914,052

# **Amount Awarded by Corporations**

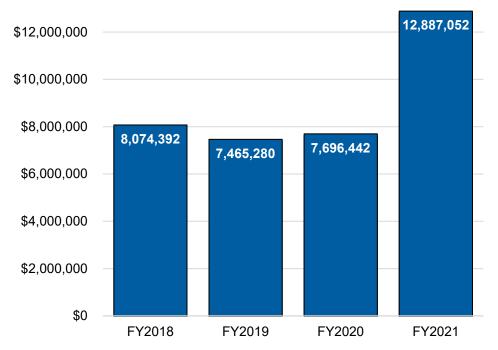
Agency/Sponsor	FY2018	FY2019	FY2020	FY2021
Aquasight, LLC	0	0	0	30,000
Balance Tracking Systems	0	20,000	0	0
Cayman Chemical Company	0	0	0	1,000
Comcast Innovation Fund	50,000	0	0	0
Consumers Energy	54,000	0	0	0
Continental Automotive Systems, Inc.	0	41,775	0	0
Data Speed, Inc.	0	0	79,812	0
Dura Automotive, LLC	0	132,312	0	0
Eaton Corporation	46,000	0	46,000	16,000
Electric Power Research Institute, Inc.	0	25,000	0	0
Fiat Chrysler Automobiles	317,264	310,528	0	100,000
Fortinet	0	0	46,864	46,984
General Motors	0	0	4,000	31,067
HBM Prenscia, LLC	0	0	18,800	0
Hitachi America, Ltd.	16,350	6,420	0	0
Hyundai Mobis Company	60,000	0	0	0
Lab Systems, LLC	0	0	64,905	0
Light Weight Innovations	0	0	41,312	0
Merck Corporate	0	0	0	178,616
Molex, LLC	0	56,348	0	0
Sapphire North America	0	0	0	2,000
X-wave Innovations	20,000	0	0	0
Oakland University Grand Total	\$563,614	592,383	\$301,693	\$405,667

# Amount Awarded by Public/Nonprofit Sponsors

Agency/Sponsor	FY2018	FY2019	FY2020	FY2021
Alliance of Coalitions for Healthy Communities	16,500	0	8,320	11,320
Alpha Foundation	175,000	0	745,717	0
American Educational Research Association	0	2,075	0	0
American Heart Association	0	375,942	180,983	0
American Nephrology Nurses Association	0	0	0	12,293
American Sociological Association	7,999	0	0	0
American Society of Hematology	0	0	6,000	0
American Society for Clinical Lab. Science	0	0	0	4,884
Arnold P. Gold Foundation	0	0	5,500	0
Art Bridges	0	0	12,790	6,350
Association of American Medical Colleges	0	0	5,000	0
Blue Cross Blue Shield of Michigan Foundation	85,312	6,000	70,000	3,000
Brain Aneurysm Foundation	0	40,000	0	0
CARE House of Oakland County	0	0	30,000	0
Daisy Foundation	0	0	0	7,500
Educas AS	23,744	0	0	0
Eversight	15,000	0	0	0
Forging Foundation (FIERF)	0	0	10,000	0
George Washington University	0	25,119	9,000	0
Golf Ball Divers Alliance	2,500	0	0	0
Harvard University	0	0	52,959	0
Helping Hand for Relief and Development	38,222	0	0	0
Henry Ford Health System	59,976	0	23,055	59,271
Imam Mohammad IBN Saud Islamic University	0	0	0	163,780
Judson Center, Inc.	0	51,526	0	0
Michigan Institute for Clinical and Health	0	0	0	10,000
Michigan Health Endowment Fund	0	301,558	484,418	0
Michigan Physical Therapy Association	0	0	0	500
Michigan Swimmer's Itch Partnership	0	29,558	0	0
Midwest Inter-Professional Practice Education	0	0	1,000	0
National Student Affairs in Higher Education	0	1,500	0	0
Neilsen Foundation	0	0	22,400	0
Sheriff PAL/United Way	0	15,000	0	0
Sigma Theta Tau	0	0	2,000	1,000
Social Sciences and Humanities Research Council	0	0	0	6,754
Sociologists for Women in Society	133,373	110,088	0	0
Southeast Michigan Health Association	0	8,297	0	0
United Way	0	0	20,000	25,000
University of Buffalo/Spencer	0	0	10,324	0
University of Michigan	0	30,983	0	0
Grand Total	\$557,626	\$997,646	\$1,699,466	\$311,652

#### Amounts and Number of Research Awards

#### Research Awards Fiscal Years 2018-2021



#### Purpose of Funding: Research

College/School	FY2018	FY2019	FY2020	FY2021
College of Arts and Sciences	4,942,618	4,288,967	4,909,847	5,945,914
Eye Research Institute	63,677	37,500	134,997	1,967,042
School of Business Administration	16,350	0	0	0
School of Engineering and Computer Science	2,493,911	2,533,284	1,677,455	2,298,215
School of Education and Human Services	0	0	69,418	10,000
School of Health Sciences	522,524	599,529	585,777	137,938
School of Medicine	0	6,000	209,554	2,497,150
School of Nursing	35,312	0	73,000	30,793
Other	0	0	36,394	0
Total	\$8,074,392	\$7,465,280	7,696,442	\$12,887,052

#### FY 2021 Research Awards by Source

Source	Amount	Amount Percentage	Number of Awards	Number Percentage
Federal	11,620,808	90.2%	36	59.0%
State/Local	603,925	4.7%	5	8.2%
Corporate	375,667	2.9%	7	11.5%
Public/Nonprofit	286,652	2.2%	13	21.3%
Total	\$12,887,052	100.0%	61	100.0%

# Research Awards by Department

# Fiscal Years 2018 - 2021

College of Arts and Sciences	FY2017	FY2018	FY2019	FY2021
Art and Art History	0	0	0	6,350
Biological Sciences	2,067,691	1,345,469	1,005,699	882,603
Chemistry	1,163,000	1,210,223	1,313,163	4,089,796
Mathematics and Statistics	0	108,215	0	198,305
Philosophy	0	8,297	0	0
Physics	1,395,296	965,735	2,582,665	743,786
Psychology	251,788	651,028	8,320	18,320
Sociology and Anthropology	64,843	0	0	6,754
CAS Total	\$4,942,618	4,288,967	4,909,847	5,945,914

