

NEW FACULTY ORIENTATION

RESEARCH AND ECONOMIC DEVELOPMENT

August 21-22, 2023

Joseph Balthasar, PhD
Executive Director,
Research Initiatives

Welcome to UB:

A comprehensive, research-intensive public university





#1 public university in NYS;
flagship SUNY campus



Member of AAU
(65 top research-intensive
American Universities)

**\$428.7
million+**

annual spending on research
(NSF reported)

**\$3
billion**

Annual economic
impact

19.3k + 11.1k

Undergraduate students

Graduate students

16%

of students are international

40%

of domestic students racially/ethnically diverse

A few of our largest grants

\$47.5 million

Science and Technology
Center Awards*

\$36.7 million

Clinical and Translational
Science Awards**

32 years

Continuous funding for
Women's Health Initiative**

*National Science Foundation / **National Institutes of Health

Welcome New Faculty

Office of the Vice President for Research and Economic Development

www.buffalo.edu/research



Joseph Balthasar, PhD

*Executive Director,
Research Initiatives*

516 Capen Hall

716.645.3321

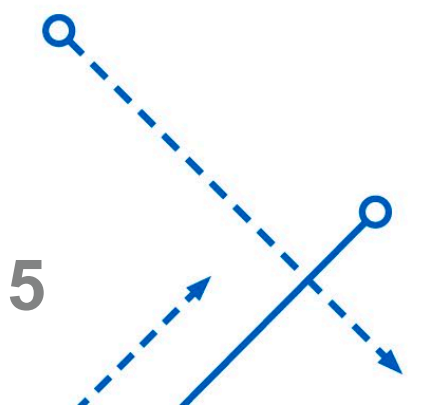
jb@buffalo.edu

Supporting faculty
success in research,
innovation, and
entrepreneurship

VPRED MISSION

As a top public research university - and No. 1 in New York State – UB is a place where ambition meets altruism. Join other top minds in pursuing your passion, utilizing world-class facilities and bettering our world, one discovery at a time.

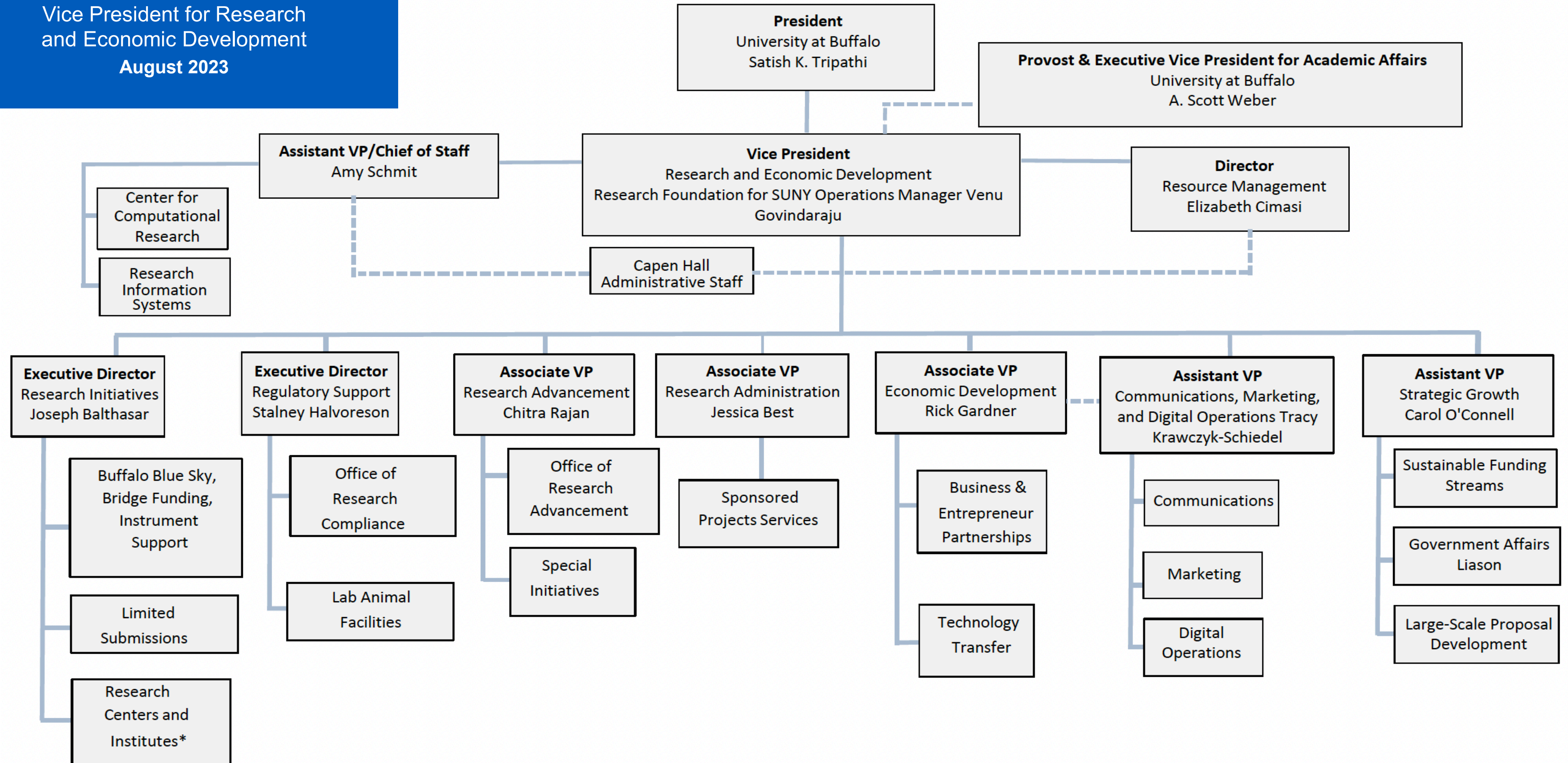
The Office of Research and Economic Development is the intersection of innovation, entrepreneurial and business partnerships, transforming communities locally and around the globe. Our offices assist everyone – from principal investigators to budding and mature businesses – in obtaining funding for their research and development, fostering scientific discoveries and entrepreneurial stewardship to advance UB’s Top 25 initiative and societal impact.



Unit Organizational Chart

Vice President for Research and Economic Development

August 2023



* CRIA, ILPB, IAD, CII, RENEW, Ctr. for Urban Studies, Community Health Equity Research Institute, Proteomics Core, Genomics & Bioinformatics Core, Ctr. for Cannabis & Cannabinoid Research, Ctr. for Ingestive Behavior, Ctr. for Post-Acute COVID Sequelae, Ctr. for Hybrid Rocket Exascale Simulation Technology

ASSOCIATE DEANS FOR RESEARCH

Associate Deans for Research act as liaisons between faculty and the Office of Research and Economic Development to disseminate information, provide guidance related to research process and policies, and attend VPRED meetings.

