



CALIFORNIA STATE UNIVERSITY, LONG BEACH
OFFICE OF RESEARCH AND ECONOMIC DEVELOPMENT

August 17, 2022

To: Jane C. Conoley, President

Karyn Scissum Gunn, Provost and Senior Vice President, Academic Affairs

Scott Apel, Vice President, Administration and Finance

Beth Lesen, Vice President, Student Affairs

Jeff Cook, Interim Vice President, University Relations and Development

Min Yao, Vice President, Chief Information Officer

Brian Nowlin, Chief Operating Officer, Research Foundation

Anne D’Zmura, Acting Dean, College of the Arts

Michael Solt, Dean, College of Business

Anna Ortiz, Interim Dean, College of Education

Jinny Rhee, Dean, College of Engineering

Monica Lounsbery, Dean, College of Health and Human Services

Deborah Thien, Dean, College of Liberal Arts

Curtis Bennett, Dean, College of Natural Sciences and Mathematics

Chris Swarat, Dean, College of Professional and Continuing Education

From: Simon Kim, Associate Vice President for Office of Research and Economic Development (ORED)

RE: Sponsored Programs and Research Compliance - Year-End Report

I am pleased to provide the FY 2021-2022 Year-End Report of Sponsored Programs and Research Compliance. With a primary emphasis on faculty-student research engagement, ORED has provided administrative support services, including proposal development and submission, grant and contract administration, reporting, and regulatory compliance. This report captures the research accomplishments of our faculty, staff, students, and administrators.

I. Proposal Preparation and Submission

Despite the ongoing COVID-19 pandemic, grant writing productivity continued. We are pleased to report that 209 faculty, staff, and administrators submitted 280 new proposals, totaling \$104 million (See Table 1). While we were unable to invite program officers from various federal funding agencies to our campus for professional development workshops, we continued to offer virtual workshops for faculty to share best practices in grant writing and information about their upcoming grant opportunities.

Table 1: New Proposals Submitted

Division/College	2022 Total New Proposals Submitted	2022 Total New Research Funds Requested	2021 Total New Proposals Submitted	2021 Total New Research Funds Requested	Total Proposals Submitted (% Change)	Total Research Funds Requested (% Change)
COB	6	\$ 506,081	2	\$ 11,501	200.00	4300.32
CPaCE/CITT	11	\$ 1,105,368	12	\$ 4,220,859	-8.33	-73.81
CED	15	\$ 11,599,187	17	\$ 29,267,093	-11.76	-60.37
CHHS	62	\$ 41,723,735	46	\$ 21,331,731	34.78	95.59
CLA	57	\$ 5,636,881	63	\$ 6,600,155	-9.52	-14.59
CNSM	48	\$ 19,546,494	54	\$ 33,843,129	-11.11	-42.24
COE	57	\$ 12,647,019	74	\$ 16,677,134	-22.97	-24.17
COTA	6	\$ 335,000	13	\$ 1,269,070	-53.85	-73.60
Other Units (Pres, AA, SS, URD)	18	\$ 10,914,448	20	\$ 15,428,087	-10.00	-29.26
TOTAL	280	\$ 104,014,213	301	\$ 128,648,759	-6.98	-19.15

II. New Awards

We are also delighted to report that 119 Principal Investigators received 186 new external awards, totaling around \$65.8 million (See Table 2). Sponsors included 85 federal, 43 state, and 4 local agencies, as well as 54 private corporations and foundations. Our faculty have had a remarkable year securing new external awards during the COVID-19 pandemic. Despite the challenges we had in the reduction of research activities, almost all Colleges increased the number of proposals and amount awarded.

Table 2: New Awards Received

Division/College	2022 Total New Proposals Awarded	2022 Total New Research Funds Awarded	2021 Total New Proposals Awarded	2021 Total New Research Funds Awarded	Total Proposals Awarded (% Change)	Total Research Funds Awarded (% Change)
COB	2	\$ 35,500	2	\$ 11,500	-	208.70
CPaCE/CITT	12	\$ 1,626,728	8	\$ 896,414	50.00	81.47
CED	7	\$ 4,873,859	7	\$ 3,415,941	-	42.68
CHHS	41	\$ 19,816,774	37	\$ 16,255,558	10.81	21.91
CLA	29	\$ 3,999,564	29	\$ 2,360,322	-	69.45
CNSM	38	\$ 11,802,763	34	\$ 3,113,267	11.76	279.11
COE	30	\$ 3,708,449	17	\$ 2,237,338	76.47	65.75
COTA	8	\$ 53,400	6	\$ 161,429	33.33	-66.92
Other Units (Pres, AA, SS, URD, AF, IT)	19	\$ 19,860,367	11	\$ 3,690,642	72.73	438.13
TOTAL	186	\$ 65,777,404	151	\$ 32,142,410	23.18	104.64

III. Research Expenditures

The campus generated \$33.8 million in research expenditures, \$29.4 million in direct expenditures and \$4.4 million in indirect expenditures, during the year with restricted on-campus lab openings, research training programs, and travel (See Table 3). Ongoing post-award administration activities include award negotiation and acceptance, fund establishment, coordination of employment, expenditure compliance and processing, financial reporting, sponsor invoicing, and project close out. The ORED Post-Award team continuous working with campus partners to streamline timely award execution, award set up, expenditure approvals, financial reporting, and close out requirements.