Eye Research Institute	FY2018	FY2019	FY2020	FY2021
ERI Total	\$63,677	\$37,500	\$134,997	\$1,967,042

School of Business Administration	FY2018	FY2019	FY2020	FY2021
Management and Marketing	16,350	0	0	0
SBA Total	\$16,350	\$0	\$0	\$0

School of Engineering and Computer Science	FY2018	FY2019	FY2020	FY2021
Computer Science and Engineering	342,222	810,554	825,255	386,746
Electrical and Computer Engineering	426,018	530,342	512,251	477,078
Industrial and Systems Engineering	23,744	202,012	79,852	0
Mechanical Engineering	1,701,927	990,376	260,097	1,434,391
SECS Total	\$2,493,911	\$2,533,284	\$1,677,455	\$2,298,215

School of Education and Human Services	FY2018	FY2019	FY2020	FY2021
Human Development and Child Studies	0	0	30,000	0
Organizational Leadership	0	0	39,418	0
Reading and Language Arts	0	0	0	10,000
SEHS Total	\$0	\$0	\$69,418	\$10,000

#### Research Awards by Department, continued

#### Fiscal Years 2018 - 2021

School of Health Sciences	FY2018	FY2019	FY2020	FY2021
Clinical and Diagnostic Sciences	0	0	0	4,884
Human Movement Science	1,000	221,558	0	500
Interdisciplinary Health Sciences	521,524	278,909	522,818	121,154
Public and Environmental Wellness	0	99,062	62,959	11,400
SHS Total	\$522,524	\$599,529	\$585,777	\$137,938

School of Medicine	FY2018	FY2019	FY2020	FY2021
SOM Total	\$0	\$6,000	\$209,554	\$2,497,150

School of Nursing		FY2018	FY2019	FY2020	FY2021
SC	N Total	\$35,312	\$0	\$73,000	30,793

Other	FY2018	FY2019	FY2020	FY2021
International Education	0	0	24,998	0
Research Office	0	0	11,396	0
Other Total	\$0	\$0	\$36,394	\$0

Oakland University Total	FY2018	FY2019	FY2020	FY2021
Grand Total Research	\$8,074,392	\$7,465,280	\$7,696,442	\$12,887,052
Grand Total Funding	\$9,598,612	\$9,121,729	\$23,460,407*	\$16,109,977

# FY 2021 Research Awards by Unit, Department, and Principal Investigator

#### College of Arts and Sciences

Art and Art History

Goody, Stephen; Art Bridges Ahead Initiative: Upgrades to OU Art Gallery Website to Increase Virtual Presence; Art Bridges, \$6,350

#### Biological Sciences

Battistuzzi, Fabia Ursula; Effects of Microgravity on Genomic Variability; Michigan Space Grant Consortium, University of Michigan, \$5,000

Delorme-Axford, Elizabeth; Metabolic Regulation and Autophagy; Cayman Chemical Company, \$1,000

Delorme-Axford, Elizabeth; Investigation into Autophagy Regulation by Pseudouridylation; Sapphire North America, \$2,000

Jiang, Lan; Osiris Genes as Novel Coordinators of Protein Trafficking in Drosophila Trachea; National Institutes of Health, \$438,957

Rhee, Sang Hoon; Studying the Gut-Brain Inflammatory Interaction; National Institutes of Health, \$430,646

Villa-Diaz, Luis; Use of Simulated Microgravity to Determine Molecular Signaling Enhancing Self-Renewal of Pluripotent Stem Cells; Michigan Space Grant Consortium, University of Michigan, \$5,000

#### Chemistry

Szlag, David; Detecting COVID-19 in Sewage Runoff; Michigan Department of Health and Human Services, \$2,483,851

Szlag, David; Detecting COVID-19 in Sewage Runoff; State of Michigan Department of Environment Great Lakes and Energy, \$405,391

Thomas Bianchette; Multi-Proxy Approach to Characterizing Hurricane Induced Deposits in Coastal and Inland Environments; National Science Foundation / Florida A&M University, \$18,177

Trivedi, Evan; Rare-earth 'Salen' Phosphors as Up-converting Antennae for Photovoltaics; Michigan Space Grant Consortium, University of Michigan, \$3,000

Trivedi, Evan; Structural Modification of Subphthalocyanines as Fluorescence Probes for Real-time Tumor Detection; Michigan Space Grant Consortium, University of Michigan, \$3,000

Wang, Zhe; Excellence in Research: Investigation of Small Molecule Adsorption and Conversion on the Semiconductor/Ionic-Liquid Interface and Application to Sensing and Catalysis; National Science Foundation / Xavier University, \$68,493

Yang, Ziming; Reactivity and Stability of Amides in Habitable Hydrothermal Environments; Michigan Space Grant Consortium, University of Michigan, \$5,000

Yang, Ziming; CAREER: Mechanistic Understanding of Organic Carbon and Nitrogen Transformations in Hydrothermal Systems; National Science Foundation, \$592,632

Zeng, Xiangqun; A Wearable Electrochemical Alcohol Sensor; National Institutes of Health / LabSys LLC, \$21,850

Zeng, Xiangqun; Collaborative Research: SitS: Integrating Novel Greenhouse Gas Sensor Technology with Mechanistic Modeling to Improve Projections of Arctic Soil Responses to Climate Warming and Fire, National Science Foundation, \$388,403

Zeng, Xiangqun; A Novel Low-Cost, Miniaturized Hydrogen Sensor with High Robustness and Reliability for Continuous Hydrogen Monitoring; United States Department of Energy / 4D Maker, \$99,999

#### Mathematics and Statistics

Cesmelioglu, Aycil; Collaborative Research: Development of Reduced Order Models for Poroelasticity and Related Problems; National Science Foundation, \$198,305

#### **Physics**

Cholis, Ilias; Correlations of Cosmic Ray Data in Search of Spectral Features; Michigan Space Grant Consortium, University of Michigan, \$5,000