Last Name	First Name	Title	School
Balu-Iyer	Sathy	Associate Dean for Research	School of Pharmacy and Pharmaceutical Sciences
Rajkovich	Nicholas	Associate Dean for Academic Affairs	School of Architecture and Planning
Chang	Yu-Ping	Associate Dean for Research and Scholarship	School of Nursing
Collins	R. Lorraine	Associate Dean for Research	School of Public Health and Health Professions
Wooten	James	Vice Dean for Research and Faculty Development	School of Law
Suresh	Nallan	Associate Dean for Faculty, Research and Centers	School of Management
Noyes	Katia	Associate Dean for translational and Team Science	School of Public Health and Health Professions
Dulmus	Catherine	Associate Dean for Research	School of Social Work
Leonard	Kenneth	Director	Clinical Research Institute on Addictions

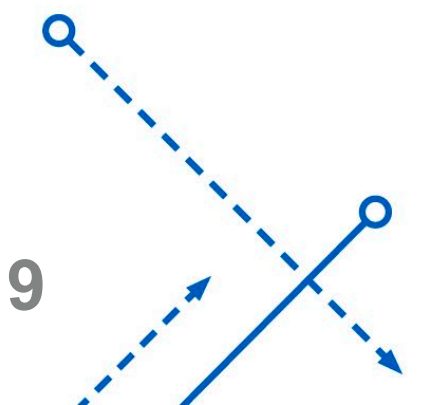
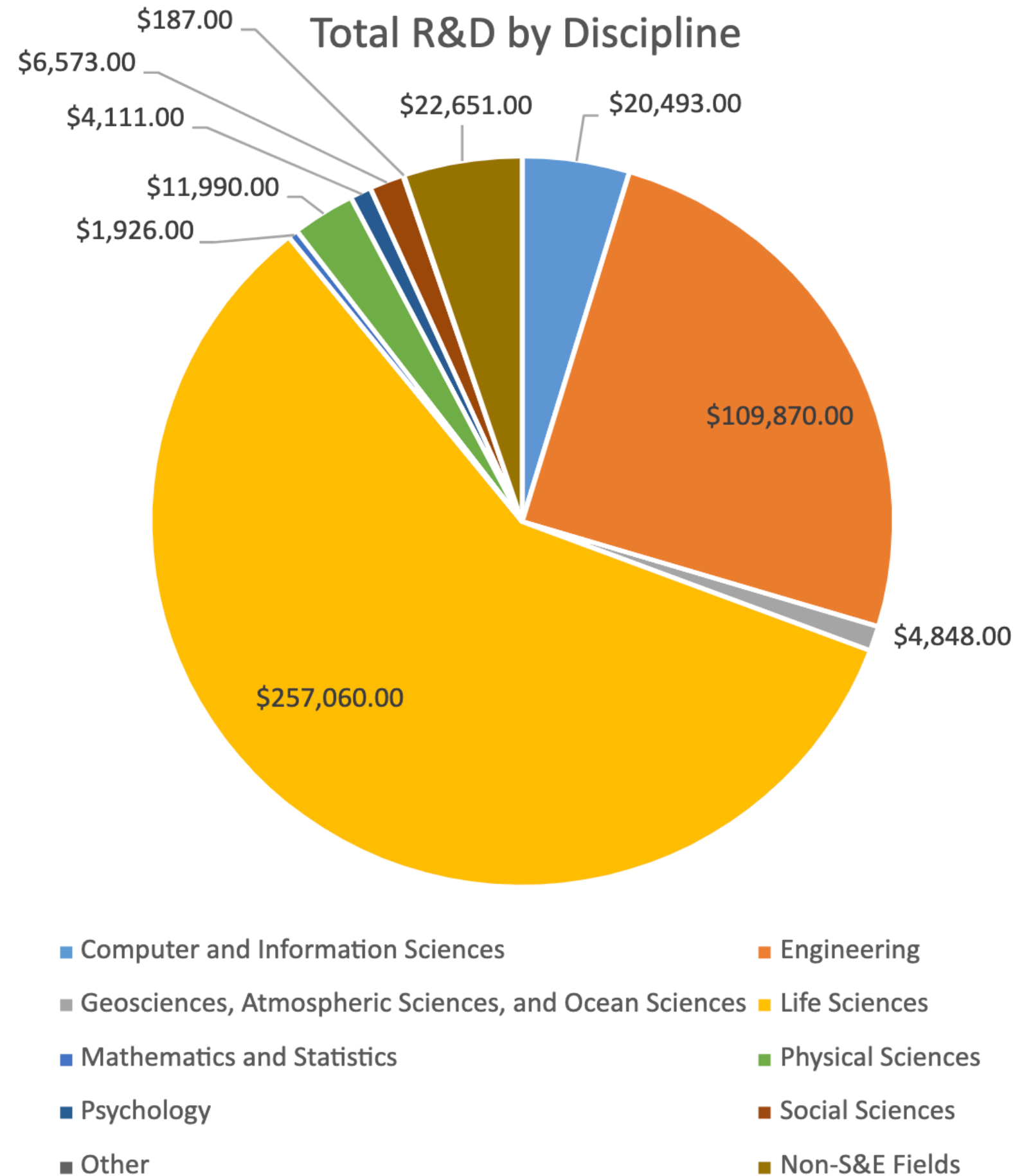
ASSOCIATE DEANS FOR RESEARCH, CONT'D

Last Name	First Name	Title	School
Kirkwood	Keith	Associate Dean for Research	School of Dental Medicine
Murphy	Timothy	Associate Dean for Clinical and Translational Research	Jacobs School of Medicine and Biomedical Sciences; CTRC
Quattrin	Teresa	Associate Dean for Research Integration	Jacobs School of Medicine and Biomedical Sciences
Ganapathy	Murthy	Associate Dean for Research Administration	College of Arts and Sciences
Wang	X. Christine	Associate Dean for Interdisciplinary Research Education	Graduate School of Education
Patel	Mulchand	Associate Dean for Research and Biomedical Education	Jacobs School of Medicine and Biomedical Sciences
Sutton	Mark	Assistant Dean for Research and Graduate Education	Jacobs School of Medicine and Biomedical Sciences
Sudit	Moises	Associate Dean for Research and Graduate Education	School of Engineering and Applied Sciences

UB R&D Portfolio

Ideally positioned to conduct interdisciplinary research

Total R&D at UB and affiliated institutions: \$439.7 million in FY2022



Research Support

Supporting and advancing the research and creative activities of our faculty



Joseph Balthasar, PhD
*Executive Director,
Research Initiatives*
516 Capen Hall
716.645.3321
jb@buffalo.edu



Stanley Halvorsen, PhD
*Executive Director,
Regulatory Support*
516 Capen Hall
716.645.3321
stanh@buffalo.edu

Research Initiatives

Supporting the scholarly success of our faculty (while enabling marketable solutions for our economy)

- Coordinate all limited submission proposals
- Proposal cost sharing/matching
- Bridge funding
- Expertise inventory & “match-making”
- Fueling new research: seed funding programs
- Centers and facilities funding

Joseph Balthasar, PhD
Executive Director, Research Initiatives
516 Capen Hall
645-3321
jb@buffalo.edu

Research Initiatives

Supporting the scholarly success of our faculty (while enabling marketable solutions for our economy)

