

**Annual Report on Research**  
**FY 2021**



**College of Sciences and Mathematics**  
**Office of the Associate Dean for Research**

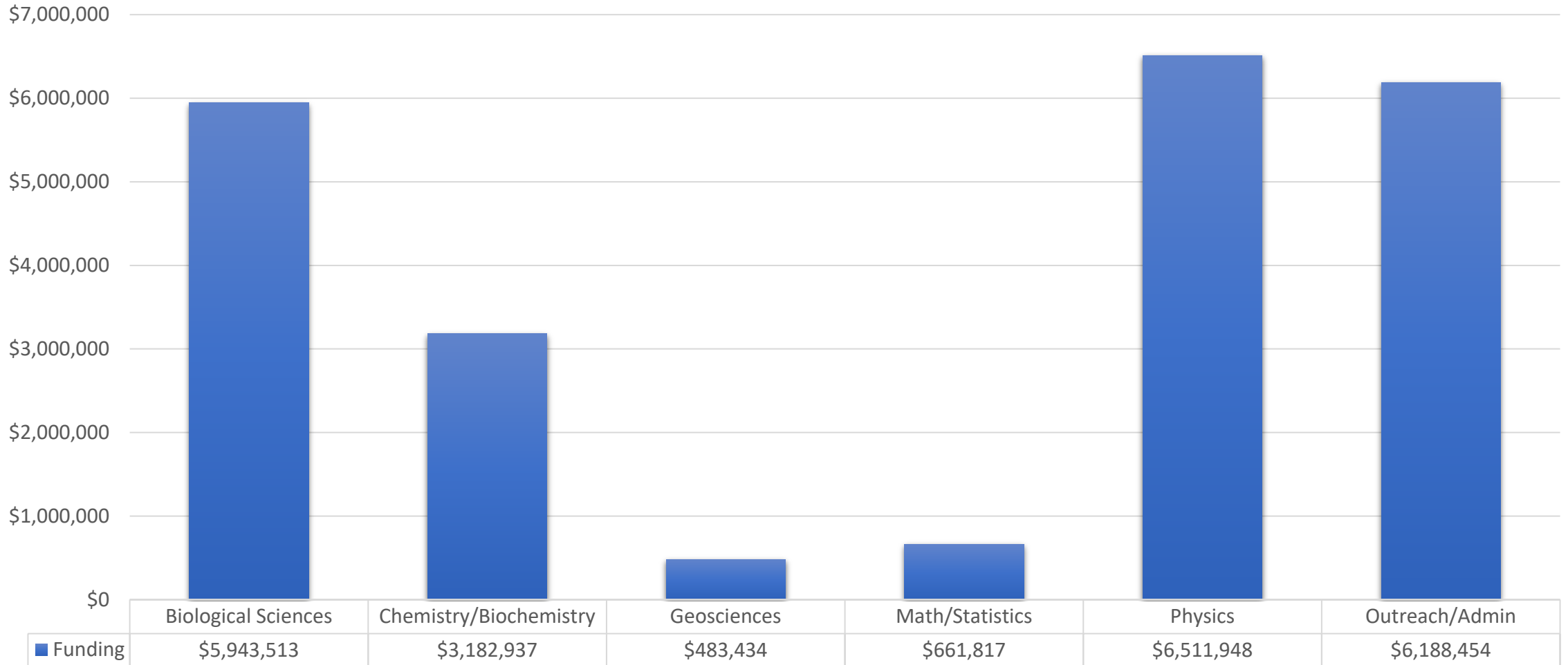
Dr. Mark Liles  
Amy Thomas, J.D.  
Sharon Godbee

Release date: March 16, 2021

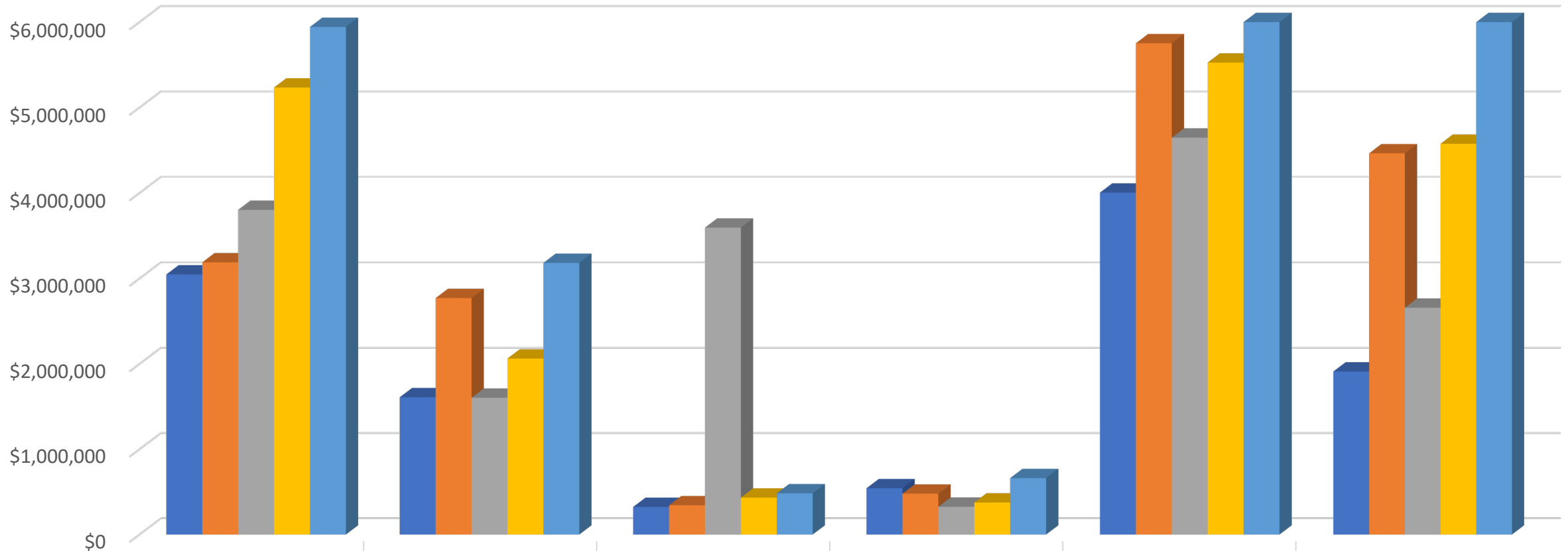
## COSAM Data

- COSAM Extramural Budget Loads by Department FY 21
- COSAM 5 Year Funding History by Department-FY17-FY21
- COSAM Funding by Sponsor FY 21

# COSAM Extramural Budget Loads by Department FY 21



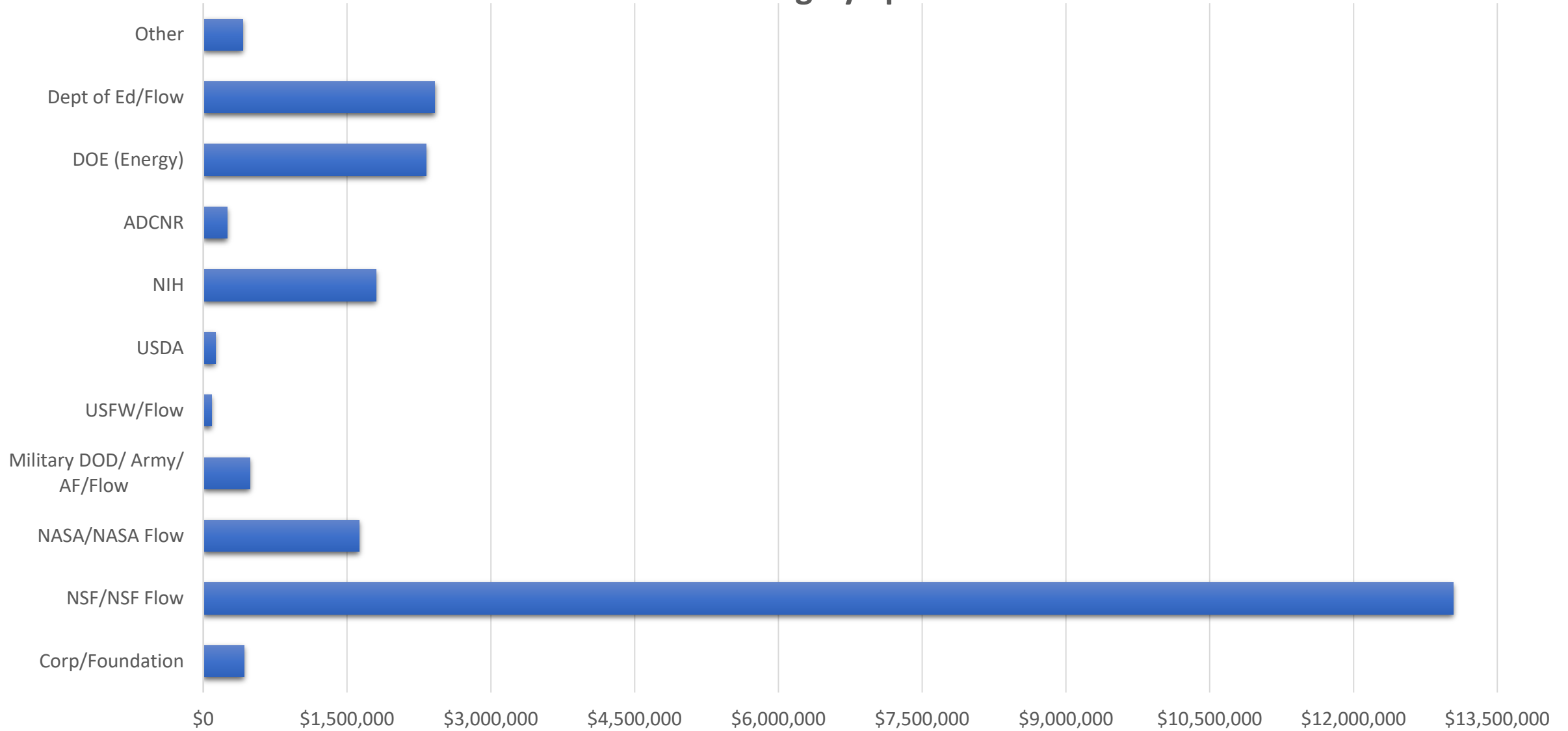
# COSAM 5 Year Funding History by Department



	Biological Sciences	Chemistry & Biochemistry	Geosciences	Mathematics & Statistics	Physics	Outreach/Admin
FY2017	\$3,047,769	\$1,610,116	\$323,708	\$543,479	\$4,004,958	\$1,912,027
FY2018	\$3,189,214	\$2,771,358	\$343,395	\$479,395	\$5,752,680	\$4,465,250
FY2019	\$3,803,724	\$1,604,457	\$3,595,528	\$325,978	\$4,647,984	\$2,658,317
FY2020	\$5,234,827	\$2,063,606	\$433,519	\$375,554	\$5,526,497	\$4,576,477
FY2021	\$5,943,513	\$3,182,937	\$483,434	\$661,817	\$6,511,948	\$6,188,454

■ FY2017 ■ FY2018 ■ FY2019 ■ FY2020 ■ FY2021

# COSAM Funding by Sponsor FY 21

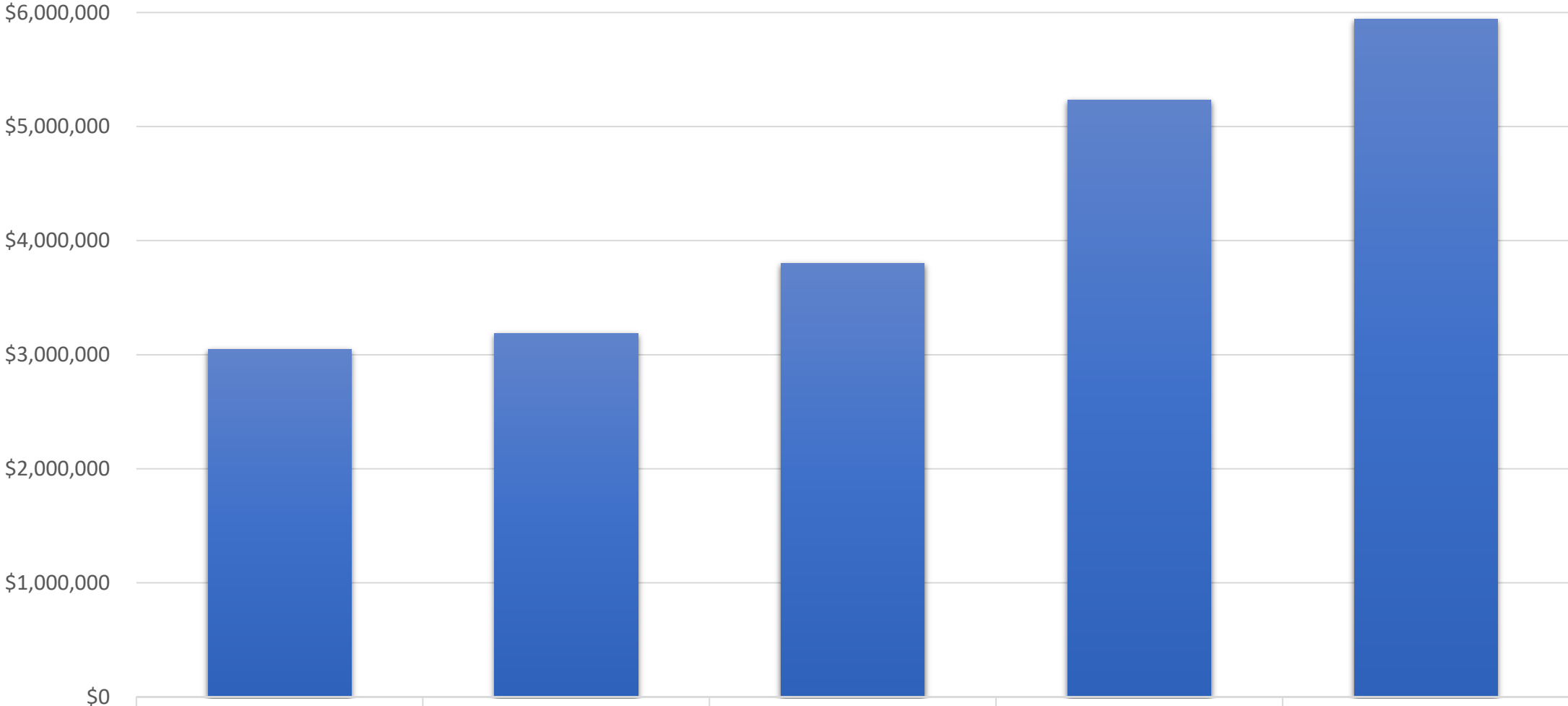


■ Total	\$423,426	\$13,038,569	\$1,625,563	\$484,713	\$85,852	\$125,000	\$1,799,481	\$247,806	\$2,321,586	\$2,414,589	\$410,544
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# Breakdown of Data by Academic Units FY 21