Elder, Ken; Collaborative Research: Nanoscale Heterostructures and Defects in Two-Dimensional Materials; National Science Foundation, \$388,000

Slavin, Andrei; Amplification of Exchange Magnons in Nanometer-Thick YIG Films by Spin-Orbit Torque; Defense Advanced Research Projects Agency / University of Chicago, \$291,515

Xia, Yang; Graduate Student Support for Medical Physics Research at Henry Ford Hospital; Henry Ford Health System, \$23,823

Xia, Yang; Prabhu Acharya: MRI Signatures of Response to High-Dose Radiotherapy in Rat Models of Cerebral Tumor; Henry Ford Health System, \$35,448

#### Psychology

Escobar, Martha; NSF INCLUDES DDLP: The Alabama Alliance for an Inclusive Middle Grades Computer Science Preparation; National Science Foundation / Tuskegee University, \$7,000

Purdie, Michele; Social Norms Intervention Assessment; Alliance of Coalitions for Healthy Communities, \$11,320

Sociology, Anthropology, Social Work and Criminal Justice

Meehan, Albert, Charting the "Reasonable Officer"; Wilfrid Laurier University/SSHRC, \$6,754

#### Eye Research Institute

Goldberg, Andrew; Investigation of the Molecular Basis of Rod and Cone Photoreceptor Structure; National Institutes of Health, \$1,967,042

#### School of Engineering and Computer Science

Computer Science and Engineering

Malik, Khalid Mahmood; Usage of Modern Technologies to Predict Emergence of Infectious Diseases and to Detect Outbreak of Pandemics; Imam Mohammad IBN Saud Islamic University, \$163,780

Malik, Khalid Mahmood; Forensic Examiner: Testbed for Benchmarking Digital Audio Forensic Algorithms; National Science Foundation, \$8,000

Rrushi, Julian; Fortinet Signature-Based Detector of Network Attacks on Industrial Control Systems - a Joint Project with Fortinet on Securing Industrial Control Systems; Fortinet Corporation, \$46,984

Rrushi, Julian; Idaho National Laboratory in response to DOE's Grid Modernization Laboratory Call (GMLC) 2019 Research Call; United States Department of Energy / Idaho National Lab, \$167,982

#### Electrical and Computer Engineering

Li, Jia; Interpretable Multimodal Sensor Fusion; United States Air Force Office of Scientific Research, \$461,078

Louie, Wing-Yue; Socially Assistive Robots Learning Nonverbal Communication Strategies for Healthcare Intervention Delivery from Human Demonstrations; National Science Foundation, \$16,000

#### Mechanical Engineering

Barber, Gary; Tribological Performance of Busway Coatings; Eaton Corporation, \$16,000

DelVescovo, Daniel; Stoichiometric Spark Ignition Propane Engine with Diesel Efficiency Parity; United States Department of Energy / Oak Ridge National Laboratory, \$34,584

Golovashchenko, Sergey; Coefficient of Friction Evaluation for Forming; General Motors Corporation, \$31,067

Guessous, Laila; Michigan Space Grant Consortium Affiliate Operating Award; Michigan Space Grant Consortium, University of Michigan, \$1,500

Kobus, Krzysztof; MICUP - Michigan College/University Partnership Program 2020-2021; State of Michigan, \$88,735

Monroe, Ryan; Acoustic Tools for Improving Vehicle NVH and Sound Quality; Fiat Chrysler Automobiles, \$100,000

Mourelatos, Zissimos; Probability of Mobility for Mission Planning of Autonomous Ground Vehicles at "High Stress" Environments; United States Department of Defense / University of Michigan, \$57,505

Nassar, Sayed; Adhesive Performance Improvements for Light Weighting Initiatives; National Center for Manufacturing Sciences, \$990,000

Nassar, Sayed; Adhesive Performance Improvements for Light Weighting Initiatives; National Center for Manufacturing Sciences, \$110,000

Yang, Ankun; Design Lithium-Sulfur Battery with High Energy Densities; Michigan Space Grant Consortium, University of Michigan, \$5,000

#### School of Education and Human Services

Reading and Language Arts

McMillon, Gwendolyn; Wolverine State Missionary Baptist Convention I Read, I Lead, I Succeed; Michigan Institute for Clinical and Health Research, \$10,000

#### School of Health Sciences

Clinical and Diagnostic Sciences

Telgenhoff, Dale; Hyperglycemic Glycosylation of Proteins in Cholesterol Signaling; American Society for Clinical Laboratory Science, \$4,884

Human Movement Science

Thompson, Kristine; Longitudinal Outcomes of Telehealth Instruction in a Doctor of Physical Therapy Program; Michigan Physical Therapy Association, \$500

Interdisciplinary Health Sciences

Lucarelli, Jennifer; Team Nutrition 19; Michigan Department of Education / USDA, \$16,750

Rohn, Edward; Neurogenic Bowel and Bladder Management after Spinal Cord Injury: Examining Factors Involved in Successful Decision-Making Processes; United States Department of Defense, University of Michigan, \$104,404

Public and Environmental Wellness

Dallo, Florence; The Prevalence and Correlates of COVID-19 Cases and Deaths among Arab Americans in Michigan; United States Department of Education / Access, \$11,400

#### School of Medicine

Afonso, Nelia; Promoting Vaccine Confidence in Medical and Dental Students: Development and Evaluation of an Educational Intervention; Merck Corporation, \$178,616

Baker, Erin; Evaluating Trunnion-Taper Fretting and Corrosion Damage in Anatomic Total Shoulder and Shoulder Hemiarthroplasty Prostheses; Blue Cross Blue Shield of Michigan Foundation, \$3,000

Cucullo, Luca; Testing Tobacco Smoke and E-Cigarette Toxicity at the Blood-Brain Barrier; National Institutes of Health / Texas Tech University, \$413,075

Cucullo, Luca; Blood and Brain Based Biomarkers of Injury to Assess the Cerebrovascular Impact of Emerging Alternatives to Classic Cigarette Products; National Institutes of Health / Texas Tech University, \$339,675