- Coordinate all limited submission proposals
- Proposal cost sharing/matching
- Bridge funding
- Expertise inventory & “match-making”
- **Fueling new research: seed funding programs**
- Centers and facilities funding

Joseph Balthasar, PhD
Executive Director, Research Initiatives
516 Capen Hall
645-3321
jb@buffalo.edu

Grant Resubmission Program

**Provides up to
\$15,000 / project**

- Research Services**
- Find Research Funding
 - UB Funding
 - Current, Annual and Ongoing Funding
 - Buffalo Blue Sky
 - ▶ **OVPRED Grant Resubmission Awards**
 - Proteomics and Bioanalysis Core Seed Fund
 - Closed Funding Opportunities
 - New and Early Career Faculty
 - Grants.gov Funding Opportunities
 - Limited Submission Opportunities

- Prepare and Submit Your Grant Proposal
- Administer Your Award
- UB Rates and Facts for Researchers
- Commercialize Your Research
- Clinical Research
- Behavioral Research

OVPRED Grant Resubmission Awards Program

Pilot project offering support to faculty for improving on already highly-rated proposals for resubmission

What: Up to \$15,000

For: Activities that could make a difference in the competitiveness of the resubmitted proposal

Who: Current faculty whose research is administered through the Research Foundation

Due: Rolling applications

Send to: [Grant Resubmission Program](#).

Agency	Rating
National Institutes of Health	Top 30 percentile and/or Impact Score < 40 after discussion

Buffalo Blue Sky 2.0 Initiative

Program Summary

- Coins summing to a total value of \$1.435M were awarded to faculty based on three criteria: **proposal submissions, total expenditures, and indirect costs**
 - The top 100 faculty, as ranked in each category, qualified for a \$5K coin
 - Faculty who ranked within the top 100 in proposal submissions and either total expenditures or indirect costs qualified for a \$10K coin
 - Faculty who were top 100 in all three categories qualified for a \$25K coin

Coins may be redeemed to support (a) collaborative, inter-disciplinary research projects, (b) equipment purchases, (c) research relating to UB priorities (e.g., research relating to COVID-19)

Buffalo Blue Sky 3.0

Under current development!!


- **Likely to focus on support for postdoctoral fellows**


Research Initiatives

Supporting the scholarly success of our faculty (while enabling marketable solutions for our economy)

- Coordinate all limited submission proposals
- Proposal cost sharing/matching
- Bridge funding
- Expertise inventory & “match-making”
- Fueling new research: seed funding programs
- **Centers and facilities funding**

Joseph Balthasar, PhD
Executive Director, Research Initiatives
516 Capen Hall
645-3321
jb@buffalo.edu


University at Buffalo
Research and Economic Development



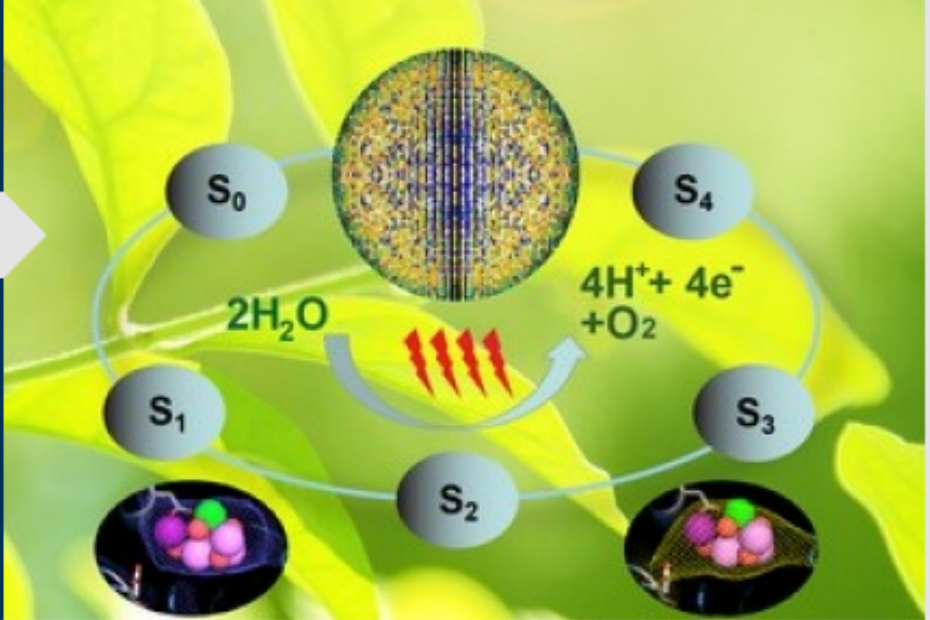
Find Help

- Who We Are
- Research Services
- Research Centers
- Business & Entrepreneur Partnerships
- SEARCH 
- INFO FOR 

Research and Economic Development >

Highlighted Research Centers

- BioXFEL Research Center
- RENEW Institute
- Buffalo Institute for Genomics (BIG)
- Biorepository



BioXFEL Research Center




A first snapshot of photosynthesis in action (photo: Mary Zhu) part of the groundbreaking research that promises to transform the way we design and develop drugs. [BioXFEL](#) is an NSF-funded Science and Technology Center composed of eight

Research Centers


UB researchers discover new knowledge to solve problems and answer questions. With more than 100 active research centers, institutes and collaborative projects, topics range from the environment to evolving materials and technologies in applied manufacturing, and from big data analytics to addictive behaviors.

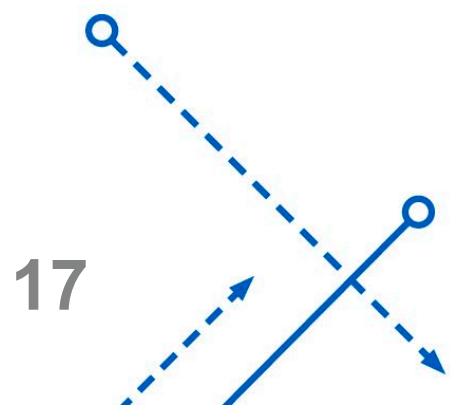
- Category
- A-Z List
- School

Research Centers by Category

-  AI: Documents, Data & Sensor Technology
-  Arts and Humanities
-  ...

Establishing New Centers

 Find out more about establishing [decanal and university research centers](#).