- Department of Biological Sciences (DBS)
  - Department of Chemistry and Biochemistry (DCB)
  - Department of Geosciences
  - Department of Mathematics and Statistics
  - Department of Physics
  - COSAM Outreach and Administration
- 
- Departmental data will be presented as follows:
    - Chart of 5 year funding history
    - Table of new funding received for the fiscal year (budget loads)
    - Table of active awards for the fiscal year (active accounts)
    - Table of proposals submitted during the current fiscal year

# Biological Sciences FY 21



■ Biological Sciences

2017

\$3,047,769

2018

\$3,189,214

2019

\$3,803,724

2020

\$5,234,827

2021

\$5,943,513

**Biological Sciences**  
**Extramural Research Grants with New Dollars Received in FY2021**

PI NAME	PI/COPI	PROJECT TITLE	SPONSOR	AMOUNT
Armbruster, Jonathan	PI	Flattened Musk Turtle & Black Warrior Waterdog Population Status Study in Bankhead Nat'l Forest	US Fish & Wildlife Service	\$85,852.00
Armbruster, Jonathan Bruner, Toni	PI COPI	Environmental Education at the Robert G. Wehle Nature Center (21)	Alabama Dept of Conservation & Natural Resources	\$21,000.00
Armbruster, Jonathan Bruner, Toni	PI COPI	Environmental Education at the Robert G. Wehle Nature Center (22)	Alabama Dept of Conservation & Natural Resources	\$21,000.00
Armbruster, Jonathan	PI	Aquatic Biodiversity Inventory of the New River Triangle, Guyana	COYPU Foundation	\$49,822.00
Armbruster, Jonathan	PI	Mobile Museum	Alabama Association of RC&D Councils	\$9,795.00
Ballen, Cissy	PI	Fostering Ideological Awareness in the Context of Postsecondary Biology thru Open-Source Course Materials*	National Science Foundation	\$299,950.00
Ballen, Cissy	PI	Fostering Ideological Awareness in Postsecondary Biology thru Open-Source Course Modules	Montana State University Billings NSF Flow	\$3,200.00
Counterman, Brian Range, Ryan	PI COPI	Developmental Architecture of Structure & Color on Butterfly Wings	National Science Foundation	\$456,763.00
Counterman, Brian Range, Ryan	PI COPI	Genomic Logic Underlying Adaptive Morphological Divergence	University of Puerto Rico Rio Piedras NSF Flow	\$633,186.00
Godwin, James	PI	Flattened Musk Turtle-21	Alabama Dept of Conservation & Natural Resources	\$159,048.00
Goertzen, Leslie	PI	ADCNR-S621-AUTRL	Alabama Dept of Conservation & Natural Resources	\$22,000.00
Hill, Geoffrey	PI	Understanding the Rules of Honest Signaling*	National Science Foundation	\$324,379.00
Hood, Wendy Hill, Geoffrey	PI COPI	Integrated Approach to Health & Longevity- Enhancing Drug Target Discovery	University of Michigan NIH Flow	\$61,983.20
Hood, Wendy Kavazis, Andreas	PI COPI	Rii Track-2 Genome to Fitness: An Analysis of the stress Response in Peromyscus	University of South Carolina NSF Flow	\$309,957.00



**Biological Sciences**  
**Extramural Research Grants with New Dollars Received in FY2021**

PI NAME	PI/COPI	PROJECT TITLE	SPONSOR	AMOUNT
Liles, Mark	PI	Assessment of Immunomodulatory Effect of Probiotics on the Catfish Adaptive Immune Response & Columnaris Disease Resistance	USDA	\$125,000.00
Liles, Mark	PI	Reducing Bioburden of Europa Lander Solid Rocket Motor Insulation & Assessing Bioburdent of other SRM Nonmetallic Materials of Concern for Planetary Protection	NASA	\$149,788.00
Liles, Mark	PI	Developmental Studies for a Fish Vaccine	Merck Animal Health	\$35,960.46
Liles, Mark	PI	Eval of Citrafiber as a Prebiotic to Enhance Bacillus Growth & Avoid Soybean Germination Inhibition	Citrus Extracts, LLC	\$11,957.00
Liles, Mark Sanz-Saez, Alvaro	PI COPI	Enhanced Soybean Growth Promoting Activity in Combination with Orange Peel Powder	Reazant, Inc.	\$27,653.60
Oaks, Jamie Witte, Maria	PI COPI	Graduate Research Fellowship Program for Kyle David	National Science Foundation	\$46,000.00
Pendergrass, Leslie Thompson, Patrick	PI COPI	Habitat Mgt & Monitoring of the Whorled Sunflower	Alabama Dept of Conservation & Natural Resources	\$6,758.28
Range, Ryan Witte, Maria	PI COPI	Graduate Research Fellowship Program for Cheikhouna Ka	National Science Foundation	\$46,000.00
Range, Ryan	PI	Wnt Signaling Pathway Interactions in Early Anterior-Posterior Specification & Patterning	National Institutes of Health	\$449,523.00
Rashotte, Aaron	PI	Eager-Forgotten N-Conjugate Cytokinins & their Active Role During Senescence*	National Science Foundation	\$248,950.00
Schotz, Alfred	PI	Status Assessment for Pondberry in Alabama	Alabama Dept of Conservation & Natural Resources	\$18,000.00
Schwartz, Elizabeth	PI	Cockroach Gut Microbiome: Eval Pressures from Inflammation & Bacteriophage	National Science Foundation	\$308,735.00

**Biological Sciences  
Extramural Research Grants with New Dollars  
Received in FY2021**

PI NAME	PI/COPI	PROJECT TITLE	SPONSOR	AMOUNT
Stevison, Laurie	PI	NSF-DEB-1939090-PSC	National Science Foundation	\$52,256.00
Sztuba-Solinsk, Joanna	PI	Interplay Between M6a & Viral Incrna During Kshv Replication	National Institutes of Health	\$188,451.00
Sztuba-Solinsk, Joanna	PI	Characterizing the Structure-To-Function Relationship of a Novel Antisense Long Non-Coding Rna	EVCOM	\$16,000.00
Sztuba-Solinsk, Joanna	PI	Characterizing the Structure-To-Function Relationship of a Novel Antisense Long Non-Coding Rna (22)	EVCOM	\$16,000.00
Wada, Haruka Witte, Maria	PI COPI	Graduate Research Fellowship Program for Victoria Coutts	National Science Foundation	\$46,000.00
Wada, Haruka	PI	Integrating Engineering Theory & Biological Measures to Model Stress Resilience, Damage & Fitness-Related Consequences*	National Science Foundation	\$905,086.00
Warner, Daniel	PI	Testing Alternative Routes of Adaptive phenotype-Environment Matching Across Heterogeneous Landscapes in Wild Populations*	National Science Foundation	\$785,639.00
Zhong, Min	PI	Biology Catalytic Grant	Biology Catalytic Grant	\$2,000.00
		<b>Biological Sciences Count</b>	<b>Accounts: 34 Individual Awards: 10</b>	
		<b>Biological Sciences Total</b>		<b>\$5,943,692.54</b>
*Participant Support Costs Included				

## Biological Sciences Active Awards

PI	Sponsor	Title	Start Date	End Date
Armbruster, Jonathan	Alabama Dept of Conservation & Natural Resources	ADCNR-Enviromental Ed-21	8/17/2020	7/31/2021
Armbruster, Jonathan	Nature Conservancy	TNC-030119 A105227	3/1/2019	11/30/2021
Armbruster, Jonathan	US Army	US Army-Redstone-20	5/31/2018	5/31/2021
Armbruster, Jonathan	U.S. Fish & Wildlife Services	FWS-F20AP12103	10/1/2020	12/31/2022
Armbruster, Jonathan	AI Assn Resource Conservation & Development Councils	AARC&D-Mobile Museum	10/1/2020	7/17/2021
Armbruster, Jonathan	COPYU Foundation Trust	COYPU FDN-NEW RVR TRIANGLE	1/1/2021	2/28/2023
Avila Flores, Adriana	Phoreus Biotechnology	Phoreus Biotechnology	6/19/2020	12/31/2020
Ballen, Margaret	University of Minnesota	UN MN-P007692401	9/1/2019	8/31/2023
Ballen, Margaret	Montana State University-Billings	MT ST UN-Billings-IEMBER	7/2/2021	9/30/2022
Ballen, Margaret	National Science Foundation	NSF-DUE-2011995*	10/1/2020	9/30/2025
Cobine, Paul	National Institutes of Health	NIH-1R01GM120211-01A1	6/1/2017	4/30/2022
Counterman, Brian	National Science Foundation	NSF-IOS-2108227	10/1/2020	8/31/2022
Dobson, F.	University of Strasbourg	UN Strasbourg-Dobson	12/1/2018	11/30/2020
Godwin, James	US Army	ARMY-W9128F18200008	7/30/2018	8/30/2021
Godwin, James	Alabama Dept of Conservation & Natural Resources	ADCNR-MS Gopher Frog-20	12/1/2019	9/30/2021
Godwin, James	LA Dept. Wildlife & Fisheries	LDWF-PO 2000482193	10/1/2019	9/30/2022
Godwin, James	Alabama Dept of Conservation & Natural Resources	ADCNR-Flattened Musk Turtle-21	10/1/2020	9/30/2021
Goertzen, Leslie	Alabama Dept of Conservation & Natural Resources	ADCNR-S621-AUTRL	10/1/2020	9/30/2021
Graze, Rita	National Science Foundation	NSF-DEB-1751296 *	8/1/2018	7/31/2023
Halanych, Kenneth	National Science Foundation	NSF-OPP-1916661	9/1/2019	8/31/2023

## Biological Sciences Active Awards

PI	Sponsor	Title	Start Date	End Date
Halanych, Kenneth	National Science Foundation	NSF-IOS-1755377	7/15/2018	6/30/2022
Halanych, Kenneth	National Science Foundation	NSF-DBI-2001316	11/1/2020	10/31/2024
Hill, Geoffrey	National Science Foundation	NSF-IOS-1754152	5/15/2018	7/31/2022
Hill, Geoffrey	National Science Foundation	NSF-IOS-203774108/01/202107/31/2024	5/15/2018	7/31/2022
Hood, Wendy	National Science Foundation	NSF-DBI-1453784	4/1/2015	3/31/2022
Hood, Wendy	University of South Carolina	UN SC-18-3423-PO#2000035389	8/1/2017	7/31/2022
Hood, Wendy	Regents of the University of Michigan	UN MI-SUBK00014655	2/1/2021	8/31/2022
Liles, Mark	SINTEF	SINTEF-Liles-22*	4/22/2019	4/23/2022
Liles, Mark	NASA	NASA-80NSSC20K0665	2/14/2020	2/13/2023
Liles, Mark	Varigen Biosciences	Varigen Biosciences	5/1/2020	11/30/2021
Liles, Mark	Merck Animal Health	MAH-Fish Vaccine	7/1/2020	12/31/2022
Liles, Mark	Reazent-Liles	Reazent-Liles	6/1/2020	3/31/2022
Liles, Mark	Citrus Extracts-Liles	Citrus Extracts-Liles	11/1/2020	12/31/2022
Liles, Mark	U.S. Department of Agriculture	USDA-58-6010-0-009	7/1/2020	6/30/2025
Mendonca, Mary	National Science Foundation	NSF-IOS-1456440	5/15/2015	4/30/2021
Oaks, Jamie	National Science Foundation	NSF-DGE-1937964-KD	9/1/2019	4/30/2023
Oaks, Jamie	National Science Foundation	NSF-DEB-1656004 *	5/1/2017	4/30/2023
Oaks, Jamie	FL Fish & Wildlife Conservation	FFWCC-Agrmt 19149	7/22/2020	2/28/2022
Pendergrass, Leslie	Alabama Dept of Conservation & Natural Resources	ADCNR-Whorled Sunflower	10/1/2020	9/30/2022
Range, Ryan	National Institutes of Health	NIH-2R15HD088272-03	3/6/2021	2/29/2024
Range, Ryan	National Institutes of Health	NSF-DGE-1937964-CK	9/1/2021	8/31/2022