Cucullo, Luca; Repurposing Metformin to Offset Stroke Risk and Injury in Comorbid Populations of Smokers; National Institutes of Health / Texas Tech University, \$1,469,735

Hurse, Deidre; Gaining Perspective on Substance Use Disorder (SUD) Treatment and Recovery Services for Foster Care Youth in Michigan; Michigan Department of Health and Human Services / University of Michigan, \$89,549

Hurse, Deidre; Evaluation Plan for OCHD; Oakland County Health Division, \$3,500

#### School of Nursing

Hays, Deana; Midwest Integration of the National HIV Curriculum; Health Resources and Services Administration / Univ of Illinois Chicago, \$10,000

Kauric-Klein, Zorica; The Effect of a Yoga Intervention on Physical and Psychological Outcomes in Patients on Chronic Hemodialysis; American Nephrology Nurses Association, \$12,293

Munyan, Kristen; Assessing the Prevalence of Post-Natal Depression among Fathers across Screening Instruments; Sigma Theta Tau, \$1,000

Pittiglio, Laura; The Use of Simulation to Increase Nursing Student Competency in Caring for LGBTQ Individuals; Daisy Foundation, \$7,500

#### **Amounts and Number of Instruction Awards**

#### Instruction Awards Fiscal Years 2018-2021



#### **Academic Unit Comparison**

Academic Unit	FY2018	FY2019	FY2020	FY2021
College of Arts and Sciences	0	0	0	0
School of Business Administration	0	6,420	0	0
School of Engineering and Computer Science	110,264	207,785	270,539	0
School of Education and Human Services	65,090	24,243	24,524	0
School of Health Sciences	0	0	3,200	0
School of Medicine	0	0	0	0
School of Nursing	26,992	236,354	217,606	2,195,252
Other	708,070	287,230	564,628	307,462
Total	\$910,416	\$762,032	\$1,080,497	\$2,502,714

#### FY 2021 Instruction Awards by Source

Source	Amount	Amount Percentage	Number of Awards	Number Percentage
Federal	2,402,231	96.0%	2	66.7%
State/Local	100,483	4.0%	1	33.3%
Total	\$2,502,714	100.0%	3	100.0%

# Instruction Awards by Department

#### Fiscal Years 2018 - 2021

School of Business Administration	FY2018	FY2019	FY2020	FY2021
Management and Marketing	0	6,420	0	0
SBA Total	\$0	\$6,420	\$0	\$0

School of Engineering and Computer Science	FY2018	FY2019	FY2020	FY2021
Computer Science and Engineering	0	97,050	99,992	0
Electrical and Computer Engineering	0	0	79,812	0
Mechanical Engineering	110,264	110,735	90,735	0
SECS Total	\$110,264	\$207,785	270,539	\$0

School of Education and Human Services	FY2018	FY2019	FY2020	FY2021
Human Development and Child Studies	65,090	22,168	14,200	0
Reading and Language Arts	0	2,075	10,324	0
SEHS Total	\$65,090	\$24,243	\$24,524	\$0

School of Health Sciences	FY2018	FY2019	FY2020	FY2021
Public and Environmental Wellness	0	0	3,200	0
SEHS Total	\$0	\$0	\$3,200	\$0

School of Nursing	FY2018	FY2019	FY2020	FY2021
SON Total	\$26,992	\$236,354	\$217,606	\$2,195,252

Other	FY2018	FY2019	FY2020	FY2020
Center for Multicultural Initiatives	645,390	100,483	100,483	0
International Education	0	0	408,795	0
Pre-College Programs	62,680	72,812	55,350	0
Student Affairs and Diversity	0	0	0	100,483
Upward Bound	0	113,935	0	206,979
CAS Total	\$708,070	\$287,230	\$564,628	\$307,462

Oakland University Total	FY2018	FY2019	FY2020	FY2021
Grand Total Instruction	\$910,416	\$762,032	\$1,080,497	\$2,502,714
Grand Total Funding	\$9,598,612	9,121,729	\$9,663,583	16,109,977

#### FY 2021 Instruction Awards by Unit, Department and Principal Investigator

#### School of Nursing

Kruse, Julie; ASPIRE: Achieving Success through Professionalism, Integrity, Resilience, and Engagement; Health Resources and Services Administration, \$2,195,252

#### Other

Upward Bound

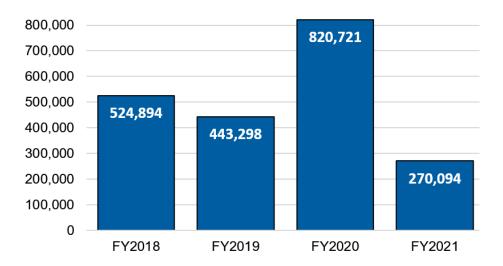
Graham, Geraldine; Project Upward Bound College Prep Academy; United States Department of Education, \$206,979

Student Affairs and Diversity

Brown-El, Omar; FY2021 - 4S - Select Student Support Services; State of Michigan, \$100,483

#### Amounts and Number of Public Service Awards

#### Public Service Awards Fiscal Years 2018 – 2021



#### **Academic Unit Comparison**

Academic Unit	FY2018	FY2019	FY2020	FY2021
College of Arts and Sciences	133,373	120,088	44,290	30,750
School of Education and Human Services	0	0	0	85,800
Other	391,521	323,210	776,431	153,544
Total	\$524,894	\$443,298	\$820,721	\$270,094

# FY 2021 Public Service Awards by Source

Source	Amount	Amount Percentage	Number of Awards	Number Percentage
Federal	85,800	31.8%	1	12.5%
State/Local	154,294	57.1%	6	75.0%
Corporate	30,000	11.1%	1	12.5%
Public/Nonprofit	0	0%	0	0%
Total	\$270,094	100.0%	8	100.0%

# Public Service Awards by Department

College of Arts and Sciences	FY2018	FY2019	FY2020	FY2021
Art and Art History	0	10,000	20,290	750
Chemistry	0	0	0	30,000
Political Science	0	0	4,000	0
Psychology	0	0	20,000	0
Sociology and Anthropology	133,373	110,088	0	0
CAS Total	\$133,373	\$120,088	\$44,290	\$30,750