OVPRED Equipment Programs

EQUIPMENT PROGRAMS (released June 2022)

- **Matching program for new equipment**
 - 1:1 match up to \$100,000
 - Prioritized equipment purchases of \$50 - \$200k
 - Requires commitment for sharing equipment with UB community
- **Equipment maintenance program**
 - 1:1 match for equipment maintenance costs (including service contracts)
 - Requires commitment for sharing equipment with UB community

OVPRED Equipment Programs

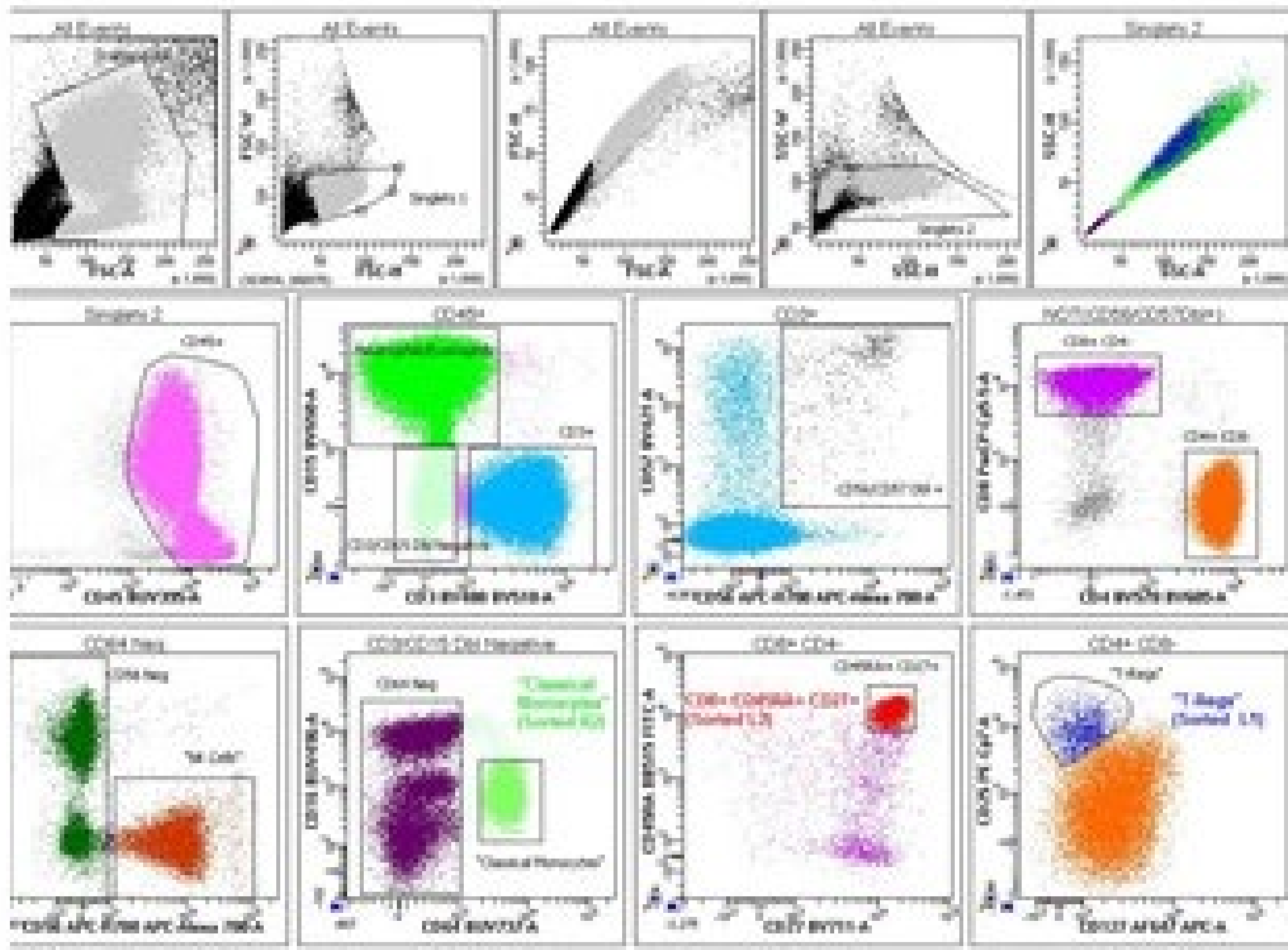
Support for high-cost, enabling equipment (Released October 2022)

- Enabling Equipment
 - \$6 million initial investment (over 3 years)
 - Prioritizes equipment purchases of \$1.5 - \$3 million
 - Requires commitment for sharing equipment with UB community, and development of recharge center to return $\geq 5\%$ / year

OVPRED Equipment Programs

BD FACSAria Fusion Flow Sorter

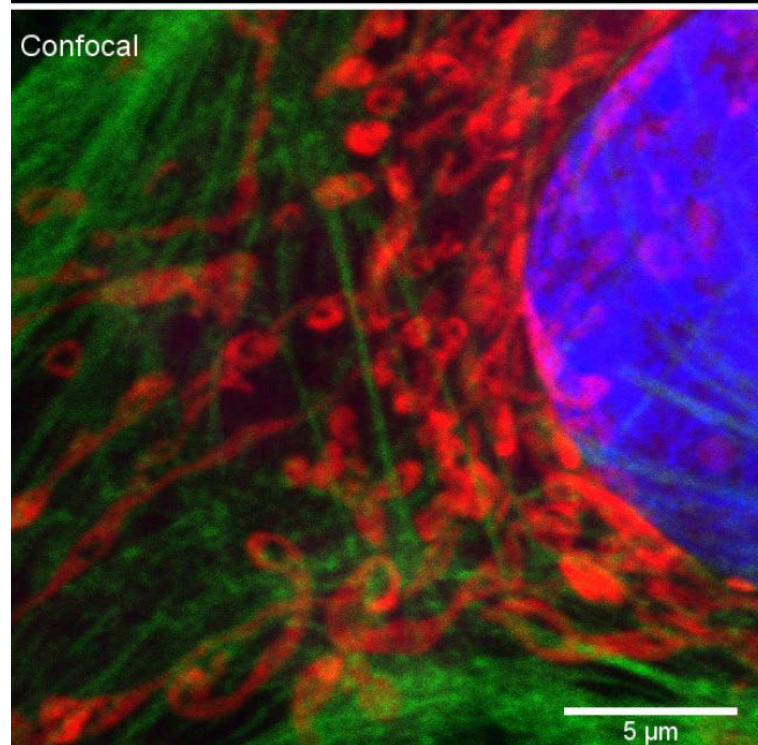
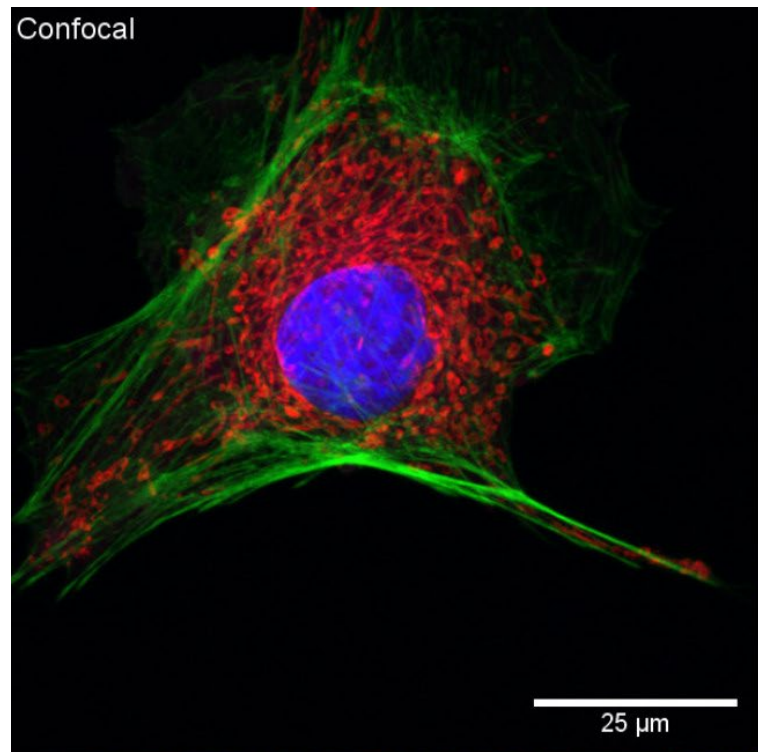
-Dr. K. Kirkwood, PI



