

Center for Biomedical Research
Annual Report 2012-2013
Bradley J. Roth, Director, CBR
June 30, 2013

Introduction

The Center for Biomedical Research had a successful year in 2012-2013. This annual report describes activities during the fiscal year that have advanced the CBR's mission to vigorously promote and support biomedical research and education at Oakland University.

Budget

The budget indicates how the CBR supports biomedical research. Below I list the ways that CBR money (including the Research Excellence Fund, REF) was spent.

• REF awards	129,000
• Graduate student stipends	75,500
• Graduate student tuition	48,215
• Shared resources	25,887
• Director stipend	19,374
• SUPER	18,000
• Stem Cell conference	5000
• Gases/biosafety cabinet	4331
• Evolution of Sexuality conference	2000
• Grant Workshop videotape	817
• Registration fee, Stem Cell conference	300
• Lunch for new STEM faculty	171
• Biomatters ad	55
	\$328,650

The source of these funds is the \$266,120 Research Excellence Fund plus the \$58,774 CBR operating account (total of \$324,894).

Graduate Student Support

The center for biomedical research supported several graduate students this year. The CBR paid \$48,215 in tuition costs, and the Office of Research Administration generously covered the remaining tuition through the Graduate Research Assistant Tuition (GReAT) program (thanks to Vice Provost for Research Dorothy Nelson, and her Business Manager Jean Miao for this support). The amount paid for stipends for the students was \$75,500, so that the total cost for graduate

student support was \$123,715, or 38% of the total budget. Graduate students supported by the Research Excellence Fund included two PhD students each from Chemistry and Physics, and three MS students from Biology:

- Yuqin Shang, Health and Environmental Chemistry
- Elizabeth Donovan, Health and Environmental Chemistry (fall)
- Jia Li, Health and Environmental Chemistry (winter)
- David Kahn, Medical Physics
- Nicholas Charteris, Medical Physics
- Kathleen Estrada, Biology
- Jeffery Jones, Biology
- Brian Lynch, Biology

Two chemistry students supported by REF obtained their PhDs this year. Shang, who worked with CBR member Xiangqun Zeng, completed a dissertation titled "Affinity-Based Label Free Immunosensor for Detection and Quantification of Bioanalytes in Human Clinical Samples." She also published a paper about the Characterization of the Native and Denatured Herceptin by Enzyme Linked Immunosorbent Assay and Quartz Crystal Microbalance Using a High-Affinity Single Chain Fragment Variable Recombinant Antibody (Analytical Chemistry, Volume 84, Pages 8164-8170, 2012). Shang is now a postdoc at the University of Kansas.

Donovan worked with Assistant Professor Greg Felton, and her dissertation was about "Dihydrogen-Producing Electrocatalysts Inspired by Hydrogenase Active Sites." She was also lead author on three journal papers: 1) Structural Effects Upon the Durability of Hydrogenase-Inspired Hydrogen-Producing Electrocatalysts: Variations in the $(\mu\text{-edt})[\text{Fe}_2(\text{CO})_6]$ system (Journal of Organometallic Chemistry, Volume 726, Pages 9-13, 2013; 2) Cyclic Voltammetric Studies of Chlorine-Substituted Diiron Benzenedithiolato Hexacarbonyl Electrocatalysts Inspired by the $[\text{FeFe}]$ -Hydrogenase Active Site (Organometallics, Volume 31, Pages 8067-8070, 2012); and 3) Electrochemical Analysis of Cyclopentadienylmetal Carbonyl Dimer Complexes: Insight into the Design of Hydrogen-Producing Electrocatalysts (Journal of Organometallic Chemistry, Volume 711, Pages 25-34, 2012).

Graduate student Jia Li was supported by the REF in the winter after Donovan graduated. She worked with CBR member Ferman Chavez, and published two papers 1) Spin-State Tuning in Iron(II) Triazamacrocyclic Complexes (European Journal of Inorganic Chemistry, Volume 2013, Pages 2115-2121, 2013) and 2) Synthesis, Structure, and Characterization of $[\text{Fe}^{\text{III}}\text{L}(\text{C}13)]$ (L=1, 4, 8-Triazacycloundecane, 1, 4, 7-Triazacyclononane), Zeitschrift für Anorganische und Allgemeine Chemie, Volume 638, Pages 1473-1477, 2012).