School of Education and Human Services	FY2018	FY2019	FY20	FY21
Human Development and Child Studies	0	0	0	85,800
SEHS Total	\$0	\$0	\$0	\$85,800

Other	FY2018	FY2019	FY2020	FY2021
Diversity, Equity and Inclusion	0	16,355	0	0
Environmental Health and Safety	0	0	174,430	0
Macomb-OU Incubator	145,946	197,995	30,000	98,663
OU Incubator	45,950	34,000	80,000	54,881
Research Office	199,625	74,860	492,001	0
Other Total	\$391,521	\$323,210	\$776,431	\$153,544

Oakland University Total	FY2018	FY2019	FY2020	FY2021
Total Public Service Awards	\$524,894	\$443,298	\$820,721	\$270,094
Grand Total Funding	\$9,598,612	\$9,121,729	9,663,583	\$16,109,977

#### FY 2021 Public Service Awards by Unit, Department and Principal Investigator

#### College of Arts and Sciences

Art and Art History

Corso-Esquivel, John; OU on the Road: Great Michigan Read Book Club; Michigan Humanities Council, \$750

Chemistry

Szlag, David; Detection of COVID-19 in Sewage; Aquasight, LLC, \$30,000

School of Education and Human Services, Human Development and Child Studies

Borowicz, Ramona; MDE Child Care Relief Funds; United States Department of Education, \$85,800

#### Other

Macomb-OU Incubator

Herriman, Lawrence; MEDC 2020 Business Incubator Programs; Michigan Economic Development Corporation, \$98,663

OU Incubator

Kent, Stephen, Business Accelerator Fund-Client Engagement, GryphonHR; Grand Valley State University / MEDC, \$8,700

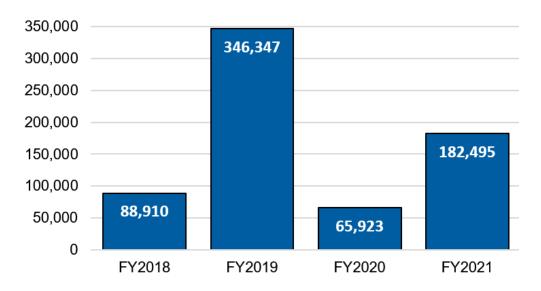
Kent, Stephen, Business Accelerator Fund-Client Engagement, GryphonHRII; Grand Valley State University / MEDC, \$10,160

Kent, Stephen, Business Accelerator Fund-Client Engagement, Afreecar; Grand Valley State University / MEDC, \$6,021

Kent, Stephen, Accelerator Development Funds-Discretionary. Grand Valley State University / MEDC, \$30,000

#### **Amounts and Number of Student Service Awards**

Student Service Awards Fiscal Years 2018 – 2021



#### Academic Unit Comparison

Academic Unit	FY2018	FY2019	FY2020	FY2021
College of Arts and Sciences	0	118,847	0	0
School of Education and Human Services	32,500	0	6,090	0
Other	56,410	227,500	59,833	182,495
Total	\$88,910	\$346,347	\$65,923	\$182,495

#### FY 2021 Student Service Awards by Source

Source	Amount	Amount Percentage	Number of Awards	Number Percentage
Federal	102,145	56.0%	1	33.4%
State/Local	55,350	30.3%	1	33.3%
Corporate	0	0.0%	0	0.0%
Public/Nonprofit	25,000	13.7%	1	33.3%
Total	\$182,495	100.0%	3	100.0%

# Student Service Awards by Department

School of Education and Human Services	FY2018	FY2019	FY20	FY21
Human Development and Child Studies	32,500	117,347	6,090	0
Organizational Leadership	0	1,500	0	0
SEHS Total	\$32,500	\$118,847	\$6,090	\$0

Other	FY2018	FY2019	FY2020	FY2021
Diversity, Equity and Inclusion	0	0	49,890	0
Kresge Library	6,410	0	9,943	0
Pre-College Programs	0	140,000	0	182,495
Research Office	50,000	87,500	0	0
Other Total	\$56,410	\$227,500	\$59,833	\$182,495

Oakland University Total	FY2018	FY2019	FY2020	FY2021
Total Public Service Awards	\$88,910	\$346,347	\$65,923	\$182,495
Grand Total Funding	\$9,598,612	\$9,121,729	9,663,583	\$16,109,977

# FY 2021 Student Service Awards by Unit, Department and Principal Investigator

#### Other

Pre-College Programs

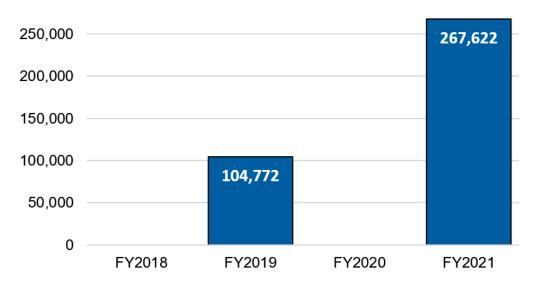
Rodges, Teresa; MDE College Day Allotment; Michigan Department of Education, \$55,350

Rodges, Teresa; GEAR-UP - Gaining Early Awareness and Readiness for Undergraduate Program; Michigan Department of Labor and Economic Growth, \$102,145

Rodges, Teresa; Oakland University Pontiac Initiative; United Way for Southeastern Michigan, \$25,000

# Amounts and Number of Scholarship & Fellowship Awards

#### Scholarship & Fellowship Awards Fiscal Years 2018 – 2021



#### Academic Unit Comparison

Academic Unit	FY2018	FY2019	FY2020	FY2021
School of Nursing	0	0	0	267,622
Other	0	104,772	0	0
Total	\$0	\$104,772	\$0	\$267,622

#### FY 2021 Scholarship & Fellowship Awards by Source

Source	Amount	Amount Percentage	Number of Awards	Number Percentage
Federal	267,622	100%	2	100%
State/Local	0	0%	0	0%
Corporate	0	0%	0	0%
Public/Nonprofit	0	0%	0	0%
Total	\$267,622	100.0%	2	100.0%