OVPRED Equipment Programs

Leica Stellaris 8 Confocal Microscope

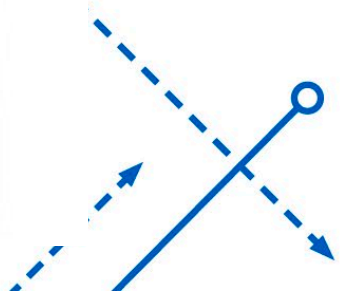
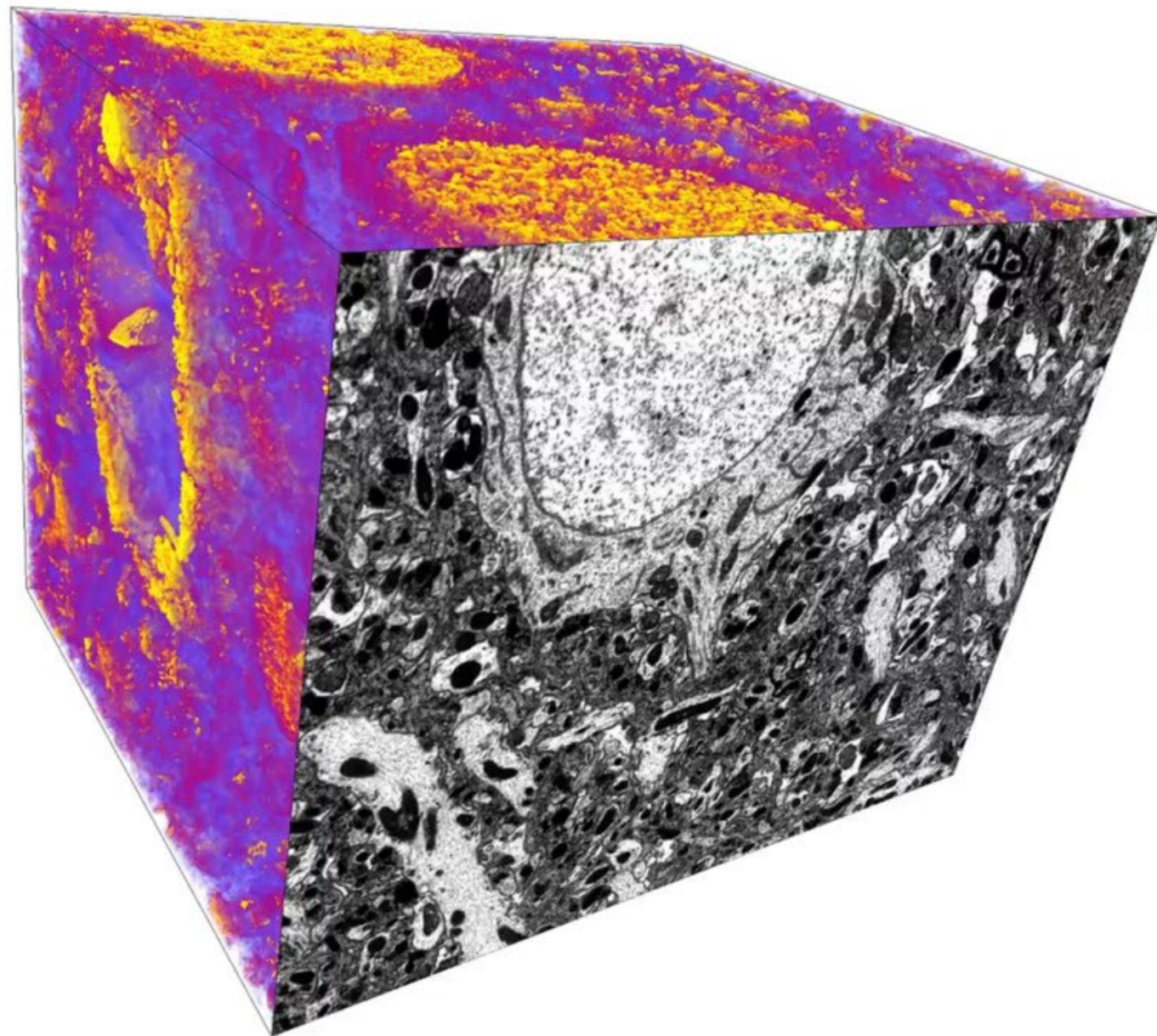
-Dr. Stan Schwartz, PI



OVPRED Equipment Programs

FIB/S(T)EM: Thermo-Fisher Inc. -Model Helios 5 UX

- Dr. Krishna Rajan, PI

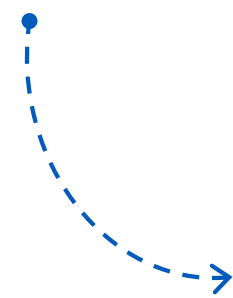


Regulatory Support: Office of Research Compliance

Programs to ensure UB's research is consistent with federal, state and university regulations



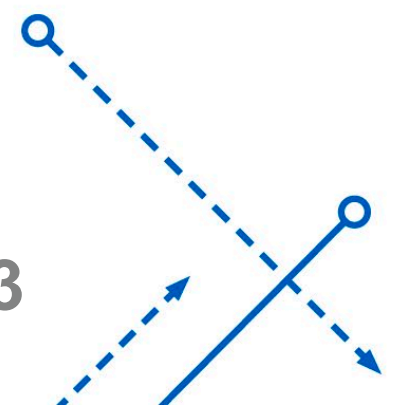
Rich Karalus, PhD
Director
716.888.4881
karalus@buffalo.edu



- Research subjects protection program (IRB)
- Financial conflicts of interest
- Responsible conduct in research
- Export controls



Stanley Halvorsen, PhD
Executive Director, Regulatory Support
516 Capen Hall
716.645.3321
stanh@buffalo.edu



Regulatory Support: Laboratory Animal Facilities

Providing support and facilities for ethical and humane research involving animal subjects



Jennifer Peirick, DVM

Director

716.829.6821

jpeirick@buffalo.edu



Stanley Halvorsen, PhD

*Executive Director,
Regulatory Support*

516 Capen Hall

716.645.3321

stanh@buffalo.edu

Laboratory Animal Facilities Locations:

• North Campus:

- Hochstetter Hall
 - Conventional rodent housing
- Park Hall
 - Conventional rodent housing

• South Campus:

- Biomedical Education Building (BEB)/Biomedical Research Building (BRB)
 - High Level Barrier Suite & Barrier Rooms (rodents)
 - Animal Biosafety Level 2 Suite (rodents)
 - Conventional rodent housing
 - Large animal housing/surgery suite
 - Rodent microPET
 - Optical imaging/irradiation available in BRB
- Pharmacy Building
 - Conventional rodent housing
 - Barrier Rooms

Downtown Campus:

- Clinical and Translational Research Center
 - High Level Barrier Suite & Barrier Rooms (rodents)
 - Conventional rodent housing
 - Large animal housing/surgery suite
 - 3T MRI, PET/CT for large animals
 - 9T MRI for rodents
- Jacobs School of Medicine and Biomedical Sciences
 - High Level Barrier Suite & Barrier Rooms (rodents)
 - Animal Biosafety Level 2 & 3 Suites (rodents)
 - Pig and rabbit housing
 - Aquatic housing
- Clinical Research Institute on Addictions
 - Conventional rodent housing



Office of Research Advancement

ORA supports the University's research and scholarly community in the pursuit of external research funding through:

Proposal Management

- Proposal organization: checklists, templates, sample plans

Proposal Development

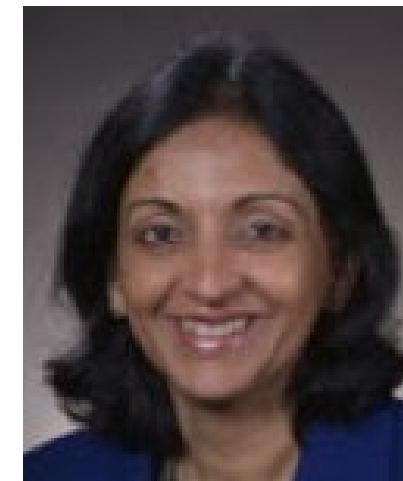
- Developing non-technical components of the proposal

Proposal Quality Improvement

- Editing proposals and provide technical reviews

Other Services

- Find funding opportunities (SPIN database)
- Programs and workshops to improve grant writing skills



Chitra Rajan, PhD
*Associate Vice President,
Research Advancement*
chitrara@buffalo.edu



Maggie Shea
*Co-Director, Proposal
Management*
mshea3@buffalo.edu

Sponsored Projects Services

Facilitates research, providing guidance to faculty and staff in securing and administering sponsored funding / awards.

Contact:

Jessica Best

Associate Vice President
716.645.2532

Joe Bach

Assistant Director, Training
716.645.1573

Jeff Schieder, CRA

Director, Pre-Award
716.645.4408
jss10@buffalo.edu

Mary Kraft

Director, Post-Award
716.645.4420
mekraft@buffalo.edu

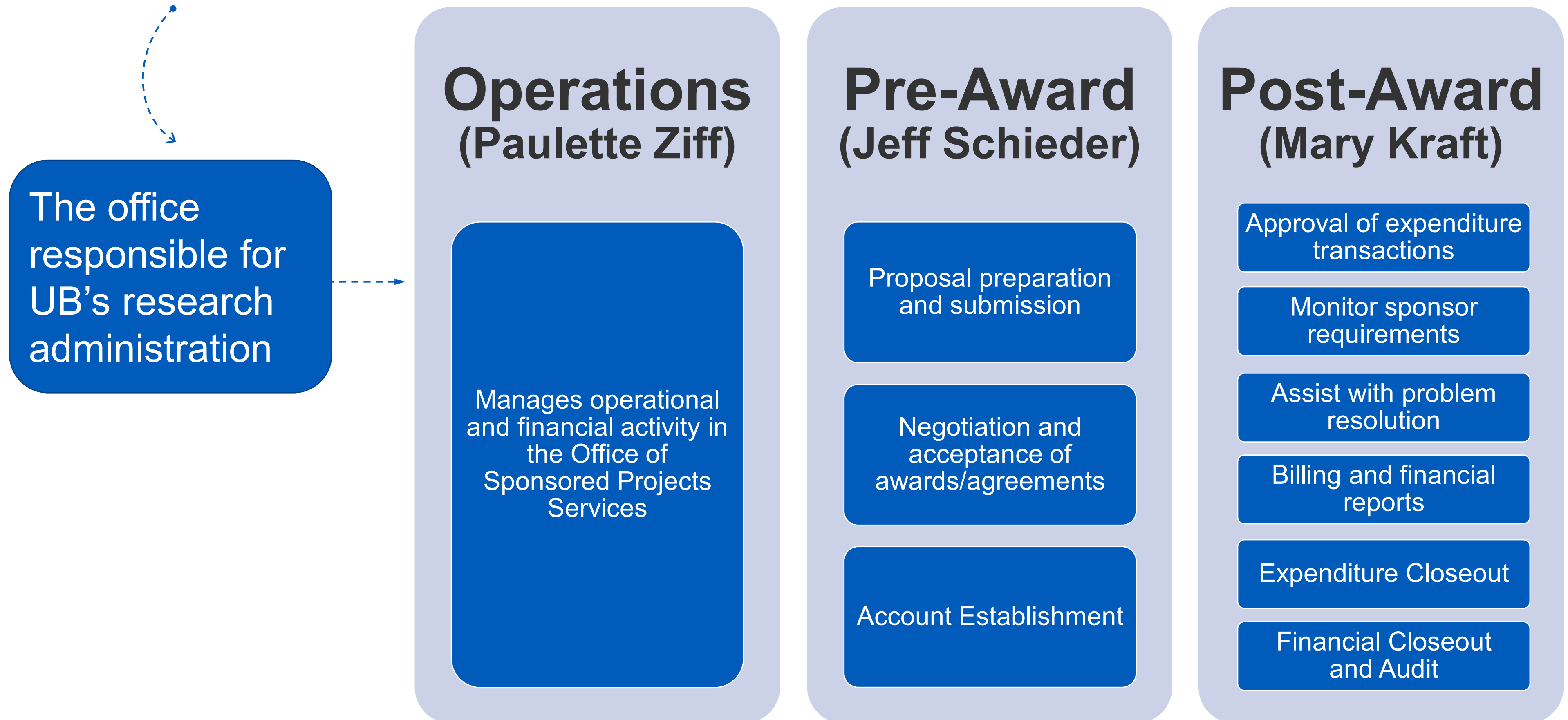
Paulette Ziff

Director, Operations
716.645.4414
pziff@buffalo.edu



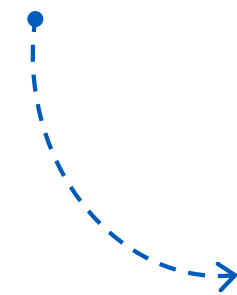
SPS submitted
1,801 proposals and
assisted in
administering 1,835
awards on behalf of
faculty and staff in
FY 2020-21

Sponsored Projects Services



Research Information Systems

Provide integrated information services, resources and technologies in support of UB's research, training, and other sponsored activities



- Application development
- Training and development
- Research administration analysis
- Website development
- Software development
- General support

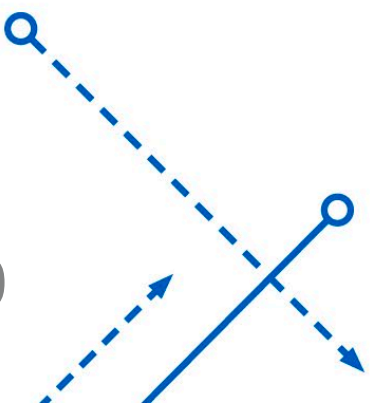


Tom Wendt

Director

716.829.3320

wendt@buffalo.edu



Business & Entrepreneur Partnerships

Business and Entrepreneur Partnerships (BEP) can help you fund translational research, protect your intellectual property, make industry connections, and bring your breakthroughs to the world.