## Biological Sciences Active Awards

PI	Sponsor	Title	Start Date	End Date
Santos, Scott	National Science Foundation	NSF-DEB-2020081	5/1/2020	4/30/2021
Santos, Scott	Kansas State University	KSU-A20-0470-S001	5/15/2020	4/30/2023
Schotz, Alfred	US Army	ARMY-W9126G-19-2-0064	9/27/2019	9/30/2022
Schotz, Alfred	U.S. Fish & Wildlife Services	FWS-F20AP11387	10/1/2020	9/30/2022
Schotz, Alfred	Alabama Dept of Conservation & Natural Resources	ADCNR-S621-AUPON	12/7/2020	9/30/2021
Schwartz, Elizabeth	National Science Foundation	NSF-IOS-2123655-BIO	8/1/2021	7/31/2024
Schwartz, Tonia	National Institutes of Health	NIH-1R5AG064655-01	8/1/2019	7/31/2022
Schwartz, Tonia	National Science Foundation	NSF-DGE-1414475-AC	9/1/2017	8/31/2021
Schwartz, Tonia	National Science Foundation	NSF-DGE-1937964-AC	9/1/2019	8/31/2021
Seibenhener, Michael	University of South Carolina	UN SC-19-3832-PO#2000045449	1/1/2019	12/31/2020
Steen, David	Environmental Protection Agency	EPA-CD-00D65317-0	10/1/2017	9/30/2022
Stevison, Laurie	National Science Foundation	NSF-DEB-1939090*	8/15/2019	7/31/2023
Strader, Marie	National Science Foundation	NSF-OCE-1935308	6/15/2019	12/31/2022
Strader, Marie	National Science Foundation	NSF-EF-2021886*	7/15/2020	6/30/2023
Sztuba-Solinska, Joanna	National Institutes of Health	NIH-1R15GM136535-01	5/6/2020	4/30/2023
Sztuba-Solinska, Joanna	National Institutes of Health	NIH-1R21AI159361-01	3/4/2021	2/28/2023
Sztuba-Solinska, Joanna	Edward via Lol Osteopathic Med	EVCOM-Sztuba-Solinska	7/1/2020	6/30/2021
Upton, Jason	National Institutes of Health	NIH-7R21AI135709-02	1/1/2019	12/31/2020
Wada, Haruka	National Science Foundation	NSF-IOS-1553657	4/15/2016	3/31/2023
Wada, Haruka	National Science Foundation	NSF-DGE-1937964-VC	6/1/2020	5/31/2022
Wada, Haruka	National Science Foundation	NSF-IOS-2015802-DBS*	6/15/2020	5/31/2024

## Biological Sciences Active Awards

PI	Sponsor	Title	Start Date	End Date
Warner, Daniel	National Science Foundation	NSF-DGE-1414475-JP	9/1/2017	12/31/2021
Warner, Daniel	National Science Foundation	NSF-DGE-1937964-JP	9/1/2019	8/31/2022
Warner, Daniel	National Science Foundation	NSF-DEB-1942145*	3/1/2020	2/28/2025
Warner, Daniel	Alabama Dept of Conservation & Natural Resources	ADCNR-Indigo Snake-16	10/1/2015	3/31/2022
		<b>Total Active: 66</b>		
*Includes Participant Support Costs				

## Biological Sciences Proposals Submitted FY2021

Proposal ID	PI/COPI	Title	Sponsor	Amount Requested
	Armbruster, Jonathan	PI	NSF	\$661,870.00
0649-21P	Armbruster, Jonathan	COPI	Louisiana Dept of Wildlife & Fisheries	\$119,605.00
0812-21P	Armbruster, Jonathan	COPI	AL Dept. of Conservation & Natural Resources	\$27,020.00
0961-21P	Armbruster, Jonathan	COPI	University of Florida	\$2,200.00
0115-21P	Avila Flores, Adriana	PI	NSF	\$407,519.00
0548-21P	Avila Flores, Adriana	PI	NIH	\$445,095.79
1301-21P	Avila Flores, Adriana	PI	NSF	\$493,854.00
	Ballen, Cissy	PI	NSF	\$299,950.00
0517-21P	Ballen, Cissy	PI	Spencer Foundation	\$49,542.41
	Ballen, Cissy	PI	Heterodox Academy	\$29,965.87
	Ballen, Cissy	COPI	USDA	
1094-21P	Ballen, Cissy	PI	NSF Career	
	Ballen, Cissy	COPI	NSF	
0046-21P	Beadles, Morgan	COPI	Friends of US Fish & Wildlife Service	\$10,218.70
	Bernal de Leon, Moises Antonio	PI	Alabama Center of Excellence	\$490,308.92
	Bernal de Leon, Moises Antonio	COPI	National Institute of Food & Agriculture	
0781-21P	Buckley, Katherine	PI	NSF	\$910,860.00
0133-21P	Counterman, Brian	PI	University of Puerto Rico (NSF)	\$633,186.00
0128-21P	Counterman, Brian	PI	NSF	\$456,763.02
1207-21P	Counterman, Brian	PI	NSF	\$620,674.00
1355-21P	Fenner, Jennifer	PI	NIH	
0649-21P	Godwin, James	PI	Louisiana Dept of Wildlife & Fisheries	\$119,605.00

## Biological Sciences Proposals Submitted FY2021

Proposal ID	PI/COPI	Title	Sponsor	Amount Requested
0793-21P	Godwin, James	PI	AL Dept. of Conservation & Natural Resources	\$30,603.00
0794-21P	Godwin, James	PI	AL Dept. of Conservation & Natural Resources	\$42,235.00
1422-21P	Godwin, James	COPI	AL Dept. of Conservation & Natural Resources	\$542,393.00
0596-21P	Goertzen, Leslie	COPI	USDA	
0625-21P	Goertzen, Leslie	COPI	Gulf Research Initiative	\$44,745.75
0020-21P	Goertzen, Leslie	PI	AL Dept. of Conservation & Natural Resources	\$22,000.00
0663-21P	Halanych, Ken	PI	Alabama Center of Excellence	\$162,310.00
	Heine, Kyle	PI	NSF	\$263,569.00
0194-21P	Hood, Wendy	PI	NSF	\$1,049,214.71
0162-21P	Leisner, Courtney	PI	Foundation for Food & Agriculture Research	\$316,434.00
	Leisner, Courtney	PI	NSF	
	Leisner, Courtney	PI	Foundation for Food & Agriculture Research	\$316,434.00
	Leisner, Courtney	PI	USDA	\$448,532.00
	Leisner, Courtney	PI	USDA	\$281,173.00
	Leisner, Courtney	PI	Alfred P. Sloan Foundation	
ANP-AG	Liles, Mark	COPI	Citrus Extracts, LLC	\$11,957.00
ANP-2427	Liles, Mark	COPI	Citrus Extracts, LLC	\$26,717.76
	Moss, Anthony	PI	Alabama Center of Excellence	
0633-21P	Oaks, Jamie	PI	AL Dept. of Conservation & Natural Resources	\$33,725.50
0947-21P	Oaks, Jamie	PI	US Fish & Wildlife Service	\$209,890.00
1266-21P	Oaks, Jamie	PI	NSF	\$1,287,213.00
	Pendergrass, Morgan	PI	Davis Arboretum	\$10,000.00



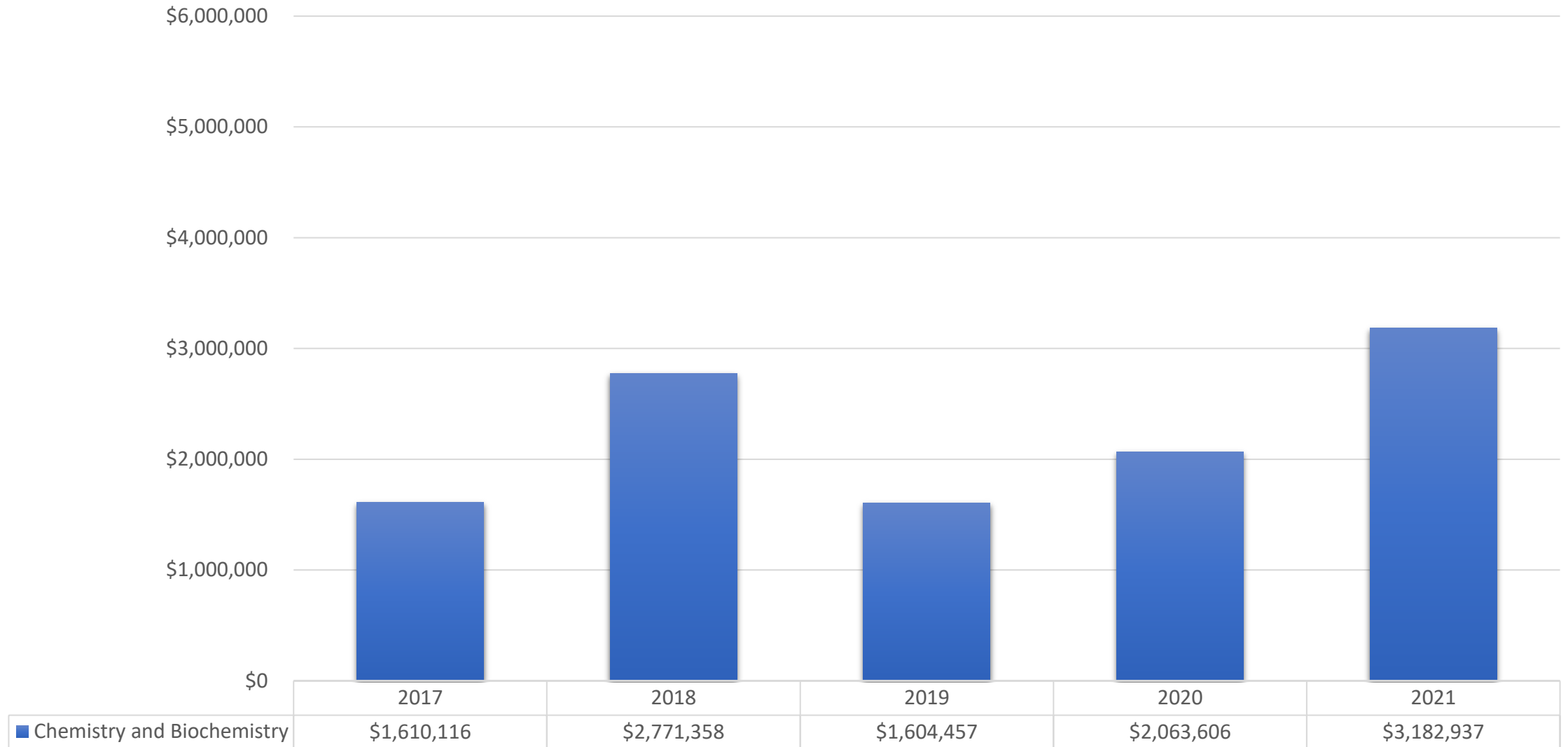
## Biological Sciences Proposals Submitted FY2021

Proposal ID	PI/COPI	Title	Sponsor	Amount Requested
0007-21P	Petrov, Alexey	PI	NIH	
1096-21P	Petrov, Alexey	PI	NIH NIAID	
	Range, Ryan	PI	NIH	
0958-21P	Rashotte, Aaron	PI	USDA	\$797,171.39
0034-21P	Schotz, Alfred	PI	AL Dept. of Conservation & Natural Resources	\$18,000.00
0626-21P	Schotz, Alfred	PI	AL Dept. of Conservation & Natural Resources	\$23,000.00
0632-21P	Schotz, Alfred	PI	AL Dept. of Conservation & Natural Resources	\$12,750.00
	Schwartz, Elizabeth	PI	NSF	\$308,735.00
0451-21P	Schwartz, Elizabeth	PI	NSF	\$323,110.69
0163-21P	Schwartz, Tonia	PI	Morris Animal Foundation	\$49,314.00
	Smith, Michael	Collaborative	NSF	
0571-21P	Smith, Michael	Collaborative	NSF	\$399,315.00
0986-21P	Smith, Michael	PI	USDA-AFRI	
email	Smith, Michael	PI	NSF	\$507,312.00
0009-21P	Smith, Michael	COPI	Project APIS	
1598-21P	Smith, Michael	COPI	Project APIS	
	Stevison, Laurie	PI	NIH	
	Stevison, Laurie	PI	NSF	
	Sztuba-Solinska, Joanna	PI	NIH	
0906-21P	Warner, Daniel	PI	The Epley Foundation	\$18,957.75

### Biological Sciences Proposals Submitted FY2021

Proposal ID	PI/COPI	Title	Sponsor	Amount Requested
	Wills, Bill	PI	USDA(SARE)	\$16,497.32
	Wolak, Matthew	PI	Alabama Center of Excellence	\$481,280.42
	Zhong, Min	COPI	Pearson Publisher	
	<b>Total Proposals: 67</b>		<b>Total Requested:</b>	<b>\$13,832,828.00</b>