Medical Physics graduate student Nick Charteris was coauthor on a paper titled "Migration of Adhesive Glioma Cells: Front Propagation and Fingering (Physical Review E, Volume 86, Article Number 011904, 2012). Charteris works with CBR member Evgeniy Khain, and uses mathematical models to study how cancer cells divide and move.

REF Research Awards

A competition for Research Excellence Fund awards that was held in the winter. Funding decisions were made by an ad hoc committee consisting of myself plus Arik Dvir (Biological Sciences), Art Bull (Chemistry), Shravan Chintala (ERI), and Anna Spagnuolo (Math & Stat). The following faculty were supported:

Andrew Goldberg	ERI	\$16,000
Ken Mitton	ERI	12,000
Roman Dembinski	Chemistry	18,000
Greg Felton	Chemistry	12,000
Zijuan Liu	Biological Sci	20,000
Lan Jiang	Biological Sci	18,000
Charlie Lindemann	Biological Sci	16,000
Susmit Suvas	Biological Sci	10,000
Libin Rong	Math & Stat	7,000
Total		\$129,000

The funds, 39% of the CBR budget, were awarded to help these faculty members perform their research, with the goal of stimulating external grant proposals, particularly proposals to the National Institutes of Health. In some cases, the funds are helping young faculty obtain the preliminary data needed to get their first grant, and in other cases they act as bridge funding for previously funded faculty.

Shared Resources

The CBR provided funding (\$4842) for three faculty members from the Department of Chemistry (CBR member Michael Sevilla, Maria Bryant, and Marta Wloch) to obtain the software package Turbomole, licensed by Cosmologic. This modern highly parallelized software is applicable to very large systems, allows for the influence of solvent, includes very high-level methods for benchmarking purposes, and is easy to use and thus suitable for undergraduate researchers. The purchase will be used for several biomedical studies, including radiation induced DNA damage by free radical species and nonlinear phenomena in medically-important gold nanoparticles.

The Eye Research Institute received \$9000 to purchase AutoQuant software to be used with existing microscopes in the ERI and the Department of Biological Sciences. This software can be used by any investigator at OU for quantification of fluorescence, cell number, and co-localization of various proteins. In addition, it allows researchers to obtain quantitative data from confocal, spinning-disc, and fluorescence microscopes.

The Department of Biological Sciences was provided \$12,045 to purchase a new diode laser for the Nikon Confocal Microscope. The argon laser previously in the confocal microscope was aging and needed to be replaced. The main users of the confocal microscope, whose work would be seriously impacted if the device failed,

are CBR members Lan Jiang, Susmit Suvas, Rasul Chaudhry, Amy Banes-Berceli, Zijuan Liu (all in the Department of Biological Sciences) and Andrew Goldberg (Eye Research Institute).

Other Major Budget Items

Each year the CBR provides \$18,000 to support the Eye Research Institute's Summer Undergraduate Program in Eye Research (SUPER). Students supported during the summer of 2012 include Heba Elghoroury, Noha Elghoroury, Wasym Mando, Kevin Roumayah, and Trung Tran.

The CBR provided \$5000 to help support the OU-Beaumont Institute for Stem Cell and Regenerative Medicine in hosting the 2nd Midwest Conference on Stem Cell Biology and Therapy.

One necessary item of infrastructure is to purchase liquid nitrogen and carbon dioxide, and to pay for recertification of biosafety cabinets, in the Departments of Biological Sciences and Chemistry, totaling \$4331.

The Department of Psychology organized a one-day conference at Meadow Brook Hall on the Evolution of Sexuality, held on March 28, the day after Jane Goodall's Varner Vitality lecture at OU. Fourteen leading sexuality researchers were invited to serve as panelists, and conference attendees came from Oakland University, University of Michigan, and Michigan State University, as well as from across the nation. Part of the goal of this conference was to showcase the new graduate programs in the Department of Psychology, which launched in the fall. The CBR provided \$2000 to help support this conference.

CBR Activities

The CBR assisted the College of Arts and Sciences in selecting the winner of the Michael P. and Elizabeth A. Kenny Merit Scholarship for the Sciences. I organized a selection committee—consisting of Assistant Professors Lan Jiang (Department of Biological Sciences), Marta Wloch (Department of Chemistry), and Yuejian Wang (Department of Physics)—to choose the winner. The scholarship was awarded to Hanna Trzeciakiewicz, a Biochemistry major who is performing research with Assistant Professor Sanela Martic in the Department of Chemistry, investigating the Tau protein that is commonly associated with Alzheimer's disease.