There are two paths you can take to move your discoveries and research forward. We'll help you identify which is right for you.

Work with industry

We'll help you engage with companies to collaborate on R&D and/or license your technology.

- Learn how to engage with companies and best practices for industry-sponsored research
- Get contract support for industry collaboration
- Access research funding
 - o Matching grants
 - o Proof-of-concept grants
 - o Funded student internships
- Explore licensing options

Launch a business

We'll explore if a startup is right for you and help you get it off the ground.

- Access funding and programs to de-risk and commercialize innovations
- Consult with experienced, successful entrepreneurs on startup exploration
- Tap into business formation services



Rick Gardner

Associate Vice President for Economic Development

716.645.8144

rg62@buffalo.edu

rg62@buffalo.edu

BEP has a team of professionals ready to help you make industry connections and protect your intellectual property

Commercialization Support for Faculty

Commercialization Support:

- New technology assessments – IP and market opportunity
- Secure intellectual property protection – patents, copyrights, trademarks
- Validate commercial opportunity
- Access to proof-of-concept funding to de-risk technology
- Negotiate options and license agreements
 - To established companies
 - To a startup



Did you know?

The BEP team has supported over 1,200* partnerships with industry partners and can introduce you to key business contacts.

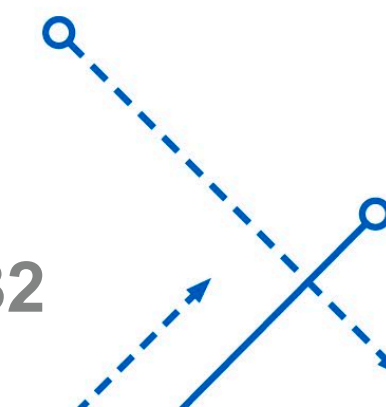
*FY 2020-2023

Making connections to industry, to other faculty, to core facilities

Industry Engagement Support

We help nurture trusting collaborative relationships

- Educate on best-practices on how to engage with industry partners
- How to write a scope of work
- How to budget for industry sponsored research
- How to protect your IP
- How to uncover industry needs (open ended questions)
- Contract support & managing contracts for faculty-industry collaboration



Funding & Commercialization Support for Faculty

Translational Funding:

- Industry Sponsored Research
- Matching grants supporting collaborative R&D with Industry
- Proof-of-concept grants – Innovation Hub
- Drug discovery & development through EDI
- Direct funding for materials informatics translational research
- Industry federal funding (SBIR/STTR)
- Funding for student internships



Did you know?
Over 50* faculty-led teams or
companies supported by BEP
*FY 2020-2023

Research Infrastructure



Center for Computational Research:

- Nationally recognized supercomputing center
- High-performance computing environment and high-end visualization laboratories
- Support staff with expertise in scientific computing, software engineering, parallel computing, bioinformatics, visualization, advanced database design, medical informatics, high-speed networking



Genomics & Bioinformatics Core:

- Provides high-quality services on massively parallel (Next-Generation) sequencing and expression analysis platforms enhanced by analytical services of a talented team.
- Dedicated to providing comprehensive and cost-effective results
- WNY's first next-generation sequencing service provider



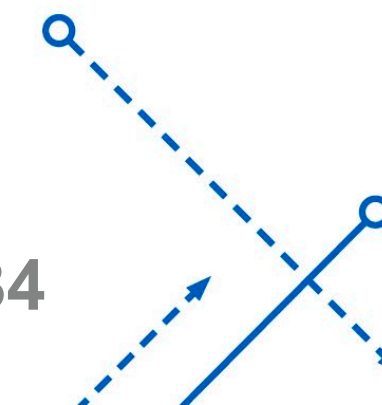
Center for Materials Informatics Instrument Facility:

- Centrally-coordinated instruments that support research in nanoscience, physics, engineering, materials research



Proteomics & Bioanalysis Core

- Specializes in proteomics, liquid chromatography-mass spectrometry and bioinformatics.
- Services Fortune 500 companies, such as Merck and Johnson & Johnson.



Centralized Biorepository Program

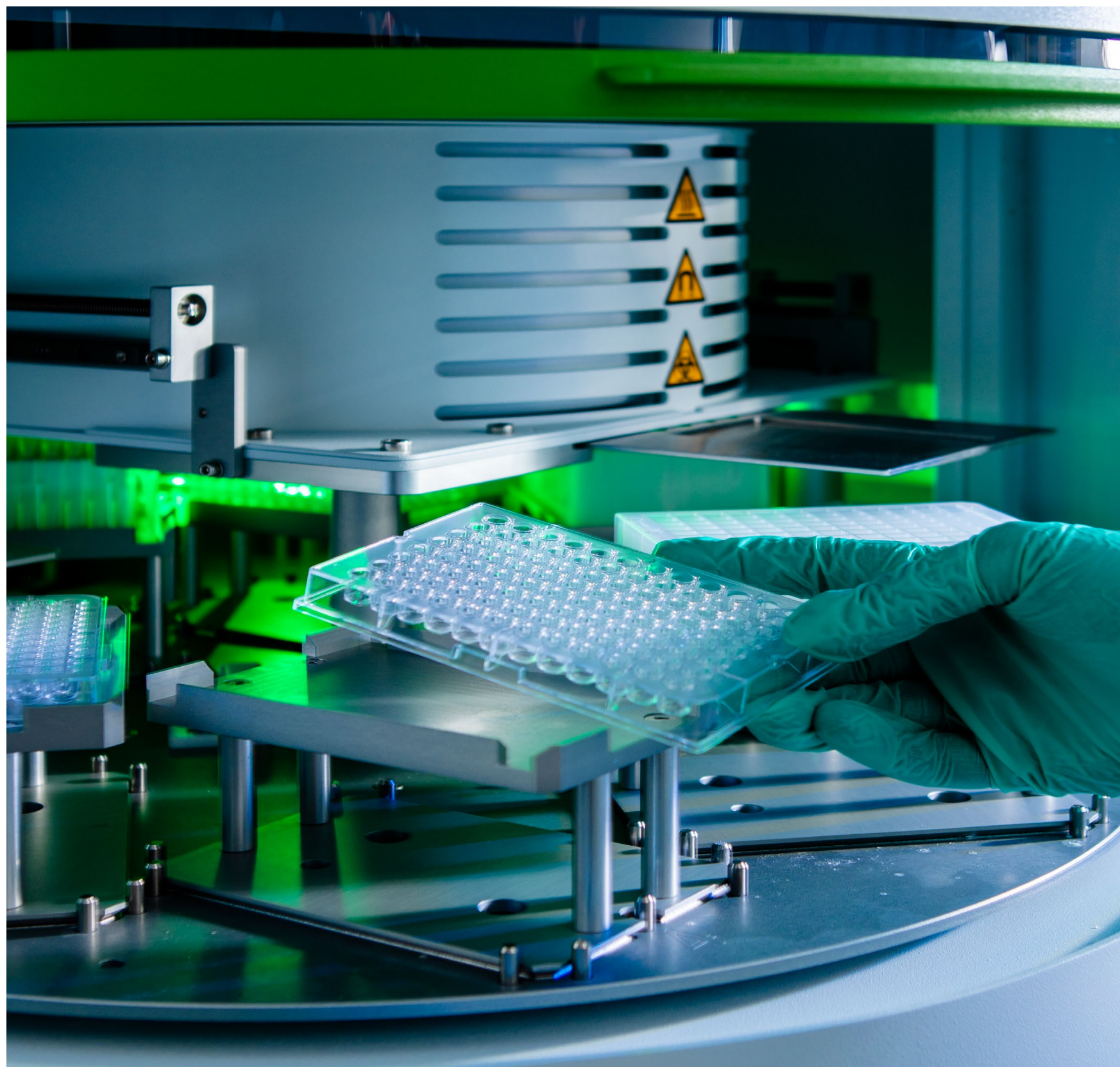
The UB Biorepository program has implemented cutting edge technology to create a high-quality program to ensure that all biobank services and facilities ensure minimal variation in sample quality due to harmonized sample collection and processing, increased accuracy of biosample identity, reliable and seamless integration between sample data and quality control metrics, and regulatory compliant facilities and processes designed to meet the needs of any biosample application.