# Chemistry and Biochemistry FY 21



## Extramural Research Grants with New Dollars Received in FY2021 Chemistry/Biochemistry

PI NAMEAc	PI/COPI	PROJECT TITLE	SPONSOR	AMOUNT
Boersma, Melissa	PI	Hair Proteomics	NOBLIS	\$ 10,290.00
Chen, Ming	PI	Enantioselective Syntheses of Organoboron Compounds Via Transition-Metal Catalysis*	National Science Foundation	\$ 264,184.00
Duin, Eduardus	PI	Recombinant Methyl-Coenzyme M Reductase in the Methanogenic Archaeon Methanococcus Maripaludis for Examination of Activation & Role of Post-Translational Modifications	US Dept of Energy	\$ 102,738.58
Duin, Eduardus	PI	Mechanistic Investigation of Radical Sam Methylases Involved in Tetrahydromethanopterin Biosynthesis	Virginia Tech (NSF)	\$ 88,105.00
Easley, Christopher	PI	Nucleic Acid Nanostructure Built Thru On-Electrode Ligation for Electrochemical Detection of Proteins, Peptides & Small Molecules	National Institutes of Health	\$ 592,604.00
Easley, Christopher Judd, Robert	PI COPI	Unmasking Mechanisms Of Lipolytic Dynamics In Adipose Tissue Using High-Resolution Microfluidic Sampling	National Institutes of Health	\$ 505,920.00
Farnum, Byron	PI	Multi-Electron Nickel Redox Cycles for Solar Energy Conversion & Storage*	National Science Foundation	\$ 418,680.00
Mansoorabadi, Steven	PI	Mechanistic Studies of a Primitive Homolog of Nitrogenase Involved in Coenzyme F430 Biosynthesis	U.S. Department of Energy	\$ 143,273.00
Mansoorabadi, Steven	PI	Mechanistic & Biosynthetic Studies of Dinoflagellate Bioluminescence	National Science Foundation	\$ 140,598.00
Mansoorabadi, Steven	PI	Methane Production & Oxidation by Recombinant Methyl- Coenzyme M Reductase	Exxon Mobil Research & Engineering Co.	\$ 152,888.00
Miliordos, Evangelos	PI	State of the Art Quantum Calculations on a Novel Class of Super-Atoms*	National Science Foundation	\$ 289,196.00
Mills, German	PI	Electrically Conductive Nanoparticle Additives For Greases Used In Electric Vehicles & Other Applications	National Lubricating Grease Institute	\$ 21,460.00
Pokkuluri, Phani Goodwin, Douglas	PI COPI	CRI Drug Screening Core 2021	Medical College of Wisconsin	\$ 3,000.00
Zhan, Wei	PI	Janus Liposomes In Motion*	National Science Foundation	\$ 450,000
		<b>Chemistry &amp; Biochemistry Count:</b>	<b>Chemistry &amp; Biochemistry Total</b>	<b>\$ 3,182,936.58</b>
		<b>Accounts: 14      Individual Awards:10</b>		
*includes participant support costs				

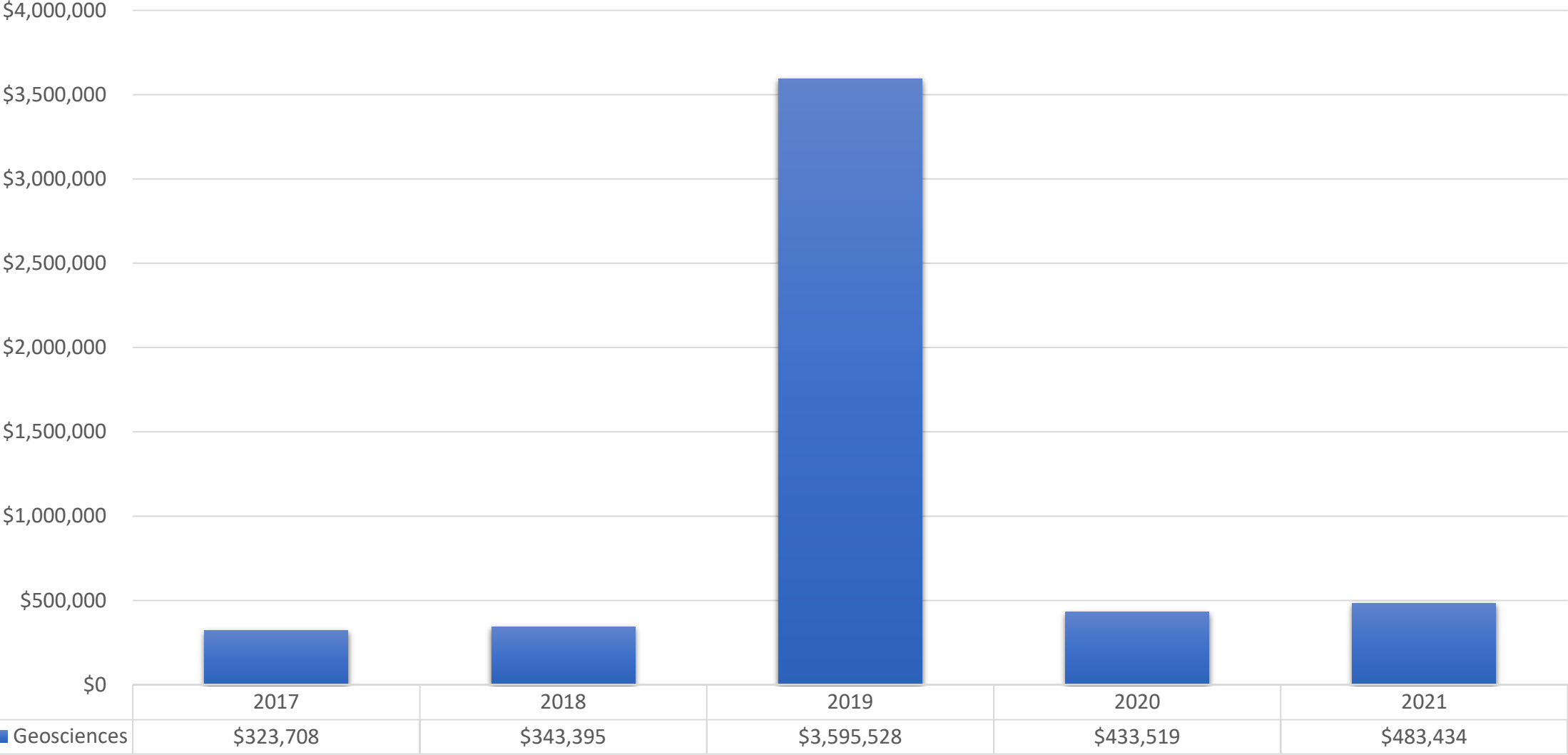
## Chemistry and Biochemistry Active Awards

PI	Sponsor	Title	Start Date	End Date
Duin, Eduardus	University of Arkansas	UA-UA2019-63	8/15/2018	8/14/2022
Duin, Eduardus	Department of Energy	DE-SC0018011	9/1/2017	8/31/2022
Easley, Christopher	National Institutes of Health	NIH-1R01DK093810-01A1	6/8/2012	2/28/2021
Easley, Christopher	National Institutes of Health	NIH-1R01GM138828-01	9/18/2020	7/31/2022
Easley, Christopher	National Institutes of Health	NIH-2R01DK093810-08A1	7/1/2021	6/30/2022
Ellis, Holly	National Science Foundation	NSF-CHE-1808495	8/1/2018	7/31/2021
Franum, Byron	National Science Foundation	NSF-CHE-1945160*	7/1/2020	6/30/2025
Goldsmith, Christian	National Science Foundation	NSF-CHE-1662875	8/1/2017	7/31/2021
Goldsmith, Christian	National Science Foundation	NSF-CHE-1954336	8/1/2020	7/31/2023
Goodwin, Douglas	National Science Foundation	NSF-MCB-1616059*	7/1/2016	7/31/2021
Harshmann, Jordan	National Science Foundation	NSF-DUE-1915343	10/1/2019	10/31/2022
Mansoorabadi, Steven	National Science Foundation	NSF-CHE-1555138	5/1/2016	9/30/2022
Mansoorabadi, Steven	Department of Energy	DE-SC0018043	9/1/2017	8/31/2022
Mansoorabadi, Steven	Exxon Mobile	EMRE-EM11662	9/15/2019	12/31/2022
Merner, Bradley	National Science Foundation	NSF-CHE-1654691	5/1/2017	4/30/2022
Miliordos, Evangelos	National Science Foundation	NSF-CHE-1940456*	9/1/2020	8/31/2025
Miliordos, Evangelos	US Department of Energy	DE-SC0019177	9/1/2018	8/31/2022
Ortiz, Joseph	National Science Foundation	NSF-CHE-1565760	9/1/2016	8/31/2022
Patkowski, Konrad	National Science Foundation	NSF-CHE-1955328*	7/1/2020	6/30/2023
Pokkuluri, Phani	Medical College of Wisconsin	MCW-eBridge FP0019427	1/1/2021	12/31/2021
Zhan, Wei	National Science Foundation	NSF-CHE-1808123*	8/15/2018	7/31/2021
Zhan, Wei	National Science Foundation	NSF-CHE-2108243	8/15/2021	7/31/2024
*includes participant support costs		<b>Total Active: 22</b>		

## Chemistry and Biochemistry Proposals Submitted FY2021

Proposal ID	PI/COPI	Title	Sponsor	Amount Requested
1443-20P	Chen, Ming	PI	National Institute of Health	\$685,000.00
0562-21P	Boserma, Melissa	COPI	Noblis	\$10,290.00
0074-21P	Duin, Eduardus	PI	Virginia Tech	\$88,105.00
	Duin, Eduardus	PI	University of Oklahoma	
0117-21P	Easley, Christopher	PI	National Institute of Health	\$2,598,573.80
0132-21P	Ellis, Holly	PI	National Science Foundation	\$676,416.94
0546-21P	Hamid, Ahmed	PI	Society for Analytical Chemists of Pittsburgh	\$37,872.00
1243-21P	Hamid, Ahmed	PI	National Science Foundation	\$689,564.00
0105-21P	Harshman, Jordan	COPI	National Science Foundation	\$408,808.00
0524-21P	Harshman, Jordan	PI	Notre Dame - NSF Flow	\$244,698.43
1240-21P	Harshman, Jordan	PI	National Science Foundation Career	\$732,072.64
1408-21P	Karimov, Rashad	PI	National Institute of Health	\$1,870,813.82
0576-21P	Karimov, Rashad	PI	National Institute of Health	\$1,496,245.15
1256-21P	Karimov, Rashad	PI	National Science Foundation Career	\$747,411.00
0522-21P	Mills, German	COPI		
1407-20P	Ortiz, Joseph	PI	National Science Foundation	\$449,722.82
1564-21P	Ortiz, Joseph	PI	National Science Foundation	\$472,665.71
0224-21P	Patkowski, Konrad	PI	University of Georgia-NASA Flow	\$146,144.17
0366-21P	Patkowski, Konrad	PI	Ames Lab - DOE Flow	\$783,919.44
0414-21P	Pawlowski, Filip	PI	Department of Energy	\$3,054,513.34
0750-21P	Pokkuluri, Phani Raj	PI	The Medical College of Wisconsin	\$3,000.00
0151-21P	Zhan, Wei	PI	National Science Foundation	\$545,085.00
	<b>Total Proposals: 22</b>		<b>Total Requested:</b>	<b>\$15,740,921.26</b>

# Geosciences FY 21



**Geosciences**  
**Extramural Research Grants with New Dollars Received in FY2021**

PI NAME	PI/COPI	PROJECT TITLE	SPONSOR	AMOUNT
Chaney, Philip	PI	Rural Employment & The Need For An Ala Irrigated Acreage Survey	University of Alabama Huntsville	\$ 46,443.00
Marzen, Luke Mitra, Chandra	PI COPI	Stateview Prog Development & Operations for State of Alabama	America View Fed Flow USGS	\$ 23,493.99
Marzen, Luke	PI	GIS Fellowship Agreement with City of Auburn	City of Auburn, Alabama	\$ 10,000.00
McNeal, Karen	PI	Developing A Diverse, Future-Oriented Workforce for Renewable Energy Industries	National Science Foundation	\$ 97,330.00
McNeal, Karen Hanqin, T. Srivastava, P.	PI COPI	Hosting the SE Climate Ctr-Yr 5	NC State University Fed Flow USGS	\$ 14,045.00
McNeal, Karen	PI	Data Analysis & Visualization to Support FWS Service Species Status Assessments	NC State University Fed Flow USGS	\$ 70,127.00
Mitra, Chandana	PI	Multi-Scalar Analysis Of Urban-Influenced Hydrometeorological Processes	University of Georgia (NASA)	\$ 87,418.00
Ojeda, Ann	PI	Upgrade Of An Isotope Ration-Mass Spectrometer For Compound-Specific Isotope Analysis In Organic Biogeochemical Resch*	National Science Foundation	\$ 110,081.00
Wolf, Lorraine Witte, Maria	PI COPI	Graduate Resch Fellowship Prog for Akilah Alwan	National Science Foundation	\$ 24,495.57
		<b>Geosciences Count:</b>	<b>Accounts: 9</b> <b>Individual Awards: 6</b>	
*Participant Support Costs Included		<b>Geosciences Total:</b>		<b>\$ 483,433.56</b>