Table 3: Research Expenditures

Division/College	2022 Research Expenditures	2022 F&A Revenue	2022 Effective F&A Rate	2021 Research Expenditures	2021 F&A Revenue	2021 Effective F&A Rate	Total Research Expenditures (% Change)	Total F&A Revenue (% Change)	Total Effective F&A Rate (% Change)
COB	\$ 25,373.28	\$ 10,327.34	41%	\$ 6,292.30	\$ 1,587.69	13.8%	303.24	550.46	194.81
CPIE/CITT	\$ 870,406.35	\$ 228,040.98	26%	\$ 940,005.25	\$ 229,970.09	25.7%	-7.40	-0.84	2.12
CED	\$ 3,053,281.50	\$ 115,862.57	4%	\$ 3,166,370.34	\$ 121,484.77	3.6%	-3.57	-4.63	6.70
CHHS	\$ 8,926,865.81	\$ 1,121,014.02	13%	\$ 8,561,490.85	\$ 1,049,354.47	6.5%	4.27	6.83	94.53
CLA	\$ 1,339,880.42	\$ 334,712.00	25%	\$ 985,444.03	\$ 260,068.02	11.0%	35.97	28.70	126.72
CNSM	\$ 4,381,064.58	\$ 912,573.29	21%	\$ 4,505,445.71	\$ 733,981.87	23.6%	-2.76	24.33	-11.65
COE	\$ 3,067,802.74	\$ 544,539.27	18%	\$ 3,350,541.58	\$ 457,493.73	20.4%	-8.44	19.03	-13.19
COTA	\$ 69,279.44	\$ (0.74)	0%	\$ 120,948.92	\$ 7,507.72	4.7%	-42.72	-100.01	-100.02
Other Units (Pres, AA, S S, URD, AF, IT)	\$ 7,714,655.83	\$ 1,142,105.18	15%	\$ 8,037,061.59	\$ 1,291,350.18	35.0%	-4.01	-11.56	-57.69
TOTAL	\$29,448,609.95	\$ 4,409,173.91	15%	\$ 29,673,600.57	\$ 4,152,798.54	14.0%	-0.76	6.17	6.98

The campus participated in the annual National Science Foundation (NSF) Higher Education Research and Development (HERD) Survey. In FY 2020, the campus generated \$16.7 million in funding of research and development, according to data from the NSF (HERD) survey. The campus ranks 7th among 23 CSU campuses.

Table 4: NSF Higher Education Research and Development (HERD) Data for FY 2020

Institution	Rank	All R&D expenditures	Computer and information sciences	Geosciences, atmospheric sciences, and ocean sciences	Life sciences	Mathematics and statistics	Physical sciences	Psychology	Social sciences	Sciences nec	Engineering	All non-S&E fields
San Diego State U.	165	97,710	1,519	2,234	27,880	3,899	6,402	20,222	5,106	3,669	7,934	18,845
San Jose State U.	205	47,301	10	13,747	1,542	0	2,445	19,670	190	7	2,863	6,827
San Francisco State U.	234	33,078	869	4,450	13,391	1,060	3,200	1,375	3,760	1,344	1,330	2,299
California Polytechnic State U., San Luis Obispo	245	26,605	626	1,105	7,929	2,841	5,672	185	675	0	4,646	2,926
California State U., Sacramento	257	24,939	178	839	1,328	94	296	310	7,680	2,956	7,744	3,514
California State U., Northridge	271	21,228	201	2,158	6,822	980	5,407	473	559	1,690	1,115	1,823
California State U., Long Beach	289	16,684	102	514	4,816	691	2,670	1,465	625	284	4,733	784
California State U., San Marcos	319	13,250	987	47	1,888	82	1,667	1,261	884	2,694	2,408	1,332
California State U., San Bernardino	336	10,819	472	87	948	633	1,569	1,775	320	13	1,598	3,404
California State U., Los Angeles	337	10,590	36	0	2,299	10	5,241	110	1,570	0	922	402

IV. Internal Research Funding

The campus continues investing heavily in the research infrastructure to revitalize Research, Scholarly, and Creative Activity (RSCA) and the competitiveness for external funding opportunities that align with our mission and faculty interests and expertise. This effort includes the investment of approximately \$1.7 million allocated to colleges towards RSCA; \$200,000 from the Chancellor's Office for mini-grants and summer stipends; \$100,000 for the Office of Research and Economic Development Multidisciplinary Research Award; and \$200,000 for the Summer Student Research Assistantship. Other ongoing investments and incentives made by Academic Affairs and ORED to RSCA on campus include: Responsible Conduct of Research (RCR) training for faculty and students in compliance with National Institute of Health (NIH) and NSF regulations; and faculty professional development workshops in grant development.