It is an enterprise-wide resource, serving the University at Buffalo community as well as local biotechnology partners through centralized and highly automated standardized services for the collection, processing, management, and distribution of biological assets.

The UB Biorepository is located in the Clinical and Translational Research Center (CTRC), Room 6071, 875 Ellicott Street, Buffalo, New York 14203 in the heart of the Buffalo-Niagara Medical District.



Primary contact for faculty queries:
Norma Nowak, PhD
njnowak@buffalo.edu or
biorepository@buffalo.edu



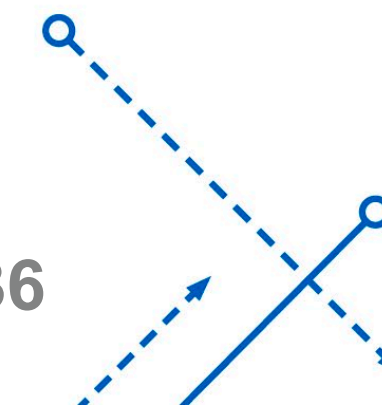
Centralized Biorepository Program

Why use the UB Biorepository?

- Remain competitive (from a grant and/or from a product development perspective)
- Make research dollars go further by not having to create/support significant infrastructure for biobanking operations
- Ensure the regulatory compliance of samples so no samples are restricted for use downstream
- Access sample processing services that ensure high quality data and samples for research and clinical applications
- Access sample collections to facilitate and accelerate research and product development programs

How can I use the UB Biorepository services?

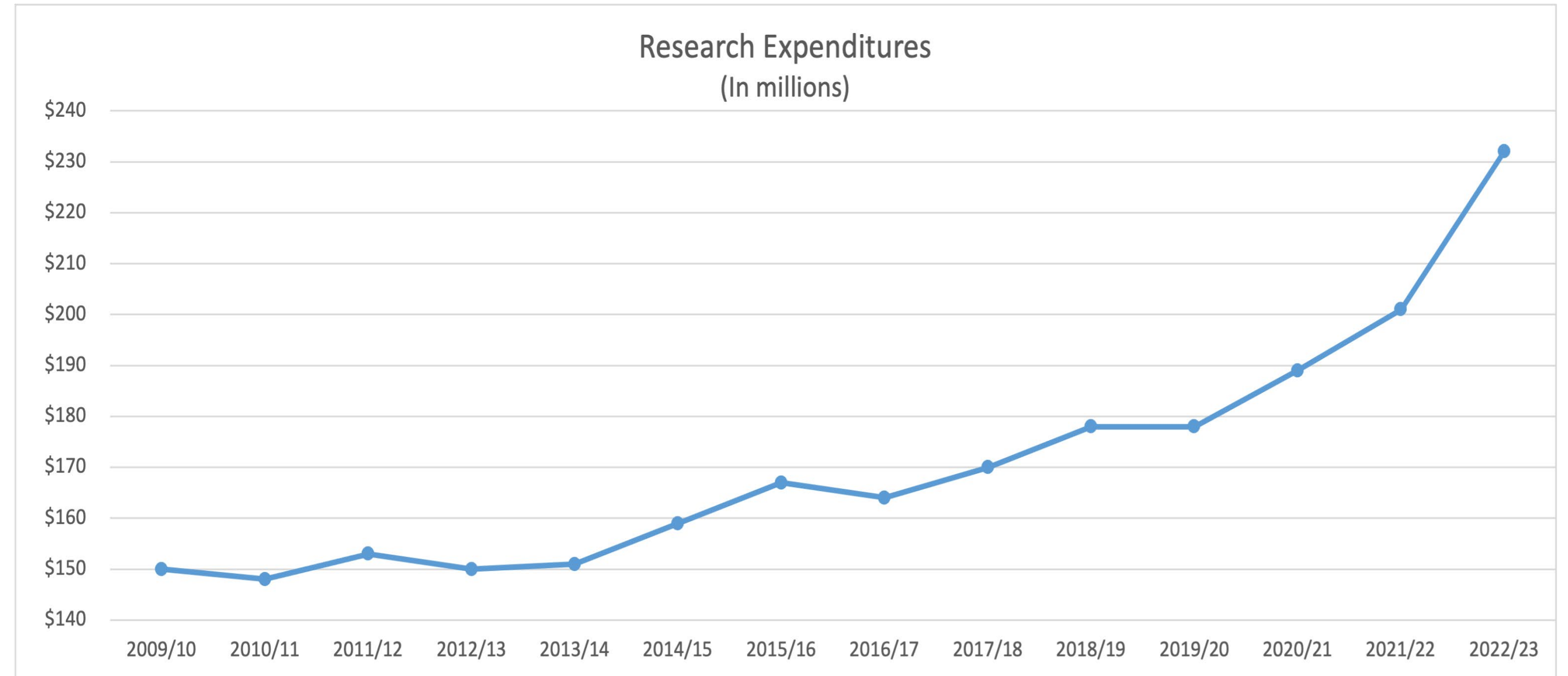
- Consult with Biorepository staff to build and implement an effective biomaterial plan for existing and future studies



UB's RESEARCH AND OTHER SPONSORED ACTIVITIES

UB's research and creative enterprise is poised for continued growth

New faculty are the most important ingredient for fueling that growth



Questions?