I worked with Daniel Bodene of Communications & Marketing to prepare a half-page ad for MichBio's spring issue of BioMatters. The advertisement was free because OU is a sponsor of MichBio, a non-profit association representing bioscience companies, universities, and academic institutions dedicated to advancing Michigan's bioscience industry.

The Office of Research Administration offered a grants workshop on March 1. Several researchers wished to attend but were not available on that day. Therefore, the CBR arranged to have the workshop video recorded. The company that put on the workshop allowed faculty who enrolled in the workshop to have access to the video. The cost of the recording was \$817.

On March 25, CBR member Gerard Madlambayan and I served as panelists at the Biosciences Think Tank event, sponsored by Career Services. Along with other panelists from industry, we offered our insights to students about how to prepare for an industry career in the biosciences.

I participated in a visit by Jay Rozzi from Creare (www.creare.com), along with David O’Ryan, Vice Provost for Research Dorothy Nelson, and School of Engineering and Computer Science Dean Louay Chamra, with the goal of exploring commercialization opportunities for OU researchers. I organized a tour of OU labs:

11:00	Susmit Suvas	304 SEB	Biological Sci
11:15	Ken Mitton	ERI	Eye Research Inst
11:30	Gerard Madlambayan	324 DHE	Biological Sci
11:45	Xiangqun Zeng	231 SEB	Chemistry
12:00	Ferman Chavez	260 SEB	Chemistry
12:15	Yang Xia	Bennett lab	Physics
12:30	Gopal Srinivasan	86 SEB	Physics

The CBR provided lunch for Rozzi, O’Ryan, Nelson, and me.

In the summer of 2012, I helped write and submitted a National Science Foundation proposal “IGERT: Integrative Graduate Training in Biomedical Translational Research.” I was PI, and Nilesh Patel, CBR member Mohammad Siadat, and Subramaniam Ganesan (all from the SECS) were co-PIs. Unfortunately, the proposal was not funded. In winter 2013 I submitted a proposal to the National Institutes of Health for a Summer Undergraduate Research Program in Child Health and Human Development (3-year, \$241,045). Faculty from the College of Arts and Sciences, the School of Health Sciences, and the School of Education and Human Services contributed to this proposal, which is pending. Finally, I assisted Honors College Dean Graeme Harper to prepare a proposal for a planning grant for a NIH BUILD (Building Infrastructure Leading to Diversity) proposal (\$179,327). Harper recruited partners from educational institutions throughout the Detroit metropolitan area to participate in the important effort.

I continue to maintain the CBR website (www.oakland.edu/cbr). The News section of this website highlights the accomplishments of OU biomedical researchers. Typically, one or two news items are posted each week. The CBR also has a Facebook page (<http://www.facebook.com/pages/Oakland-University-Center-for-Biomedical-Research/139479655553>) where you can keep up with the latest events and announcements. My goal in maintaining these websites is to increase the visibility of OU biomedical researchers, and I emphasize highlights about OU faculty and students. I believe that this resource is useful for anyone wanting to learn what sorts of research activities occur at OU.

The requirements for membership in the CBR are 1) at least an average of one biomedical publication per year over the last three years, 2) either current external support for research or at least one biomedical grant proposal per year over the last three years, and 3) at least one year working at OU. The full list of members can be found at the CBR website (www.oakland.edu/cbr). This year, Assistant Professor

Tamara Hew, of the School of Health Sciences, and Assistant Professor Dao-Qi Zhang, of the Eye Research Institute, were added as new members of the CBR.

I am a member of the leadership team for WISE@OU (Women in Science and Engineering at Oakland University). This group was funded by a grant from the National Science Foundation ADVANCE program (former Associate Dean Kathy Moore is PI), with the goal of promoting recruitment and retention of women and underrepresented minorities at OU. I consider my participation in this project to be an extension of the CBR director duties. One focus for the grant is to improve mentoring of new faculty in Science, Technology, Engineering and Mathematics (STEM) fields. As part of that effort, the CBR and WISE@OU sponsored an end-of-the-academic-year lunch for new STEM faculty hired in the last two years. Wenjin Zhou (a new Assistant Professor from the School of Engineering and Computer Science) presented her experience visiting funding organizations including NSF. In the fall, I met with all the new STEM faculty to discuss research support at OU, including the CBR, WISE@OU, the Office of Research Administration, and internal funding opportunities.