## Geosciences Active Awards

PI	Sponsor	Title	Start Date	End Date
Chaney, Philip	University of Alabama Huntsville	UAH-2021-1313-GEO	1/15/2021	12/15/2022
Marzen, Luke	Americaview Inc.	AVI-AV18-AL-01-GY21	9/18/2021	9/17/2022
Marzen, Luke	City of Auburn	Auburn-GIS Fellow-22	8/15/2021	8/14/2022
McNeal, Karen	National Science Foundation	NSF-DGE-1922687 *	9/1/2019	8/31/2024
McNeal, Karen	National Science Foundation	NSF-DGE-1937964-SC	9/1/2019	5/31/2022
McNeal, Karen	National Science Foundation	NSF-DGE-1937964-EJ	9/1/2019	5/31/2023
McNeal, Karen	National Science Foundation	NSF-DUE-2043990-GEO	7/1/2021	6/30/2024
McNeal, Karen	North Carolina State University	NCSU-2017-1878-05	8/1/2018	7/31/2022
McNeal, Karen	North Carolina State University	NCSU-2017-1878-05-Y5	8/1/2021	7/31/2022
McNeal, Karen	North Carolina State University	NCSU-2020-0455-01	10/1/2019	9/30/2022
McNeal, Karen	North Carolina State University	NCSU-2020-0455-01 FY21	10/1/2020	9/30/2021
McNeal, Karen	North Carolina State University	NCSU-2020-2689-01	5/1/2020	3/31/2022
McNeal, Karen	USGS	USGS-G21AP10596-00-KM	9/1/2021	8/31/2022
Mitra, Chandana	University of Georgia	UGA-SUB00002502	7/1/2020	7/1/2024
Nelson, Jake	Arizona State University	AZ ST UN-ASUB00000979	6/10/2022	6/9/2022
Ojeda, Ann	National Science Foundation	NSF-EAR-2051747*	7/1/2021	6/30/2023
Ojeda, Ann	USGS	USGS-G21AP10596-00-AO	9/1/2021	8/31/2022
Ojeda, Ann	USGS	USGS-G21AP10596-00-AO2	9/1/2021	8/31/2022
Savrda, Charles	American Chemical Society	ACS-PRF 57720-UR8	7/1/2017	8/31/2022
Wolf, Lorraine	National Science Foundation	NSF-DGE-1937964-AA	6/1/2020	5/31/2022
Zou, Haibo	American Chemical Society	ACS-PRF 57500-UR2	9/1/2017	8/31/2022
*includes participant support costs		<b>Total Active: 21</b>		

## Geosciences Proposals Submitted FY2020

Proposal ID	PI/COPI	Title	Sponsor	Amount Requested
1120-20P	Chaney, Philip	PI	AL Dept of Economic & Community Affairs	\$66,073.00
0401-20P	King, David	PI	Electric Power Research Institute	\$30,000.00
0394-20P	King, David	COPI	NASA	\$455,020.00
1355-20P	King, David	COPI	NASA	\$1,820,121.00
0096-20P	Lee, Ming-Kuo	COPI	NSF	\$624,012.00
1036-20P	Marzen, Luke	PI	America View	\$23,493.99
1202-20P	Marzen, Luke	PI	City of Auburn	\$10,000.00
0127-20P	McNeal, Karen	PI	NSF AISL	\$2,989,925.00
0237-20P	McNeal, Karen	PI	NSF NRT	\$229,669.00
1144-20P	McNeal, Karen	COPI	NSF	\$139,375.00
0732-20P	Mitra, Chandana	PI	America View	\$7,499.40
0146-20P	Mitra, Chandana	PI	Sub-Awardee NASA	\$185,401.00
1061-20P	Mitra, Chandana	PI	UAH - NASA Sub	\$120,000.00
1043-19P	Ojeda, Ann	PI	NIH K25	\$610,014.11
0098-20P	Ojeda, Ann	PI	Alabama Water Resources Research Institute	\$24,954.00
0440-20P	Ojeda, Ann	PI	AL-MISS Sea Grant	\$9,662.00
0510-20P	Ojeda, Ann	PI	Thomas Jefferson Fund	\$7,700.00
1185-20P	Ojeda, Ann	PI	ARO	\$390,495.80
1313-20P	Ojeda, Ann	PI	NSF	\$109,585.00
1380-20P	Ojeda, Ann	PI	NSF	\$329,999.54
0080-20P	Rogers, Stephanie	PI	Project Apis M.	\$62,226.46

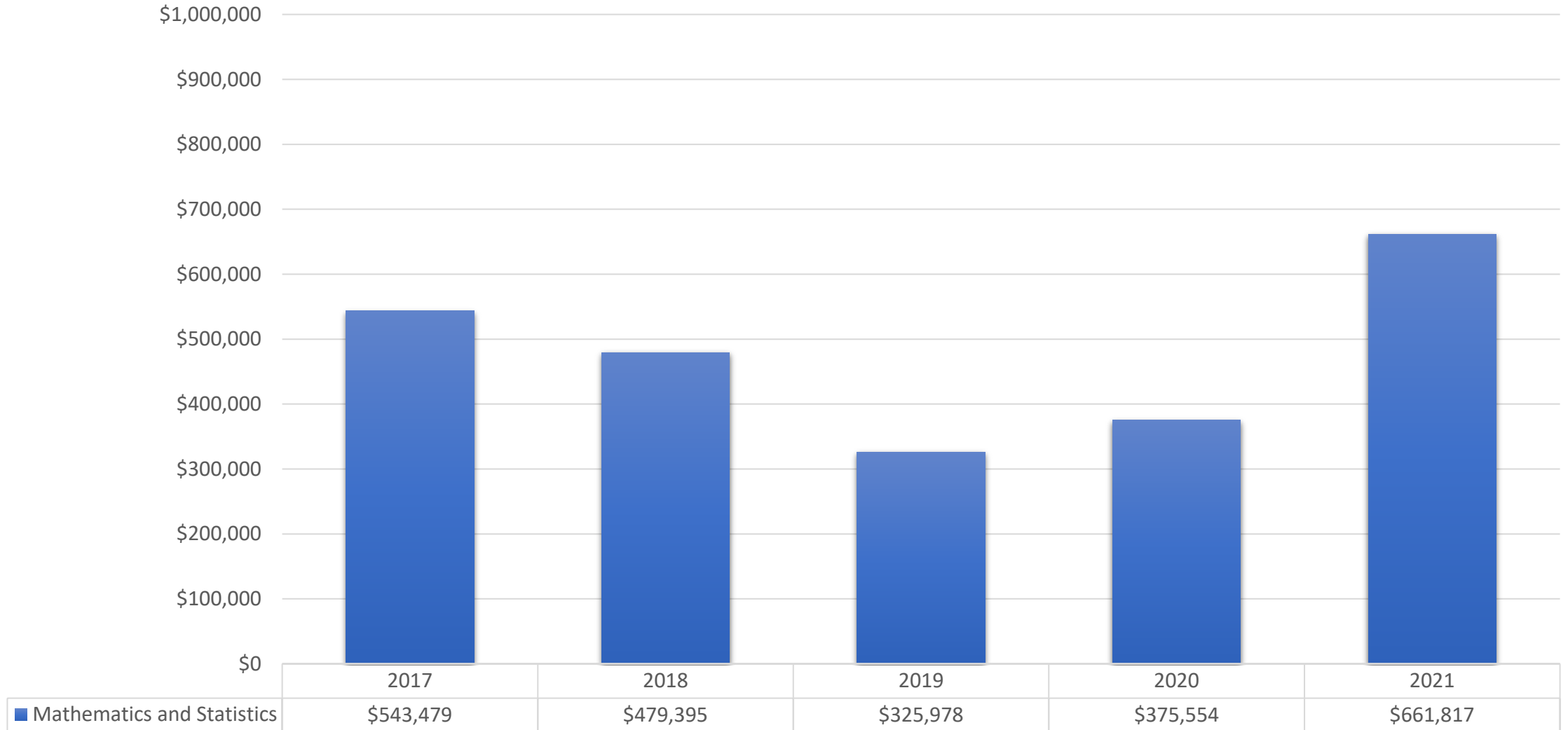
## Geosciences Proposals Submitted FY2020

Proposal ID	PI/COPI	Title	Sponsor	Amount Requested
0105-20P	Rogers, Stephanie	COPI	California State Beekeeper Assoc.	\$62,226.26
0439-20P	Rogers, Stephanie	PI	Project Apis M.	\$62,226.26
0760-10P	Rogers, Stephanie	PI	Southeast Climate Adaptation Science Center	\$174,561.00
1205-20P	Rogers, Stephanie	PI	Univ. of Texas at Dallas NSF STS-Collaboration	\$43,433.74
0688-20P	Shepherd, Stephanie	PI	USDA	\$499,061.00
0201-20P	Zou, Haibo	PI	UAH EPSCoR-NASA	\$79,999.99
	<b>Total Proposal: 27</b>		<b>Total Requested:</b>	<b>\$9,166,734.55</b>

## Geosciences Proposals Submitted FY2021

Proposal ID	PI/COPI	TITLE	SPONSOR	AMOUNT REQUESTED
0030-21P	Bilenker, Laura	PI	National Science Foundation	\$66,073.00
1505-21P	Chaney, Philip	COPI	UAH	\$30,000.00
0158-21P	Lee, Ming-Kuo	COPI	National Science Foundation	\$1,223,542.00
0508-21P	Lee, Ming-Kuo	COPI	AL Water RRI	\$5,000.00
1101-21P	Marzen, Luke	PI	USGS/America	
1147-21P	McNeal, Karen	PI	North Carolina State University	\$37,017.06
1146-21P	McNeal, Karen	PI	North Carolina State University	\$19,099.50
1296-21P	McNeal, Karen	PI	USGS/CASC	\$180,000.00
0403-21P	Mitra, Chandana	PI	National Science Foundation	
0655-21P	Mitra, Chandana	COPI	ALCoE	
1383-21P	Mitra, Chandana	PI	National Science Foundation	
0489-21P	Ojeda, Ann	PI	Alabama Water Resources Research Institute	
0490-21P	Ojeda, Ann	PI	Alabama Water Resources Research Institute	
0653-21P	Ojeda, Ann	PI	Alabama-COE	
1295-21P	Ojeda, Ann	PI	National Science Foundation	
1478-21P	Ojeda, Ann	PI	NIOSH	
0469-21P	Ojeda, Ann	COPI		
0159-21P	Rogers, Stephanie	PI	National Science Foundation	\$1,073,773.00
0202-21P	Rogers, Stephanie	PI	East Alabama Medical Center	\$1,167.91
0814-21P	Rogers, Stephanie	PI	Alabama Coastal Area Management Program	
	Rogers, Stephanie	PI	AAES-AIR	
	<b>Total Proposal:</b>		<b>Total Requested:</b>	<b>\$</b>

# Mathematics and Statistics FY 21



**Mathematics and Statistics**  
**Extramural Research Grants with New Dollars Received in FY2021**

PI NAME	PI/COPI	PROJECT TITLE	SPONSOR	AMOUNT
Carpenter, David	PI	Solid Propellant Motor Analysis Pool	Parsons Government Service (DOD)	\$ 1,366.59
Carpenter, David	PI	Solid Propellant Motor Analysis Pool	Parsons Government Service (DOD)	\$ 83,480.82
Cao, Guanqun	PI	Statistical Learning In Next Gen Of Functional Data Analysis	Simons Foundation Inc.	\$ 8,400.00
Cao, Yanzhao	PI	Reliable &Efficient Machine Learning For Leadership Facility Scientific Data Analytics	US Department of Energy	\$ 100,000.00
Ceyhan, Elvan	PI	Graph Theoretic Learning & Spatial Methods	Simons Foundation Inc.	\$ 8,400.00
Lin, Junshan	PI	Imaging & Sensing via Plasmonic Nanohole Resonances	National Science Foundation	\$ 71,649.00
McDonald, Jessica	PI	Colouring & Structure In Graphs	Simons Foundation Inc.	\$ 8,400.00
Nane, Erkan	PI	Space-Time Fractional Dynamics	Simons Foundation Inc.	\$ 8,400.00
Oeding, Luke	PI	Machine Learning, Invariants Of Tensors &Quantum Information	Embassy of France	\$ 10,000.00
Phuong Hoang, Thi Thao	PI	Efficient &Accurate Local Time-Stepping Algorithms For Multiscale Multiphysics Systems	National Science Foundation	\$ 75,245.00
Schenck, Henry	PI	Computational Algebra & Applications	National Science Foundation	\$ 200,000.00
Schenck, Henry	PI	Symbolic Computation Meets Computational Geometry &Data Approximation	National Science Foundation	\$ 86,476.00
		<b>Mathematics &amp; Statistics Count:</b>	<b>Accounts: 12</b> <b>Individual Awards: 12</b>	
		<b>Mathematics &amp; Statistics Total:</b>		<b>\$ 661,817.41</b>