Open-access (OA) publishing for research articles is growing in popularity; OA publications have more than doubled in the past 5 years as more faculty wish to maximize the accessibility of their work. Many OA journals are highly regarded by researchers and have high impact factors. At CSULB, OA publications currently account for 10% of annual faculty publications, and the proportion aligns with the global trend: 13% of all 2017 publications on Web of Science were OA. OA publishing, thus, represents a small but growing proportion of our university's publications. As more and more faculty choose OA publishing, it has become an important means of promotion for CSULB. ORED has allocated \$20,000 starting FY2019 to support research publications by CSULB faculty. All tenured and probationary faculty and full-time lecturers are eligible to apply to fund publication of their work. There were 38 OA awardees which funding totaled to more than \$36,253 since its inception in 2019.

This past year, the President – Provost Initiative, Faculty Research Awards in Equity, Diversity, and Inclusion (FRA-EDI) was inaugurated with a focus on Racial Equity. The \$150,000 total amount was given to 10 awardees for \$15,000 each. Through this program, the campus encouraged and supported proposals which aim to investigate issues of racial equity, diversity, and inclusion on the campus and/or our immediate geographical region that supports student access and success.

V. Research Compliance

Continuous collective efforts have been made to overcome ongoing challenges of the COVID-19 pandemic. Significant progress was made towards the improvement of CSULB research compliance programs, including:

- Updated the Responsible Conduct of Research (RCR) training policy and procedure, building up a centralized online course management and record sharing platform named RCR Course via BeachBoard.

- Enhanced Financial Conflict of Interest (FCOI) Management Program for all key personnel to complete FCOI training requirements prior to participating in sponsored projects.
- Completed Compliance Reviews of 381 grant/contract applications with a focus on RCR training, FCOI disclosures, and promptly followed up to adequately address issues in the areas of Institutional Animal Care and Use Committee (IACUC), Institutional Review Board (IRB), Export Control, and/or Intellectual Property (IP).
- Updated registrations with federal regulation agencies, such as Federalwide Assurance (FWA)/IRB registration with U.S. Department of Health and Human Services – Office of Human Research Protections (HHS-OHRP), Institutional Biosafety Committee (IBC) registration with NIH-IBC- Registration management System (RMS), IACUC 3rd year Assurance Renewal and Annual Report to NIH- Office of Laboratory Animal Welfare (OLAW) and U.S. Department of Agriculture (USDA)- Animal and Plant health Inspection Service (APHIS), and Annual Report on Possible Research Misconduct to HHS- Office of Research Integrity (ORI).
- Successfully recruited and hired a Director of Innovation and Economic Development to build an infrastructure that manages Intellectual Property towards tech-transfer and commercialization of innovations.
- Conducted reviews of Material Transfer Agreements and Non-disclosure agreements to support inter-institution collaborations.
- Continued monitoring the use of Unmanned Aircraft Systems.
- Collaborated with Academic Senate to complete the 5-year continuation reviews for five centers and institutes.
- Represented CSULB Research Compliance by sharing and exchanging best practices via continuing to serve as the Association of Research Integrity Officers (ARIO) Communication Committee member and presenting at CSU System IRB Forum, etc.

The Chancellor's Office conducted an audit of Sponsored Programs – Pre-Award Activities as part of the 2021-2022 Audit Plan. While the audit did not reveal any significant internal control problems or weaknesses, the review identified opportunities for improvement in administering RCR requirements, required COI training, suspension and debarment, and export controls. In response, the campus has updated the Cayuse Pre-Award system to now include a certification statement, indicating that Principal Investigators (PI) and other Key Personnel are not currently debarred, suspended or ineligible to receive federally funded grants or contracts. Additionally, at the time of award acceptance, ORED will verify that PI's and key personnel are not debarred or suspended. To improve the RCR program, the campus updated the RCR Procedures to address training requirements specified by NSF, NIH and USDA- National Institute of Food and Agriculture (NIFA), established and maintained a centralized documentation process to monitor RCR training completion, and reminded PIs of their RCR training requirements. For the FCOI program, the campus has implemented a documented process to track and monitor PIs and key

personnel for FCOI training requirements. The campus also developed a draft export control policy, which is pending further revisions, and the final review and approval by the Academic Senate in FY 2022-2023.