This year I served on the Provost Search Committee, with the goal of finding a permanent replacement for former Provost Virinder Moudgil. Although this was not a CBR activity, one of the reasons I was asked to be on the committee was because I am the director of the CBR. The search was successful, and Provost James Lentini will begin his term July 1, 2013.

As part of my CBR duties, I served on the organizing committee for the Second Midwest Conference on Stem Cell Biology and Therapy, was a judge at the OU-Beaumont Biomedical Research Symposium, served on OU's Premed Council, was a member of the Engineering Biology steering committee, and was a member of the Outstanding Dissertation and Thesis Award selection committee.

Biomedical Research at Oakland University

News about achievements of OU biomedical researchers and events can be found in the News page of the CBR website. Some highlights include:

- The \$62-million Human Health Building opened in the late summer, housing the School of Health Sciences and the School of Nursing.
- OUCARES presented their 5th annual Quality of Life Autism Symposium, about medical and biomedical issues in autism. The symposium was held at the Auburn Hills Marriott on May 20-21.
- The School of Business Administration presented a forum on "The Physician's Practice: Emerging Issues for Healthcare Providers" May 9-10, which brought industry practitioners and researchers together to discuss patient needs, practice management, care delivery and information technology support.
- OU's Outstanding Dissertation Award was won by Brandon Twardy, of the Biomedical Sciences: Biological Communication PhD Program. His dissertation was titled "The Role of Substance P in Murine Herpetic Stromal

Keratitis : an Ocular Herpes Simplex Virus Type-1 (HSV-1) Infection Induced Chronic Inflammation in the Corneal Stroma” and was carried out in the lab of CBR member Susmit Suvas. Twardy is currently a medical student at Wayne State University.

- Undergraduate Engineering Biology major Julianne Boyle was awarded a summer internship with the Laboratory of Clinical Investigation, part of the Intramural Research Program of the National Institute of Aging (one of the National Institutes of Health). Boyle’s research will focus on studying cartilage degradation using magnetic resonance imaging.
- Two Oakland University undergraduates, Mathrew Solt and Alexandra Zetye, received honorable mention in the 2013 Barry Goldwater Scholarship and Excellence in Education Program competition. This scholarship is the most prestigious award for undergraduate science/engineering/math majors in the United States.
- Vanessa Punal, a physics major who graduated from OU last year, was recently awarded a National Science Foundation Graduate Fellowship. Punal is currently a graduate student studying Neuroscience at Duke University. She performed undergraduate research at OU with me with and Dao-Qi Zhang of the Eye Research Institute.
- Oakland University doctoral candidate Avinash Konkani won the American College of Clinical Engineering 2013 Student Paper Competition. The award is given annually to a graduate student for writing an essay that “contributes significantly to the body of knowledge in clinical engineering.” Konkani, a doctoral student in the Department of Industrial & Systems Engineering who works with Associate Professor Barb Oakley, was also appointed as a Junior Associate Editor and member of the Student Advisory Board of the IEEE Journal of Translational Engineering in Health and Medicine.
- Graduate student Cameron Atkinson has received a National Eye Institute travel grant to attend the 2013 Association for Research in Vision and Ophthalmology Annual Meeting during May in Seattle, Washington. Cameron is a student in the Biomedical Sciences: Biological Communication PhD program, and her graduate research is supervised by CBR member Dao-Qi Zhang of the Eye Research Institute.
- Students from Troy Athens High School and Troy-based International Academy East Campus visited the Eye Research Institute, where they received hands-on training in a variety of eye-related research areas.
- The 2012 President’s Colloquium highlighted the research of Charles Lindemann (Department of Biological Sciences). Lindemann presented a talk about “Life in the Fast Lane: The Story of Cilia and Flagella.”
- CBR member Mohammad-Reza Siadat, of the Department of Computer Science and Engineering, was awarded \$42,866 by the National Institutes of Health to support Engineering Biology undergraduate Diamond Park. The award was a supplement to the National Institute on Aging grant “Urinary Continence Index for Prediction of Urinary Inconsistency in Older Women,”

awarded to Siadat and Dr. Ananias Diokno of Beaumont Health Systems. The supplement was to promote diversity in health-related research.