## Mathematics and Statistics Proposals Submitted FY2021

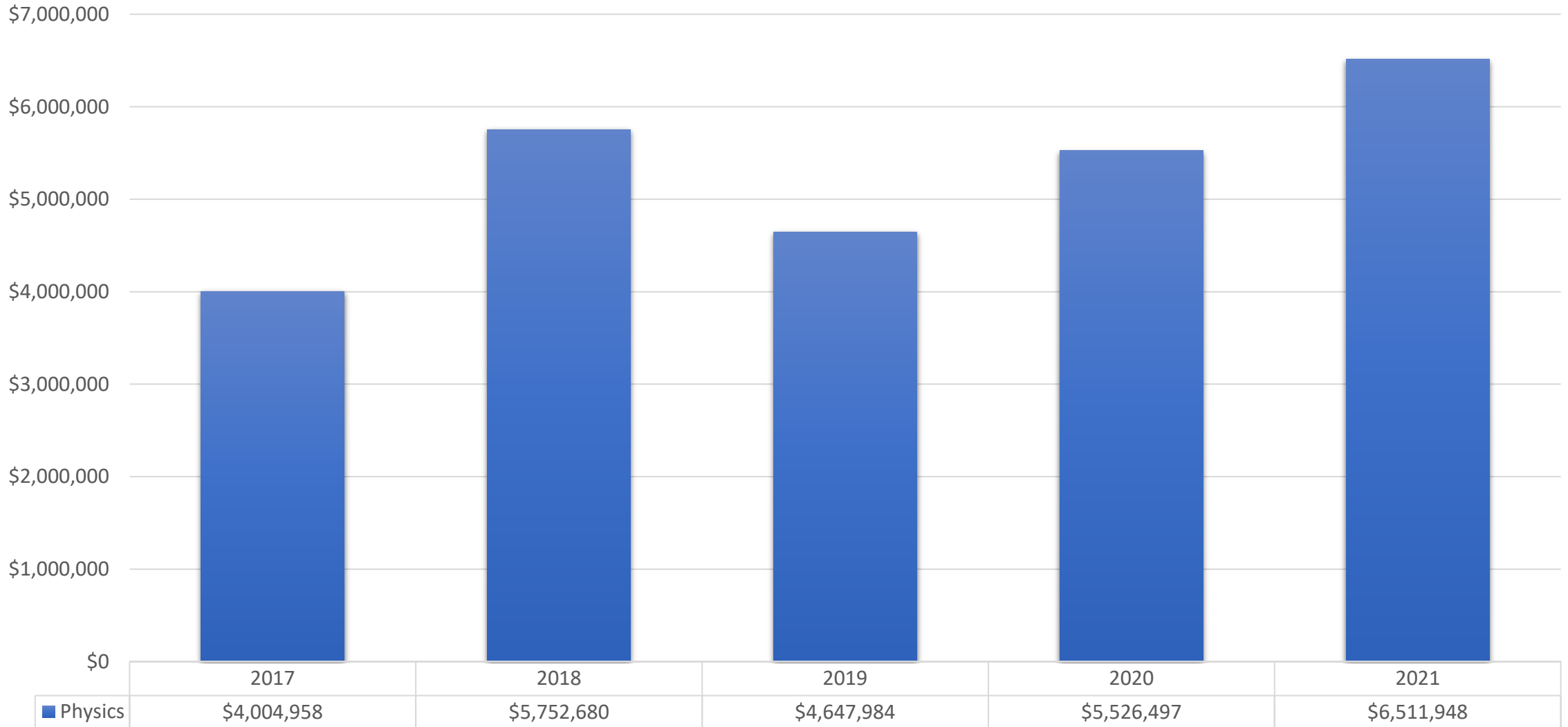
Proposal ID	PI/COPI	Title	Sponsor	Amount Requested
0441-21P	Billor, Nedret	PI	National Science Foundation	\$1,500,000.00
	Brown, Michael	PI	National Science Foundation	
	Brown, Michael	PI	Simons Foundation	\$42,000
0243-21P	Cao, Guanqun	PI	National Science Foundation	\$184,011.00
0334-21P	Cao, Guanqun	PI	Simons Foundation	\$8,400.00
0864-21P	Cao, Guanqun	PI	National Science Foundation	\$179,664.00
0199-21P	Cao, Yanzhao	PI	National Science Foundation	\$151,463.00
	Cao, Yanzhao	PI	National Science Foundation	
0960-21P	Cao, Yanzhao	PI	DOE	\$100,000.00
0129-21P	Carpenter, Mark	COPI	Research in Flight	\$24,605.00
1294-21P	Carpenter, Mark	PI	Parsons	\$175,000.00
0257-21P	Ceyhan, Elvan	PI	National Science Foundation	
0400-21P	Ceyhan, Elvan	COPI	UAH	
0364-21P	Feng, Ziqin	PI	Simons Foundation	
0325-21P	McDonald, Jessica	PI	Simons Foundation	\$8,400.00
	McDonald, Jessica	PI	National Science Foundation	\$207,742.10
033-21P	Molinari, Roberto	COPI	National Institute of Health	\$597,017.00
0448-21P	Molinari, Roberto	COPI	National Institute of Health	\$372,846.00
0497-21P	Molinari, Roberto	COPI	National Institute of Health	
	Molinari, Roberto	PI	OVPRED	\$1,307,460.51
	Molinari, Roberto	PI	Purdue University	\$149,668.79
0363-21P	Nane, Erkan	PI	Simons Foundation	\$8,400.00
0651-21P	Nane, Erkan	COPI	ALCoE	



## Mathematics and Statistics Proposals Submitted FY2021

Proposal ID	PI/COPI	Title	Sponsor	Amount Requested
0382-21P	Puleo, Gregory	COPI	Simons Foundation	
0806-21P	Puleo, Gregory	PI	Clayton State	
	Puleo, Gregory	PI	National Science Foundation Career	
	Schenck, Henry	PI	Simons Foundation	\$132,000
0372-21P	Sukhtaiev, Selim	PI	Simons Foundation	
0055-21P	Zheng, Jingyi	PI	Johnson & Johnson	
	Zheng, Jingyi	PI	National Science Foundation	
0256-21P	Zheng, Jingyi	PI	National Science Foundation	
0383-21P	Zheng, Jingyi	PI	Simons Foundation	
0423-21P	Zheng, Jingyi	PI	National Science Foundation	\$38,207.48
0498-21P	Zheng, Jingyi	PI	National Institute of Health	\$594,594.00
0512-21P	Zheng, Jingyi	PI	National Science Foundation	\$174,964.00
0518-21P	Zheng, Jingyi	COPI		
	<b>Total Proposals: 36</b>		<b>Total Requested:</b>	<b>\$5,956,442.88</b>

# Physics FY 21



**Physics**  
**Extramural Research Grants with New Dollars Received in FY2021**

PI NAME	PI/COPI	PROJECT TITLE	SPONSOR	AMOUNT
Bodewits, Dennis	PI	Unravel Photon & Electron Processes & Their Interaction With Coma Of 67p	NASA	\$171,687.00
Bodewits, Dennis	PI	Comet Diagnostics Of The Solar Wind	NASA	\$40,301.90
Bodewits, Dennis	PI	Rapid Follow Up Characterization of Cometary Outburst Ejecta	NASA	\$39,999.99
Bodewits, Dennis	PI	Nicer Diagnostics Of The Comet-Solar Wind Interaction With Deep Space 1'S 19p Borrelly & Rossetta's 67P	NASA	\$37,496.49
Bodewits, Dennis	PI	Composition & Physical Processes of Inner Coma of Comet 46p-Wirtanen	Space Telescope Science Institute - NASA	\$57,684.00
Comes, Ryan	PI	Topological Phenomena In 4d & 5d Complex Oxide Interfaces & Superlattices Grown By Hybrid Molecular Beam Epitaxy*	National Science Foundation	\$393,501.00
Comes, Ryan	PI	Metastable Oxides for High-Mobility & Spin-Orbit 2D Electronics	Air Force Research Lab (Dept. of Defense)	\$149,580.00
Dhar, Sarit	PI	Accelerator Services (5)	various	\$22,321.46
Dhar, Sarit	PI	Improving Sic Wafers & Processing For Lower Costs & Higher Reliability	National Renewable Energy Lab (Dept. of Energy)	\$75,000.00
Ennis, David Loch, Stuart	PI COPI	Erosion & Re-Deposition Spectroscopic Diagnostic Dvlmts for High-Z PFCS in DIII-D	Us Department of Energy	\$294,452.00
Fogle, Michael	PI	Small Satellite Based Secure Communication Thru Entangled Quant Key Distribution	Missile Defense Agency (Dept. of Defense)	\$28,631.00
Fogle, Michael Loch, Stuart	PI COPI	Joint Theoretical & Experimental Approach To Low-Temp Dielectronic Recombination Data For Photoionized Astrophysical Environments	National Science Foundation	\$274,602.00
Fogle, Michael Loch, Stuart	PI COPI	A Joint Theoretical & Experimental Approach To Dielectronic Recombination Data Needs	NASA	\$200,090.00
Giordano, Nicholas	PI	Physics of Wind Musical Instruments	National Science Foundation	\$110,463.00

**Physics**  
**Extramural Research Grants with New Dollars Received in FY2021**

PI NAME	PI/COPI	PROJECT TITLE	SPONSOR	AMOUNT
Guazzotto, Luca	PI	Two Fluid Equilibrium & Stability Analysis in Axisymmetric Plasmas	U.S. Department of Energy	\$123,447.65
Hanson, James	PI	Three-dimensional Equilibrium Reconstruction and MHD Studies in Stellarators	U.S. Department of Energy	\$200,000.00
Jin, Wencan	PI	Probing Novel Phases of Matter in Van Der Waals Magnet	National Science Foundation	\$97,857.09
Konopk, Uwe Thomas, Edward	PI COPI	Studying The Properties Of Complex Plasma Using Experiment Facilities Designed For Operation Aboard The International Space Station, Pk-4 And Beyond	Jet Propulsion Lab California Inst. Technology (NASA)	\$77,466.00
Konopka, Uwe	PI	Compact Mission Science Definition Team	Jet Propulsion Lab California Inst. Technology (NASA)	\$14,958.00
Laurent, Guillaume	PI	Attosecond Electron Dynamics in Metallic Nanoparticles, Metallic Surfaces & Nanoparticles-Covered Metallic Surfaces	U.S. Air Force	\$221,655.00
Lin, Yu Zhao, Hong Wang, Xueyi	PI COPI COPI	Gem-Radiation Belt Losses Using Combined Global Hybrid & Test Particle Simulations	National Science Foundation	\$599,007.00
Lin, Yu	PI	Impact of Solar Wind Pressure Pulses & Foreshock Waves on the Dayside Magnetosphere	NASA	\$143,292.00
Lin, Yu	PI	Heliospheric Magnetic Energy Storage & Conversion	UCLA sub (NASA)	\$47,944.00
Lin, Yu	PI	Tracers Phase A-C	University of Iowa (NASA)	\$25,225.00
Loch, Stuart Wyk, Hans Werner	PI COPI	Participation in High Fidelity Line Diagnostics for the X-Ray Astrophysics recovery Mission	Smithsonian Astrophysical Observatory (NASA)	\$89,610.00
Maurer, David Ennis, David Schmitt, John	PI COPI COPI	Three Dimensional Equilibrium Stability & its Impact on Edge Transport & Divertor Performance in Wendelstein7-X	U.S. Department of Energy	\$50,000.00
Maurer, David Knowlton, Stephen Hartwell, Greg	PI COPI COPI	MHD Stability & Equilibrium in a Current Driven Stellartor- Tokamak Hybrid	U.S. Department of Energy	\$540,000.00

**Physics**  
**Extramural Research Grants with New Dollars Received in FY2021**

PI NAME	PI/COPI	PROJECT TITLE	SPONSOR	AMOUNT
Perez, Joseph	PI	Interpreting Magnetic Field & Cosmic Ray Observations in the Outer Heliosheath	University of AL in Huntsville (NASA)	\$55,975.00
Schmitt, John	PI	Optimized Stellarator Pilot Plant Design	Princeton Plasma Physics Lab sub (Dept of Energy)	\$22,000.00
Schmitt, John Maurer, David Hartwell, Greg	PI COPI COPI	Stellarator, Simplification With Permanent Magnets	Princeton Plasma Physics Lab sub (Dept of Energy)	\$89,464.30
Thomas, Edward	PI	Connecting the Plasma Universe to Plasma Technology in Alabama*	University of AL in Huntsville - EPSCoR (NSF)	\$567,734.00
Thomas, Edward	PI	Dvlmt Of A Cognitive Rf Plasma Analyzer To Enable Planetary Space Environment Exploration	University of AL in Huntsville - EPSCoR (NSF)	\$14,000.00
Thomas, Edward Konopka, Uwe	PI COPI	Magnetized Plasma Resch Lab as a DOE Plasma Science Facility	U.S. Department of Energy	\$581,210.48
Thomas, Edward	PI	Lunar Dust Resch & Mitigation Science Definition Team	Jet Propulsion Lab sub (NASA)	\$44,972.00
Zhao, Hong	PI	Multipoint Observations & Global Modeling Of Energetic Particle Deep Penetration Into The Low L Region Of Earth'S Inner Magnetosphere	National Science Foundation	\$361,392.00
Zhao, Hong	PI	Quantifying The Role Of Radial Diffusion On The Energy- Dependent Acceleration Of Ultrarelativistic Electrons In The Ctr Of Outer Radiation Belt	National Science Foundation	\$307,273.00
Zhao, Hong	PI	Miniaturized High-Energy-Resolution Relativistic Electron Telescope	NASA	\$341,655.40
		<b>Physics Count:</b>	<b>Accounts: 37</b>	
			<b>Service Center: 5</b>	
			<b>Individual Awards: 26</b>	
			<b>Physics Total:</b>	<b>\$6,511,947.76</b>
*Participant Support Costs Included				