The Institutional Review Board (IRB) reviewed a total of 487 protocol submissions in AY 2021-2022, including 278 new protocols, 51 renewals/Continuing Reviews/Annual Check-Ins, and 158 requests for modifications. Among the 278 new protocols, the number of protocols processed via Full Board Review, Expedited Review, and Administrative/Limited Review were 3, 56, and 196, respectively, and the percentages from student, faculty/staff, and external investigators were 57%, 41%, and 2%, respectively. The numbers of new protocols were led by College of Liberal Arts (94), College of Health and Human Services (86), and College of Education (51). Most of the new submissions came from the Department of Psychology (36), followed by Educational Leadership (28), Kinesiology (24), Advanced Studies in Education & Counseling (19), Family and Consumer Sciences (16). More than 10 IRB Review Reliance Agreements were finalized to facilitate inter-institutional collaborations in human subject research. CSULB IRB continued to serve as the designated IRB for the CSU Chancellor Office (CO) and supported the CO to complete the 5th year renewal of the CSU CO FWA00023352. More than six department/discipline specific out-reaching workshops were provided. An increased number of one-on-one consultation sessions via Zoom/Microsoft Teams were provided to investigators with flexible schedules so that their questions/issues were addressed without delay. The IRB office supported the staff and invited Board members to attend CSU system IRB Forum and various online training conferences/workshops to get updated IRB regulations and exchange ideas on best practices to improve IRB operations. Ongoing efforts were made to provide clear guidance on student research projects and the new umbrella protocol model continued to streamline the submission/review/approval process. An IRB member liaison was recruited to provide dedicated assistance to improve protocol submission/review process for the University Honors Program.

The Institutional Animal Care and Use Committee (IACUC) reviewed and approved 6 new protocols, 11 third year de novo renewals, 5 major modifications, 27 minor protocol modifications, and 24 annual reports. The total number of active protocols was 40, among which 35 were from Biological Sciences and 4 were from Psychology and 1 from Biochemical Engineering. There were 35 research protocol, 3 teaching/observation protocols, and 2 protocols involving collaboration with external institutions. Animal research projects were funded from various resources, most notably the NIH Building Infrastructure Leading to Diversity (BUILD) grant, but also including awards from NIH, National Oceanic and Atmospheric Administration (NOAA), CSU COAST Program, Monterey Bay Aquarium Foundation, North Pacific Research Board, Ocean Protection Council, California State Science Information Needs Program, etc. There were 18 faculty/staff, 1 post-doctoral fellow, 38 graduate students, 45 undergraduate students, and 2 volunteers working on active IACUC protocols. Volunteers were CSULB alumni continuing to work on a protocol as part of their professional and educational development. IACUC was successful in completing semi-annual U.S Drug Enforcement Administration (US

DEA) regulated drug inspections. The Semi-Annual Programmatic Reviews and Semi-Annual Facilities Inspections found no major deficiencies. The campus successfully passed the unannounced USDA Annual Inspection on June 24th, 2022. More progress was made to build and implement the new electronic management system, IRBManager, to improve the efficiency of IACUC operations. In response to the COVID-19 pandemic, the IACUC emergency policy was promptly updated and enforced, and essential personnel at the Vivarium continued working onsite with flexible schedules to provide uninterrupted services, maintaining essential operations. On Feb 16th, 2022, an unexpected campus-wide power outage occurred after working hour. The Vivarium successfully overcame this emergency with efficient teamwork involving the IO, AV, IACUC office staff, safety officer, PIs, and vivarium staff. A new backup veterinarian was recruited and hired to ensure services were not interrupted in case the attending veterinarian was unavailable. Ongoing trainings were provided to IACUC office staff, vivarium personnel, and IACUC members regarding animal research regulations updates.

VI. Goals for FY 2022-23

1. Foster a campus environment that is conducive to promoting research and creative activities that contribute to the BEACH 2030 Strategic Priorities.
2. Lead research, innovation, and problem-solving in response to the grand challenges of our society through collaborative partnerships.
3. Identify research priorities for the campus, locate relevant funding opportunities, and promote faculty to seek external funding opportunities to support RSCA efforts.
4. Continue to streamline and update the administrative process and policies, including compliance with federal research regulations, by developing and adopting a more innovative and flexible strategy to overcome the ongoing challenges caused by the COVID-19 pandemic.
5. Engage faculty, staff, and students in creating a campus environment with infrastructure that supports research and entrepreneurial innovations, licensing of intellectual property, with expanded external revenue streams for campus research and creative activities that also contribute to the economic development of the local community.