- Afton Turner, an international student who spent the summer researching at Oakland University, returned to the campus last fall to present at the Second Midwest Conference on Stem Cell Biology and Therapy. Turner, a student from the University of Central Lancashire in England, spent six weeks at Oakland working in the lab of CBR member Rasul Chaudhry.
- Assistant Professor and CBR member Libin Rong, of the Department of Mathematics and Statistics, was awarded the 2012 Leon Heller Postdoctoral Publication Prize in Theoretical Physics, for the best article describing work performed primarily during the tenure of a postdoctoral appointment at the Los Alamos National Laboratory. Rong published his award-winning paper titled “Rapid Emergence of Protease Inhibitor Resistance in Hepatitis C Virus” in Science Translational Medicine. In only two years, this paper was cited 43 times.
- Barbara Penprase (School of Nursing) was named the inaugural Endowed Professor at Crittenton Hospital Medical Center, a position that will allow her to work in a collaborative role with Crittenton Hospital and focus on the evidence based outcomes of relationship based care.
- Karen Dunn and Cheryl Riley-Doucet (both with the School of Nursing) were inducted as fellows in the Gerontologic Society of American Nursing. They were honored for their research on aging.
- The Third Oakland University Beaumont Health System Biomedical Research Symposium was held November 14 at the Oakland Center Banquet Hall. The symposium, organized by the staff of the Office of Research Administration, highlighted recipients of OU-Beaumont Multidisciplinary Research Awards to encourage and foster multi-disciplinary, inter-institutional research collaboration. Among the presenters were CBR members Gerard Madlambayan, Xiangqun Zeng, and Susmit Suvas.
- Department of Biological Sciences graduate student Chithra Muraleedharan was selected to receive an American Society of Microbiology Student Travel Grant to assist in covering expenses when she attended the 2012 Interscience Conference on Antimicrobial Agents and Chemotherapy in San Francisco. Muraleedharan works in the laboratory of Associate Professor Satish Walia.
- CBR members Ken Mitton (Eye Research Institute), Tamara Hew (School of Health Sciences) and Libon Rong (Department of Mathematics and Statistics) were honored at OU’s 18th Annual Faculty Recognition Luncheon in April. Rong received the New Investigator Research Excellence Award.
- Assistant Professor Kanako Taku, of the Department of Psychology, is a member of a research team that has been awarded a \$31,012 grant from the American Academy of Family Physicians through their Joint Grant Awards Program, which supports research that poses questions of high relevance to family medicine. Titled “An Evidence-Based Definition of Physician Wellness

- in Primary Care,” the project will be carried out in collaboration with several physicians, including Dr. Jodie Eckleberry-Hunt of Beaumont Health System.
- CBR member Dao-Qi Zhang of the Eye Research Institute obtained a \$15,000 research grant from Midwest Eye-Banks to study Dysfunction of the Retinal Ganglion Cells in Diabetes.
 - The 2nd Midwest Conference on Biology and Therapy was held October 5-7, 2012 at Oakland University, in the new Human Health Building. The conference addressed the latest advancements in basic and applied stem cell research. The organizing committee was chaired by CBR member Rasul Chaudhry. OU speakers included CBR members Chaudhry, Ferman Chavez, and Gerard Madlambayan, and also Naimisha Reddy Beeravolu, Sumi Dinda, Domenico Luongo, Christina McKee, and Anne Mitchell, plus many others presenting posters.
 - The Office for Human Research Protections Research Community Forum was hosted by Oakland University and Beaumont Health System on May 2 in Oakland Center. The forum, organized by the Office of Research Administration, was a one-day program focusing on regulatory and ethical issues in protecting human participants in research.
 - CBR member Patricia Wren, of the School of Health Sciences, was part of a team that was awarded a federal grant for campus suicide prevention efforts. Wren works with School of Education and Human Services faculty members Michael MacDonald and Lisa Hawley, and with Dalton Connally of the Department of Sociology, Anthropology, Social Work and Criminal Justice. Grizzlies Response: Awareness and Suicide Prevention (GRASP) is a comprehensive multi-dimensional program encompassing both the university and the southeast Michigan community. The grant, totaling over \$600,000, is funded through the Garrett Lee Smith Memorial Act and managed by the Suicide Prevention Branch within the Center for Mental Health Services in the Substance Abuse and Mental Health Services Administration.
 - In June, the Liaison Committee for Medical Education reported that the Oakland University William Beaumont School of Medicine had achieved Provisional Accreditation. Passing this milestone keeps the School of Medicine on track for achieving full accreditation in time for the graduation of the charter class of 2015.
 - Two Oakland University undergraduates, Nada Sitto and Lisa Shammas, have been recognized for their research work with the Early Career Forum Travel Award from The Endocrine Society. They attended the Endocrine Society’s 95th Annual Meeting and Expo in San Francisco in June. They work with Associate Professor Sumi Dinda in the School of Health Sciences.
 - CBR members Yang Xia, Frank Giblin, and Michael Sevilla continued their National Institutes of Health funded research throughout the year.