## Physics Active Awards

PI	Sponsor	Title	Start Date
Ahyi, Ayayi (Claude)	University of Alabama in Huntsville	UAH-2020-1246	6/1/2020
Bodewits, Dennis	Planetary Science Institute	PSI-Subaward 1528 Auburn	8/1/2018
Bodewits, Dennis	NASA	NASA-80NSSC19K0152	1/1/2019
Bodewits, Dennis	NASA	NASA-80NSSC19K0245	3/14/2019
Bodewits, Dennis	NASA	NASA-80NSSC19K1304	9/1/2019
Bodewits, Dennis	NASA	NASA-80NSSC20K0839	4/1/2020
Bodewits, Dennis	NASA	NASA-80NSSC21K0127	11/1/2020
Bodewits, Dennis	NASA	NASA-80NSSC21K0703	4/1/2021
Bodewits, Dennis	Association of Universities for Research in Astronomy	STSI-HST-GO-15625.001-A	3/1/2019
Bodewits, Dennis	Association of Universities for Research in Astronomy	STSI-HST-GO-15372.011-A	12/1/2018
Bodewits, Dennis	Association of Universities for Research in Astronomy	STSI-HST-GO-15421.007-A	11/1/2018
Bodewits, Dennis	Association of Universities for Research in Astronomy	STSI-HST-GO-15965.001-A	12/1/2019
Bodewits, Dennis	Association of Universities for Research in Astronomy	STSI-HST-GO-16049.001-A	3/1/2019
Bodewits, Dennis	Association of Universities for Research in Astronomy	STSI-HST-GO-16040.003-A	4/1/2020
Bodewits, Dennis	Association of Universities for Research in Astronomy	STSI-HST-GO-16077.003-A	8/1/2020
Bodewits, Dennis	Smithsonian Institution	SAO-GO8-19001A	12/7/2018
Bodewits, Dennis	Smithsonian Institution	SAO-DDO-21117A	4/28/2020
Bodewits/Konopka/Thomas	University of Alabama in Huntsville	UAH-2019-215-PY	7/1/2019
Comes, Ryan	National Science Foundation	NSF-DMR-1809847*	7/1/2018

## Physics Active Awards

PI	Sponsor	Title	Start Date
Comes, Ryan	National Science Foundation	NSF-DMR-2018794*	8/1/2020
Comes, Ryan	National Science Foundation	NSF-DMR-2045993*	5/1/2021
Comes, Ryan	US Air Force	AF-FA9550-20-1-0034	1/1/2020
Dhar, Sarit	US Army	ARMY-W911NF-18-2-0160	6/21/2018
Dhar, Sarit	Alliance for Sustainable Energy, LLC	NREL-AHL-9-92362-01	9/10/2019
Dhar, Sarit	The Aerospace Corporation	TAC-PO 4600006756	8/8/2019
Dhar, Sarit	Regher Solar	Accelerator	1/10/2020
Dhar, Sarit	Azurspace	PO 4500017571	8/1/2020
Dhar, Sarit	Solaero Tech	PO S000009857	8/1/2020
Dhar, Sarit	Solaero Tech	PO S000009854	8/1/2020
Dhar, Sarit	Spectrolab	PO 110212	9/25/2020
Dhar, Sarit	PB&J Partners LLC	PB&J-PO 6935	10/1/2020
Dhar, Sarit	Martin Materials Solutions Inc.	MMS-PO-S15-2021-01	1/1/2021
Dhar, Sarit	US Department of Defense	NAVY-N00173-20-P-0105	11/19/2019
Ennis, David	US Department of Energy	DE-SC0015877	6/1/2016
Fogle, Michael	National Science Foundation	NSF-AGS-1445465-PHY	8/15/2015
Fogle, Michael	Clemson University	CU-2125-204-2013329	2/1/2019
Fogle, Michael	Space Dynamics Lab	SDL-CP0053703	1/1/2019
Fogle, Michael	National Science Foundation	NSF-AST-2108647	9/1/2021
Fogle, Michael	US Department of Defense	MDA-HQ0860-21-C-6000-PHY	4/2/2021
Giordano, Nicholas	National Science Foundation	NSF-PHY-1806231	12/15/2019
Guazzotto, Luca	US Department of Energy	DE-SC0014196	7/1/2015

## Physics Active Awards

PI	Sponsor	Title	Start Date
Hanson, James	US Department of Energy	DE0FG02-03ER54692B	12/1/2002
Konopka, Uwe	National Science Foundation	NSF-DMR-1740784	6/1/2017
Konopka, Uwe	Jet Propulsion Lab-California Inst Technology	JPL-RSA 1571699	4/15/2007
Konopka, Uwe	Jet Propulsion Lab-California Inst Technology	JPL-1655063	10/1/2020
Konopka, Uwe	University of Alabama in Huntsville	UAH-2020-1255	9/1/2020
Kuroda, Marcelo	National Science Foundation	NSF-DMR-1848344*	7/1/2019
Laurent, Guillaume	US Department of Energy	DE-SC0017984	8/15/2017
Laurent, Guillaume	US Air Force	AF-FA9550-18-1-0333	6/15/2018
Lin, Yu	NASA	NASA-80NSSC17K0012	6/13/2017
Lin, Yu	NASA	NASA-NNX17AI47G	4/1/2017
Lin, Yu	NASA	NASA-80NSSC20K1322	7/14/2020
Lin, Yu	US Department of Energy	DE-SC0018071	8/15/2017
Lin, Yu	University of IOWA	UN IA-PO 1002078137	3/5/2018
Lin, Yu	UCLA	UCLA-2090 G XA735	3/4/2020
Loch, Stuart	National Science Foundation	NSF-AST-1816984	9/1/2018
Loch, Stuart	Smithsonian Institution	SAO-SV8-88019	6/1/2018
Maurer, David	US Department of Energy	DE-FG02-00ER54610	9/1/2000
Maurer, David	US Department of Energy	DE-SC0014529	8/15/2015
Perez, Joseph	University of Alabama in Huntsville	UAH-2018-251	6/26/2019
Schmitt, John	Princeton University	PPPL-S018052	4/29/2020
Schmitt, John	Princeton University	PPPL-S210158	2/1/2021



## Physics Active Awards

PI	Sponsor	Title	Start Date
Thomas, Edward	University of Alabama in Huntsville	UAH-2017-096*	8/1/2017
Thomas, Edward	University of Alabama in Huntsville	UAH-2017-096-GRA	9/1/2017
Thomas, Edward	University of Alabama in Huntsville	UAH-2017-096-A10-FS	9/1/2017
Thomas, Edward	University of Alabama in Huntsville	UAH-2017-096-A10-SJ	9/1/2017
Thomas, Edward	University of Alabama in Huntsville	UAH-2017-096-A13-ET	10/1/2020
Thomas, Edward	US Department of Energy	DE-SC0019176	9/1/2018
Thomas, Edward	Jet Propulsion Lab-California Inst Technology	JPL-1646773-PHY	2/6/2020
Thomas, Edward	L3 Harris	L3Harris-PO A000529678	2/27/2020
Wang, Xueyi	University of Texas in Dallas	UN TX-DALLAS-1604915	7/1/2017
Wang, Xueyi	UC Regents	UCLA-0965 G XA019	4/16/2019
Zhao, Hong	NASA	NASA-80NSSC21K1041	9/1/2021
*Includes Participant Support Costs		<b>Total Active: 73</b>	

**Physics  
Proposals Submitted FY2021**

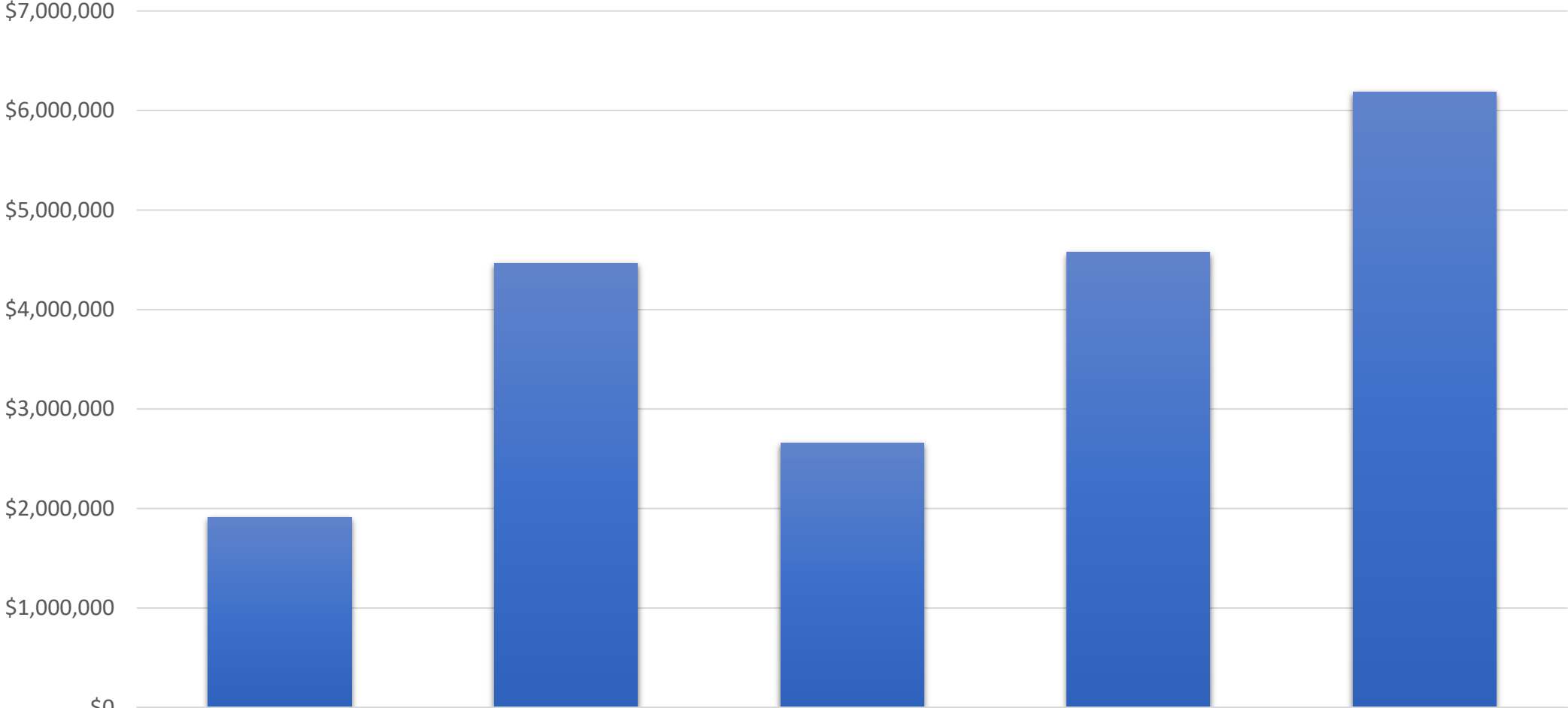
Proposal ID	PI/COPI	Title	Sponsor	Amount Requested
0205-21P	Ahyi, Ayayi (Claude)	PI	NSF	\$448,009.39
0790-21P	Ahyi, Ayayi (Claude)	PI	UAH - NSF Flow	\$106,223.00
0405-21P	Bernardi, Rafael	PI	NIH	\$1,751,676.29
0477-21P	Bernardi, Rafael	PI	NIH	\$151,000.00
1077-21P	Bernardi, Rafael	COPI	University of Illinois - NIH Flow	\$103,667.30
1276-21P	Bernardi, Rafael	PI	NSF Career	\$815,402.47
0406-21P	Bodewits, Dennis	PI	SWIFT - NASA	\$40,000.00
0784-21P	Bodewits, Dennis	PI	SAO - NASA Flow	\$37,469.49
0883-21P	Bodewits, Dennis	PI	STSCI/JWST - NASA Flow	\$20,748.91
0895-21P	Bodewits, Dennis	PI	STSCI/JWST - NASA Flow	\$21,436.81
1312-21P	Bodewits, Dennis	PI	STSCI - NASA Flow	\$11,484.23
1320-21P	Bodewits, Dennis	PI	STSCI - NASA Flow	\$81,535.39
0440-21P	Comes, Ryan	PI	DOE	\$750,921.88
0019-21P	Dhar, Sarit	PI	Blue Wave Semi Conductor - Air Force fed flow	\$4,500.00
0284-21P	Dhar, Sarit	PI	Martin Materials Solutions Inc.	\$5,874.84
0976-21P	Dhar, Sarit	PI	Spectrolab	\$1,468.71
1318-21P	Dhar, Sarit	PI	UES, Inc.	\$1,958.28
1319-21P	Dhar, Sarit	PI	UES, Inc.	\$1,468.71
1339-21P	Dhar, Sarit	Co-PI	CoolCad	\$374,859.81
1466-21P	Dhar, Sarit	PI	Naval Research Lab	\$7,833.12
0164-21P	Fogle, Michael	PI	NSF	\$314,909.00