# Scholarship and Fellowship Awards by Department

School of Nursing	FY2018	FY2019	FY20	FY21
SON Total	\$0	\$0	\$0	\$267,622

Other	FY2018	FY2019	FY2020	FY2021
Graduate Study and Lifelong Learning	0	107,772	0	0
Other Total	\$0	\$104,772	\$0	\$0

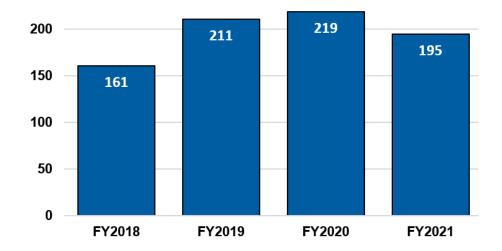
Oakland University Total	FY2018	FY2019	FY2020	FY2021
Total Scholarship & Fellowship Awards	\$0	\$104,772	\$0	\$267,622
Grand Total Funding	\$9,598,612	\$9,121,729	9,663,583	\$16,109,977

# FY 2021 Scholarship and Fellowship Awards by Unit, Department and Principal Investigator School of Nursing

Harris, Margaret; Nurse Faculty Loan Program; Health Resources and Services Administration, \$234,901

Hranchook, Anne; Oakland University Nurse Anesthetist Traineeship Program; Health Resources and Services Administration, \$32,721

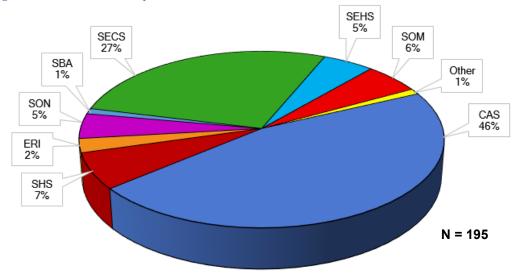
# Number of Proposals Submitted, FY 2018-2021



Number of Proposals Submitted by Academic Unit, FY 2018-2021

Academic Unit	FY2018	FY2019	FY2020	FY2021	Grand Total
CAS	88	99	109	90	386
ERI	1	3	2	5	11
SBA	0	2	1	1	4
SECS	45	52	68	54	219
SEHS	9	13	9	10	41
SHS	8	20	7	13	48
SOM	3	6	5	11	25
SON	3	8	10	9	30
Other	4	8	8	2	22
Grand Total	161	211	219	195	786

FY 2021 Proposals Submitted by Academic Unit



# FY 2021 Proposals Submitted by Academic Unit, continued

College of Arts and Sciences	FY2020	FY2021
Art and Art History	1	3
Biological Sciences	42	21
Chemistry	37	30
Communication and Journalism	0	1
Mathematics and Statistics	3	4
Philosophy	1	0
Physics	19	17
Political Science (Pre-Law)	1	1
Psychology	4	10
Sociology and Anthropology	1	3
CAS Total	109	90

Eye Research Institute		FY2020	FY2021
	ERI Total	2	5

School of Business Administration	FY2020	FY2021
Decision and Information Sciences	0	1
Management and Marketing	1	0
SBA Total	1	1

School of Engineering and Computer Science	FY2020	FY2021
Computer Science and Engineering	27	9
Electrical and Computer Engineering	14	15
Industrial and Systems Engineering	8	10
Mechanical Engineering	19	20
SECS Total	68	54

School of Education and Human Services	FY2020	FY2021
Human Development and Child Studies	4	7
Lowry Center for Early Childhood Education	0	1
Reading and Language Arts	1	1
Teacher Development and Educational Studies	3	1
Organizational Leadership	1	0
SBA Total	9	10

School of Health Science		FY2020	FY2021
Interdisciplinary Health Science		1	6
Human Movement Science		1	3
Public and Environmental Wellness		5	4
	SHS Total	7	13

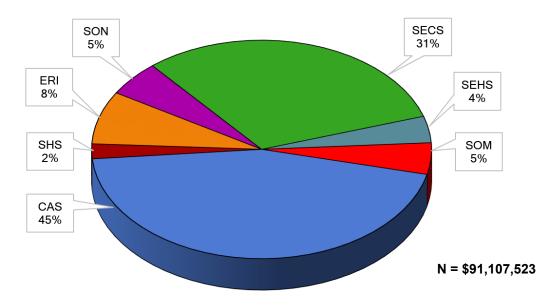
School of Medicine	FY2020	FY2021
SOM To	al 5	11

School of Nursing		FY2020	FY2021
	SON Total	10	9

Other	FY2020	FY2021
Center for Multicultural Initiatives	1	1
International Education	2	0
Plant Engineering	1	0
Research Office	1	0

Student Affairs and Diversity		3	1
	Other Total	8	2

# Percentage and Amounts Requested by Academic Unit



# Amount Requested by Academic Unit, FY 2018-2021

Academic Unit	FY2018	FY2019	FY20	FY21	Grand Total
CAS	32,526,732	33,575,125	53,597,283	40,830,887	160,530,027
ERI	1,875,000	2,034,157	2,300,649	7,134,587	13,344,393
SBA	0	8,962	2,500	56,250	67,712
SECS	8,035,043	19,530,994	20,397,225	28,378,947	76,242,209
SEHS	2,991,058	1,917,226	1,481,871	3,576,024	9,966,179
SHS	739,423	7,881,792	1,920,229	2,003,127	12,544,571
SOM	10,250	424,193	2,581,784	4,241,338	7,257,565
SON	1,335,108	4,309,136	5,297,359	4,760,880	15,702,483
Other	982,570	1,304,571	1,771,675	125,483	4,184,299
Grand Total	\$48,495,184	\$70,986,156	\$89,350,575	\$91,107,523	\$299,939,438

# Proposal Funding Requested by Academic Unit

College of Arts and Sciences	FY2020	FY2021
Art and Art History	10,000	9,297
Biological Sciences	34,264,494	15,093,745
Chemistry	12,862,729	17,816,210
Communication and Journalism	0	3,500
Mathematics and Statistics	686,480	702,446
Philosophy	283,583	0
Physics	5,172,186	3,937,789
Political Science	17,999	17,500
Psychology	92,594	2,968,347