Particularly noteworthy were the successes of OU biomedical researchers who received large, new external grants for their research.


- Assistant Professor Jing Tang, of the Department of Electrical and Computer Engineering, was awarded a 2-year, \$174,648 grant from the National Science Foundation. She will be studying Magnetic Resonance Imaging Assisted Dynamic Positron Emission Tomography Imaging. The award is part of NSF's BRIGE program (Broadening Participation Research Initiation Grants in Engineering). This research will integrate anatomical information with functional image formation, and will provide a technique to noninvasively quantify myocardial blood flow, contributing to the diagnosis and treatment of coronary artery disease.
- Assistant Professor Nessian Kerrigan of the Department of Chemistry was awarded a 3-year, \$300,000 National Science Foundation grant to study the Catalytic Asymmetric Heterodimerization of Ketenes and Applications. This work could lead to more efficient and flexible access to building blocks useful for the preparation of an array of structurally complex and biologically active molecules.
- The Eye Research Institute, led by CBR member Frank Giblin, obtained a \$500,000 grant from the Vision Research ROPARD Foundation, which supports research to combat retinopathy of prematurity and other retinal diseases. The funding will enable researchers in the ERI's Pediatric Retinal Research Laboratory to obtain preliminary data that will help make future NIH proposals more competitive. In addition, Richard Skipper of Ft. Worth, Texas, donated \$30,000 to support the ERI's Summer Undergraduate Program in Eye Research (SUPER).
- CBR member Lan Jiang, of the Department of Biological Sciences, was awarded a \$324,338 grant from the National Institutes of Health. The 3-year project, titled The Drosophila Expansion Gene Controls Tracheal Tube Diameter, began April 1.
- CBR member Zijuan Liu, of the Department of Biological Sciences, was awarded a \$422,803 grant from the National Institute of Environmental Health Sciences, one of the National Institutes of Health. Liu's award, titled Role of SLC39A8 (Zip8) in Selenite Transport, began in May and is for three years.
- CBR member Susmit Suvas, of the Department of Biological Sciences, was awarded a \$1.8 million National Institutes of Health grant to study ways of inhibiting chronic inflammation of the eye that can lead to corneal blindness.

The NIH awards to Jiang, Liu and Suvas are especially impressive given the poor funding environment because of the federal government's sequestration. Moreover, these awards reinforce an important point about CBR funding through the REF program. The reason biomedical research is singled out for support at OU is not that it is intrinsically more important than other research programs. Rather, it is because this support can serve as seed money to help investigators successfully apply for external funding, especially from the National Institutes of Health. Jiang, Liu and Suvas (and CBR member Chhabi Govind, who received a \$1.3-million NIH grant in

the 2011-2012 fiscal year) all received REF funding from the CBR in the last four years, and benefitted from the shared resources financed in part by the CBR. This support helped these outstanding young investigators compete against the top biomedical researchers in the world to obtain scarce NIH funds. The Research Excellence Fund is an investment in the research programs of our best and brightest faculty, and the return on this investment has never been more evident than in the success of these up-and-coming young faculty members. Congratulations to Govind, Jiang, Liu and Suvas for their accomplishments, and to the Department of Biological Sciences chairman Arik Dvir, who has worked tirelessly to provide the resources and environment necessary for their success.

Brad Roth

U.S. Department of Health & Human Services Text Size: A A A



Research Portfolio Online Reporting Tools
(RePORT)

HOME | ABOUT RePORT | FAQs | GLOSSARY | CONTACT US

QUICK LINKS
RESEARCH
ORGANIZATIONS
WORKFORCE
FUNDING
REPORTS
LINKS & DATA

Note: We have noticed issues with project abstracts on RePORTER. We are working to get this resolved by 5 PM (EST) Today. We apologize for any inconvenience.