**Physics  
Proposals Submitted FY2021**

Proposal ID	PI/COPI	Title	Sponsor	Amount Requested
0272-21P	Fogle, Michael	PI	NASA	\$818,026.00
1585-21P	Fogle, Michael	PI	Space Dynamics Lab - Air Force/DOE Fed Flow	\$157,237.00
0525-21P	Guazzotto, Luca	PI	DOE	\$379,254.31
0182-21P	Gramlich, Michael	PI	DOD - Army Research Office	\$602,689.27
0390-21P	Gramlich, Michael	CO-PI	National Institute of Health	\$150,997.00
0706-21P	Gramlich, Michael	PI	NSF	\$733,046.86
0940-21P	Gramlich, Michael	PI	National Institute of Health	\$700,109.36
1237-21P	Gramlich, Michael	PI	AFSOR - DOD Fed Flow	\$699,400.19
1459-21P	Gramlich, Michael	PI	PEW Trust	\$300,000.00
0704-21P	Jin, Wencan	PI	NSF	\$550,830.23
1231-21P	Konopka, Uwe	CO-PI	JPL - NASA Flow	\$77,465.98
1219-21P	Kostadinova, Eva	PI	DOE	\$55,186.40
1309-21P	Kostadinova, Eva	PI	Baylor - NSF Flow	\$47,876.57
0418-21P	Landers, Allen	PI	Carlisle IT	\$20,158.50
1329-21P	Landers, Allen	PI	CASB(UT-Knoxville)	\$20,158.50
0085-21P	Lin, Yu	CO-PI	NASA LWS	\$968,823.76
0430-21P	Lin, Yu	CO-PI	UCLA - NASA Flow	\$45,268.00
0368-21P	Lin, Yu	PI	University of Alaska, Fairbanks - NASA Flow	\$187,905.00
0344-21P	Lin, Yu	PI	Andrews University - NASA Flow	\$187,905.00
0605-21P	Lin, Yu	PI	NSF	\$599,007.13
0859-21P	Maurer, David	PI	DOE	\$584,000.00



# Outreach and Admin FY 21



■ Outreach and Admin

2017

\$1,912,027

2018

\$4,465,250

2019

\$2,658,317

2020

\$4,576,477

2021

\$6,188,454

## COSAM Central Active Awards

PI	Sponsor	Title	Start Date	End Date
Ewald, Mary	Alabama State Dept of Education	AL DOE-U200143	10/1/2019	9/30/2021
Ewald, Mary	Alabama State Dept of Education	AL DOE-U210038	10/1/2020	9/30/2022
Ewald, Mary	Robotics Education & Competition Fund	RECF-Coordinator	9/23/2019	9/22/2021
		<b>Outreach Total: 3</b>		
Ewald, Mary	Alabama State Dept of Education	AL DOE-U200071 *	10/1/2019	9/30/2021
Ewald, Mary	Alabama State Dept of Education	AL DOE-U210027*	10/1/2020	9/30/2022
		<b>AMSTI Total: 2</b>		
Boyd, Robert	Alabama Dept of Public Health	ADPH-Rural Med Prog	7/1/2010	9/30/2022
Jenda, Overtoun	Alabama Dept of Rehabilitation Services	AL DRS-AE1087MS05	4/1/2021	9/17/2021
Jenda, Overtoun	Alabama State Dept of Education	AL DOE-U210265	10/1/2020	9/30/2021
Jenda, Overtoun	National Science Foundation	NSF-HRD-1712692 *	9/1/2017	8/31/2023
Jenda, Overtoun	National Science Foundation	NSF-DUE-1644007 *	10/1/2016	3/31/2023
Jenda, Overtoun	National Science Foundation	NSF-HRD-1649344*	10/1/2016	6/30/2022
Jenda, Overtoun	National Science Foundation	NSF-DMS-1950563 *	4/1/2020	3/31/2023
Jenda, Overtoun	National Science Foundation	NSF-DMS-2015425*	7/15/2020	6/30/2023
Jenda, Overtoun	Northern Arizona University	NAU-1004670-01	12/1/2020	6/30/2022
Mulligan-Guy, Kimberly	National Science Foundation	NSF-EEC-1950304*	4/15/2020	3/31/2023
		<b>COSAM Admin Total: 10</b>		
		<b>Total Active: 15</b>		

**COSAM Central**  
**Extramural Research Grants with New Dollars Received in FY2021**

PI NAME	PI/COPI	DEPARTMENT	PROJECT TITLE	SPONSOR	AMOUNT
Ewald, Mary L. Martin, Wayne Strutchen, Marilyn	PI COPI COPI	AMSTI COSAM	ALA MATH, SCIENCE & TECHNOLOGY INITIATIVE	Alabama State Department of Education	\$2,043,079.00
			<b>AMSTI Count:</b>	<b>1</b>	
			<b>AMSTI Total:</b>		<b>\$2,043,079.00</b>
Ewald, Mary L.	PI	COSAM Outreach	ALA Science in Motion - FY21	Alabama State Department of Education	\$350,511.00
Ewald, Mary L.	PI	COSAM Outreach	Support for Robotics Education Coordinator	Robotics Ed & Competition FDN	\$23,000.00
			<b>COSAM Outreach Count:</b>	<b>2</b>	
			<b>COSAM Outreach Total:</b>		<b>\$373,511.00</b>
Boyd, Robert	PI	Sciences & Math Admin	Rural Medicine Program	Alabama Department of Public Health	\$144,155.00
Jenda, Overton McCullough, Brittany	PI COPI	Sciences & Math Admin	Alliance of Students with Disabilities for Inclusion, Networking & Transition Opportunities in Stem*	National Science Foundation	\$2,592,039.82
Jenda, Overtoun	PI	Sciences & Math Admin	Greater ALA Black Belt Region LSAMP*	National Science Foundation	\$929,360.00
Jenda, Overtoun	PI	Sciences & Math Admin	Black Belt Region STEM Initiative Summer Academy	Alabama State Department of Education	\$20,999.00
Jenda, Overtoun	PI	Sciences & Math Admin	College Quest Summer Academy for Blind & Low Vision High School Students	Alabama State Department of Rehab Services	\$79,957.00

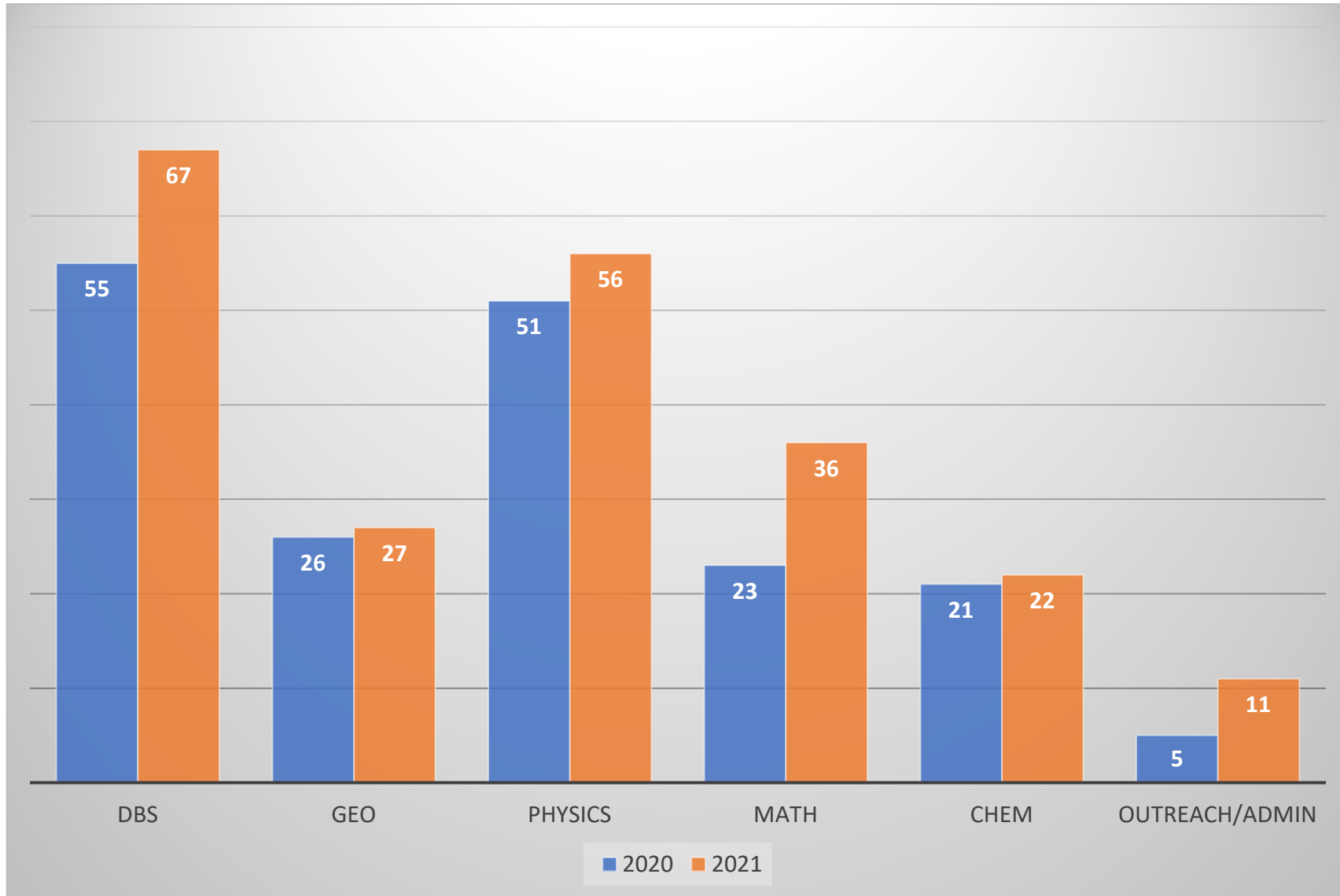




### COSAM Central Proposals Submitted FY2021

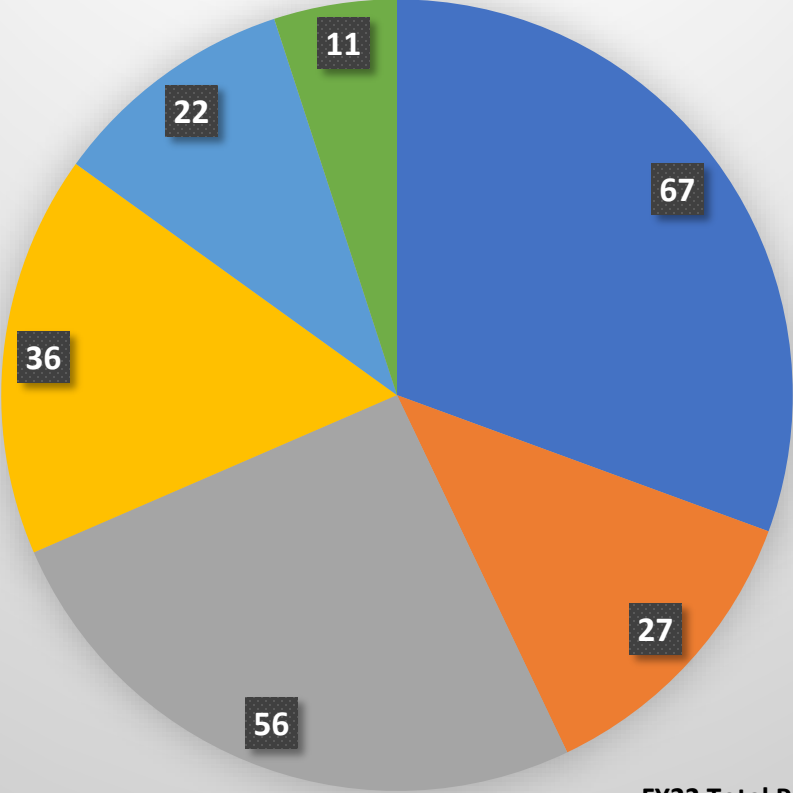
Proposal ID	PI/COPI	Title	Sponsor	Amount Requested
1570-21P	Ewald, Mary Lou	PI	Alabama Space Grant Consortium	\$5,000.00
1571-21P	Ewald, Mary Lou	PI	Alabama Space Grant Consortium	\$5,000.00
ANP	Ewald, Mary Lou	PI	Montgomery Co. Board of Education	\$11,250.00
PDF	Ewald, Mary Lou	PI	ALDOE-AL Science in Motion	\$467,616.00
0126-21P	Mulligan-Guy, Kimberly	PI	National Science Foundation	\$497,781.00
			<b>COSAM OUTREACH TOTAL:</b>	<b>\$986,647.00</b>
PDF	Ewald, Mary Lou	PI	ALDOE - AMSTI 2022	\$2,043,079.00
PDF	Ewald, Mary Lou	PI	ALDOE - AMSTI TIR Supplement	\$172,800.00
			<b>AMSTI OUTREACH TOTAL:</b>	<b>\$2,215,879.00</b>
0245-21P	Jenda, Overtun	PI	National Science Foundation	
	Jenda, Overtun	PI	National Science Foundation	
	Jenda, Overtun	PI	National Science Foundation	
0756-21P	Jenda, Overtun	PI	National Science Foundation	
			<b>SCIENCES &amp; MATH ADMIN TOTAL:</b>	<b>\$ -</b>
	<b>Total Proposals: 11</b>		<b>Total Requested:</b>	<b>\$3,202,526.00</b>

## Submitted Proposals FY20-FY21



# Proposals FY 21

■ DBS ■ GEO ■ PHYS ■ Math/Stats ■ Chem/Bio ■ Outreach/Admin



FY22 Total Proposals: 219