Sociology and Anthropology	207,218	282,053
CAS Total	\$53,597,283	\$40,830,88
roposal Funding Requested by Academic Unit, co		. , ,
Eye Research Institute	FY2020	FY2021
ERI Total	\$2,300,649	\$7,134,58
School of Business Administration	FY2020	FY2021
Decision & Information Science	0	56,25
Management and Marketing	2,500	,
SBA Total	\$2,500	\$56,25
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School of Engineering & Computer Science	FY2020	FY2021
Computer Science and Engineering	6,944,070	5,233,13
Electrical and Computer Engineering	6,454,156	8,853,50
Industrial and Systems Engineering	3,382,096	9,878,81
Mechanical Engineering	3,616,903	4,413,43
SECS Total	\$20,397,225	\$28,378,94
School of Education and Human Services	FY2020	FY2021
Human Development and Child Studies	1,329,742	3,234,40
Lowry Center for Early Child Education	0	85,80
Organizational Leadership	39,419	
Reading and Language Arts	10,000	216,70
Teacher Development and Educational Studies	102,710	38,99
SEHS Total	\$1,481,871	\$3,576,02
School of Health Sciences	FY2020	FY2021
Human Movement Science	95,694	321,54
Interdisciplinary Health Sciences	149,080	1,105,96
Public and Environmental Wellness	1,675,455	575,62
SHS Total	\$1,920,229	\$2,003,12
School of Medicine	FY2020	FY2021
SOM Total	\$2,581,784	\$4,241,33
School of Nursing	FY2020	FY2021
SON Total	\$5,297,359	\$4,760,88
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Other	FY2020	FY2021
Other  Center for Multicultural Initiatives  Diversity, Equity and Inclusion	<b>FY2020</b> 102,850 304,211	<b>FY2021</b> 100,48

Facilities Management

International Education

720,225

460,823

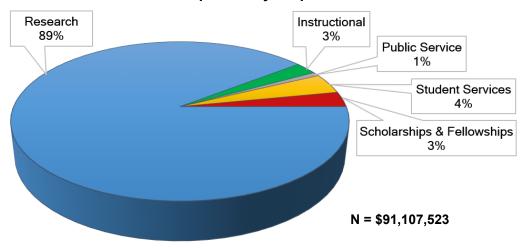
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Research Office	183,566	0
Student Affairs and Diversity	0	25,000
Other Total	\$1,771,675	\$125,483

FY 2021 Proposal Funding Requested by Purpose

FY2021 • Amount Requested by Purpose



College of Arts and Sciences	Research	Instruction	Public Service	Student Services	Scholarships Fellowships
Art and Art History	6,350	0	2,947	0	0
Biological Sciences	15,093,745	0	0	0	0
Chemistry	17,816,210	0	0	0	0
Communication and Journalism	3,500	0	0	0	0
Mathematics and Statistics	702,446	0	0	0	0
Physics	3,937,789	0	0	0	0
Political Science	0	0	17,500	0	0
Psychology	2,968,347	0	0	0	0
Sociology, Anthropology, Social Work and Criminal Justice	276,053	0	6,000	0	0
CAS Total	\$40,804,440	\$0	\$26,447	\$0	\$0

Eye Research Institute	Research	Instruction	Public Service	Student Services	Scholarships Fellowships
ERI Total	\$7,134,587	\$0	\$0	\$0	\$0

School of Business Administration	Research	Instruction	Public Service	Student Services	Scholarships Fellowships
Decision and Information Science	56,250	0	0	0	0
SBA Total	\$56,250	\$0	\$0	\$0	\$0

School of Engineering and Computer Science	Research	Instruction	Public Service	Student Services	Scholarships Fellowships
Computer Science and Engineering	2,364,080	100,000	0	280,639	2,488,416
Electrical and Computer Engineering	8,853,560	0	0	0	0

Industrial and Systems Engineering	8,238,872	0	0	1,639,944	0
Mechanical Engineering	4,324,701	0	0	88,735	0
SECS Total	\$23,781,213	\$100,000	\$0	\$2,009,318	\$2,488,416

# FY 2021 Proposal Funding Requested by Purpose, continued

School of Education and Human Services	Research	Instruction	Public Service	Student Services	Scholarships Fellowships
Human Development & Child Studies	3,234,465	0	0	0	0
Lowry Center for Early Childhood Education	0	0	0	85,800	0
Reading and Language Arts	216,760	0	0	0	0
Teacher Development and Educational Studies	38,999	0	0	0	0
SEHS Total	\$3,490,224	\$0	\$	\$85,800	\$0

School of Health Sciences	Research	Instruction	Public Service	Student Services	Scholarships Fellowships
Human Movement Science	321,541	0	0	0	0
Interdisciplinary Health Sciences	422,296	0	683,669	0	0
Public and Environmental Wellness	575,621	0	0	0	0
SHS Total	\$1,319,458	\$0	\$683,669	\$0	\$0

School of Medicine	Research	Instruction	Public Service		Scholarships Fellowships
SOM Tota	\$4,241,338	\$0	\$0	\$0	\$0

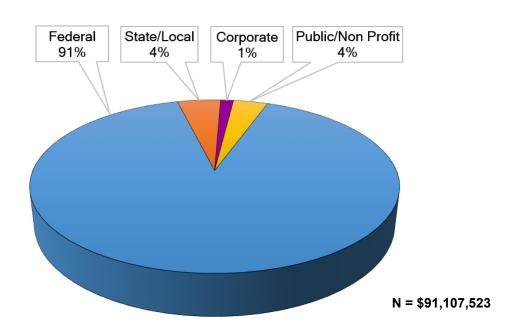
School of Nursing	Research	Instruction	Public Service		Scholarships Fellowships
SON Total	\$730,900	\$2,195,252	\$0	\$1,500,000	\$334,728