Home > RePORTER > Project Search Results MyRePORTER Login | Register System Health: GREEN

Project Search Results

Back to Query Form
Save Query
Share Query

Export

GO

PROJECTS ?
PUBLICATIONS
PATENTS
DATA & VISUALIZE
MAP
LINKS
NEWS & MORE

There were 9 results matching your search criteria. Show/Hide Search Criteria

Click on the column header to sort the results

T: Application Type; Act: Activity Code; Project: Admin IC, Serial No.; Year: Support Year/Supplement/Amendment

<input type="checkbox"/>	T	Act	Project	Year	Sub #	Project Title	Contact PI/ Project Leader	Organization	FY	Admin IC	Funding IC	FY Total Cost by IC	Similar Projects
<input type="checkbox"/>	2	R01	EY002027	35		PROTEINS OF NORMAL AND CATARACTOUS LENSES	GIBLIN, FRANK JOSEPH	OAKLAND UNIVERSITY	2012	NEI	NEI	\$431,377	
<input type="checkbox"/>	5	R01	GM095514	02		MECHANISMS OF RSC RECRUITMENT AND ITS ROLE IN TRANSCRIPTION	GOVIND, CHHABI KUMAR	OAKLAND UNIVERSITY	2012	NIGMS	NIGMS	\$273,816	
<input type="checkbox"/>	1	R15	GM100369	01A1		THE DROSOPHILA EXPANSION GENE CONTROLS TRACHEAL TUBE DIAMETER	JIANG, LAN	OAKLAND UNIVERSITY	2013	NIGMS	NIGMS	\$324,338	
<input type="checkbox"/>	1	R15	ES022800	01		ROLE OF SLC39A8 (ZIP8) IN SELENITE TRANSPORT	LIU, ZIJUAN	OAKLAND UNIVERSITY	2013	NIEHS	NIEHS	\$422,803	
<input type="checkbox"/>	1	U79	SM060542	01		GRIZZLIES RESPONSE: AWARENESS & SUICIDE PREVENTION (GRASP) AT OAKLAND UNIVERSITY	MACDONALD, MICHAEL	OAKLAND UNIVERSITY	2012	CMHS			
<input type="checkbox"/>	1	R15	HD058303	01A1		BELIEFS ABOUT THE ROLE OF NUTRITION ON MIND-BODY INTERACTIONS	RAMAN, LAKSHMI	OAKLAND UNIVERSITY	2009	NICHD	NICHD	\$222,000	
<input type="checkbox"/>	2	R01	CA045424	26		MECHANISMS FOR RADIATION DAMAGE TO DNA: LET EFFECTS	SEVILLA, MICHAEL DOUGLAS	OAKLAND UNIVERSITY	2013	NCI	NCI	\$203,672	
<input type="checkbox"/>	1	R01	EY022417	01A1		CORNEAL NEUROPEPTIDES AND HERPETIC STROMAL KERATITIS	SUVAS, SUSMIT	OAKLAND UNIVERSITY	2013	NEI	NEI	\$358,359	
<input type="checkbox"/>	5	R01	AR052353	05		ADAPTABILITY OF ARTICULAR CARTILAGE TO EXTERNAL LOADING BY MICROSCOPIC IMAGING	XIA, YANG	OAKLAND UNIVERSITY	2013	NIAMS	NIAMS	\$422,505	

Download Readers:

[About RePORT](#) | [FAQs](#) | [Glossary](#) | [Contact Us](#) | [Site Map](#) | [Data Access Policy](#) | [Accessibility Statement](#) | [Privacy Statement](#) | [Disclaimer](#) | [FOIA](#) | [Help Downloading Files](#)

The RePORTER database is available to all public users at <http://expoter.nih.gov/>. As the data are available for bulk download, the RePORTER system reserves the right to block IP addresses that fail to adhere to instructions in the system's robots.txt files or submit requests at a rate that negatively impacts service delivery to other users. RePORTER reserves the right to terminate any automated query to the RePORTER application that negatively affects service delivery to other users.

Office of Extramural Research | National Institutes of Health | U.S. Department of Health and Human Services | USA.Gov - Government Made Easy | Grants.Gov

Page Last Updated on July 22, 2013
 This site is best viewed with Internet Explorer (7.0 or higher) or Mozilla Firefox (3.0).

NIH...Turning Discovery Into Health®

RePORTERE3