Other	Research	Instruction	Public Service	Student Services	Scholarships Fellowships
Center for Multicultural Initiatives	0	0	0	100,483	0
Student Affairs and Diversity	0	0	0	25,000	0
Other	\$0	\$0	\$0	\$125,483	\$0

Oakland University Total	Research	Instruction	Public Service		Scholarships Fellowships	
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# FY 2021 Proposal Funding Requested by Source

FY2021 • Amount Requested by Source



College of Arts & Sciences	Federal	State/Local	Corporate	Public/ Nonprofit
Art and Art History	0	2,947	0	6,350
Biological Sciences	15,091,745		2,000	0
Chemistry	14,153,387	2,889,241	269,542	504,040
Communication and Journalism	0	0	0	3,500
Mathematics and Statistics	702,446	0	0	0
Physics	3,913,966	0	0	23,823
Political Science		0	0	17,500
Psychology	2,860,719	0	0	107,628.
Sociology and Anthropology	282,053	0	0	0
CAS Total	\$37,004,316	\$2,892,188	\$271,542	\$662,841

Eye Research Institute	Federal	State/Local	Corporate	Public/ Nonprofit
ERI Total	\$7,046,912	\$0	\$87 <b>,</b> 675	\$0

School of Business Administration	Federal	State/Local	Corporate	Public/ Nonprofit
Decision & Information Science	\$56,250	0	0	0
SBA Total	\$56,250	\$0	\$0	\$0

# FY 2021 Proposal Funding Requested by Source, continued

School of Engineering and Computer Science	Federal	State/Local	Corporate	Public/ Nonprofit
Computer Science and Engineering	5,184,002	0	0	49,133
Electrical and Computer Engineering	8,671,548	0	0	182,012
Industrial and Systems Engineering	9,585,872	142,944	150,000	0
Mechanical Engineering	4,104,776	88,735	219,925	0
SECS Total	\$27,546,198	\$231,679	\$369,925	\$231,145

School of Education and Human Services	Federal	State/Local	Corporate	Public/ Nonprofit
Human Development & Child Studies	2,433,558	10,000	0	790,907
Lowry Center for Early Childhood Education	0	85,800	0	0
Reading and Language Arts	216,760	0	0	0
Teacher Development and Educational Studies	0	0	0	38,999
SEHS Total	\$2,650,318	\$95,800	\$0	\$829,906

School of Health Sciences	Federal	State/Local	Corporate	Public/ Nonprofit
Human Movement Science	0	0	320,541	1,000
Interdisciplinary Health Sciences	412,319	683,669	0	9,977
Public and Environmental Wellness	524,923	12,328	0	38,370
SHS Total	\$937,242	\$695,997	\$320,541	\$49,347

School of Medicine		Federal	State/Local	Corporate	Public/ Nonprofit
S	SOM Total	\$2,652,810	\$93,049	\$178,616	\$1,316,863

School of Nursing		Federal	State/Local	Corporate	Public/ Nonprofit
9	SON Total	\$4,608,981	\$0	\$0	\$151,899

Other	Federal	State/Local	Corporate	Public/ Nonprofit
Center for Multicultural Initiatives	0	100,483	0	0
Student Affairs and Diversity	0	0	0	25,000

Other Total	\$0	\$100,483	\$0	\$25,000
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Oakland University Total	Federal	State/Local	Corporate	Public/ Nonprofit
Grand Total	\$82,503,027	\$4,109,196	\$1,228,299	\$3,267,001

#### Research, Innovation, and Engagement Town Hall - 2020 Winners

#### President Pescovitz Innovation Research Award

Dr. John V. Seeley Department of Chemistry, CAS

#### Frank Giblin Lifetime Achievement Award

Dr. Xiangqun Zeng Department of Chemistry, CAS

#### Researcher of the Year

Dr. Andrei Slavin Department of Physics, CAS

#### Most Research Active

Dr. Wei Zhang Department of Physics, CAS

#### **Most Active Grant Seeker**

Dr. Jonathan Maisonneuve Department of Mechanical Engineering, SECS

#### **Outstanding Research Department**

Physics, CAS

#### Outstanding Junior Investigator (2 winners)

Dr. Wei Zhang Department of Physics, CAS

Dr. Luis Villa-Diaz Department of Biological Sciences, CAS

#### PI Academy for Research and Engagement, Class of 2021

Zeina AlSalman, Economics, SBA

Aubrey Arain, Public and Environmental Wellness, SHS

Osman Aydas, Decision and Information Sciences, SBA

Thomas Bianchette, Chemistry, CAS

Rebecca Boni, Nursing, SON

Jun Chen, Electrical and Computer Engineering, SECS

Elizabeth Delorme-Axford, Biological Sciences, CAS

Tara Diesbourg, Public and Environmental Wellness, SHS

David Gram, Theatre, MTD

Michael Greiner, Management and Marketing, SBA

Tamas Horvath, Mathematics and Statistics, CAS

Jun Hu, Mathematics and Statistics, CAS

Kyeorda Kemp, Foundational Medical Studies, OUWB

Hyungil Kim, Industrial and Systems Engineering, SECS

Zacharias Kinney, Chemistry, CAS

Michael Kranak, Human Development and Child Studies, SEHS

Chang-kyu Kwon, Organizational Leadership, SEHS

Tianle Ma, Computer Science and Engineering, SECS

Jason Overfelt, Linguistics, CAS

Sunny Raj, Computer Science and Engineering, SECS

Zhe Wang, Chemistry, CAS

Dawn Woods, Teacher Development and Educational Studies, SEHS

Ankun Yang, Mechanical Engineering, SECS

Yongsoon Yoon, Mechanical Engineering, SECS

# Research Office

Wilson Hall, Room 529 | 371 Wilson Boulevard, Rochester, MI 48309-4486 (248) 370-2762 | oakland.edu/research



Professor Susan Evans, Department of Art and Art History pulls ice from the environment and it is shaped into photographic optics which are placed into a hand-made lens which then is used to image the polar landscape.

Light energy is used to create chemical energy (photo sensitivity and photosynthesis) to visualize the lingering yet ephemeral traces of human contact with the environment. The results are auralike images.



