

VICE PRESIDENT FOR RESEARCH & ECONOMIC DEVELOPMENT (VPRED)

Advancing UB's research enterprise, facilitating innovation, and promoting entrepreneurship.

Working with you to impact our world

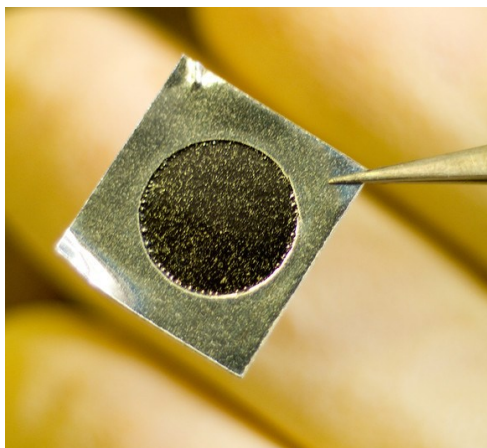
The Vice President for Research and Economic Development (VPRED) provides a supportive infrastructure for scholarly and creative activities, research compliance, innovation, industry collaboration, and technology transfer.

Supporting Scholarly Excellence

- New projects
- Funding opportunities
- Proposal assistance—develop, review, submit
- Research/funding partners
- Research award management

Contributing to Job Growth & Diversified Economy

- IP protection
- Technology transfer help
- Start-ups / Incubation
- Innovation for business growth
- Attraction of knowledge / creative workers to UB / Buffalo



Ensuring Compliance in a Regulatory Environment

- Up-to-date policies from sponsoring agencies
- Federal regulations and university guidelines
- Forms for maintaining research compliance

Creating Collaborations

- Shared equipment and facilities
- Strategic partnerships with institutions and investigators
- Results, expertise and stories communicated to multiple audiences

 **University at Buffalo**
Research and Economic Development

Contacts

Venu Govindaraju, PhD
Vice President for
Research & Economic
Development
716.645.3321
vpr@research.buffalo.edu

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Amy M. Schmit
Assistant Vice President
for Administration &
Planning
716.645.0314
amschmit@buffalo.edu

Did you know?

UB's sponsored expenditures for FY19-20 were more than \$178 million — which represents the research, training, economic development and other activities of our faculty colleagues.

RESEARCH SUPPORT

Supporting the university's scholarly and creative activities in its drive to be a top 25 public research institution.

Internal Funding

University internal funds are meant to support exploratory research projects. These programs include Buffalo Blue Sky, Arts and Humanities Seed Grants, and Grant Resubmission Awards.

Bridge Funding and Cost-Sharing

The OVPRED partners with academic units to fund projects that temporarily lose external support. It also provides cost sharing for projects when required by sponsors. These programs fill budget gaps and ensure the continuity and quality of faculty research.

Contact

Joseph Balthasar, PhD
Executive Director of
Research Initiatives
716.645.2824
jb@buffalo.edu

Stanley Halvorsen, PhD
Executive Director of
Regulatory Support
716.829.2651
stanh@buffalo.edu



Limited Submissions

Funding agencies sometimes restrict the number of applications that institutions can submit in response to grant opportunities. The Research Support Office coordinates the nomination process to ensure UB submits only the number of allowed proposals.

Check program announcements for any agency limitations.

Serving you better

Funding sponsors, especially federal agencies, want solutions to complex problems, and increasingly look for multidisciplinary research projects when selecting which proposals to fund. UB's Research and Economic Development office provides tools and programs to help faculty meet this demand, facilitating collaborative teams with expertise in multiple disciplines.

Did you know?

UB's research enterprise exceeds \$412.5M in total R&D expenditures, leading in part to the university's overall direct and indirect economic impact of nearly \$2.2B annually.



University at Buffalo

Research and Economic
Development

OFFICE OF RESEARCH COMPLIANCE (ORC)

Supporting the regulatory environment required for externally and internally funded research, training and other activities.

Protecting you and your research

- Institutional Review Board (IRB): 716.888.4888
- Quality Assurance: 716.829.2752; jmsmith@buffalo.edu
- Conflict of Interest: coiofficer@buffalo.edu
- Export Controls: 716.888.4881; exportcontrols@research.buffalo.edu
- Institutional Animal Care & Use Committee (IACUC): 716.888.4888; IACUC@research.buffalo.edu
- Responsible Conduct of Research: Richard Karalus 716.888.4881; karalus@buffalo.edu



Fully Accredited

UB is fully accredited for its research programs:

- The human research program is accredited by the Association of Human Research Protection Programs (AAHRPP).
- The animal research program is accredited by the Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC).

Serving you better

Offering guidance and regulatory oversight to faculty members and staff so they can perform high quality research.

We do this by ensuring that UB meets the highest standards for the protection of the rights and welfare of human research subjects and the humane care of laboratory animals.

Contact

Richard Karalus, PhD
Director, Office of Research Compliance
716.888.4881
karalus@buffalo.edu

Did you know?

UB has faster IRB review times.

Since 2015, UB's compliance support staff have helped reduce review times:

- From 78 to 41 days — full-committee
- From 36 to 19 days — expedited studies

UB is an IRB leader, using best practices by implementing the new single-review process — Member SMART IRB reliance system

COMPARATIVE MEDICINE & LABORATORY ANIMAL FACILITIES

Supporting faculty and staff performing ethical and humane animal research.

Special Facilities

- SPF Barrier Unit
- Biosafety Level 2 Unit
- Biosafety Level 3
- MRI/PET for rodents
- MRI for large animals
- PET/CT for large animals
- X-ray
- Fluoroscopy
- Ultrasound
- Optical Imaging



Special Services

- Surgical suites
- Post mortem room
- Pharmacy
- Procedure rooms
- Diagnostic lab
- Technical assistance: injections; blood collection; antibody raising; anesthesia; surgery; monitoring equipment; pharmacy; supplies; training; tours

Serving you better

We can house and accommodate most species, including small animals - mice, rats, rabbits, ferrets, chinchilla, guinea pigs and hamsters; as well as large animals - pigs, sheep, dogs and NHP, as well as amphibians (Xenopus), reptiles, fish and birds.

When transferring animals to UB, please contact LAF: 716.829.2919

Contact

Lisa Martin, DVM, DACLAM
Director, CM-LAF
716.829.3977
Fax: 716.829.3249
lbmartin@buffalo.edu

Locations:

South Campus

- Biomedical Education Building
- Pharmacy Building

North Campus

- Hochstetter Hall
- Park Hall

Downtown Campus

- Clinical & Translational Research Center
- Clinical Research Institute on Addictions
- Jacobs School of Medicine & Biomedical Sciences

Did you know?

AAALAC to UB
"... commends you and the staff for providing and maintaining an excellent program of laboratory animal care and use," in retaining full accreditation for the labs and IACUC
November 2018

OFFICE OF RESEARCH ADVANCEMENT (ORA)

Helping researchers develop and submit competitive grant proposals

Pre-Award Services

- Find funding opportunities (SPIN database)
- Proposal consultation: checklists, templates, sample plans
- Identify review criteria
- Compile data tables for NIH Training Grants

Workshops/Training

- Programs and workshops to improve grant writing skills; learn about funding agencies; and meet / interact with agency program managers

Proposal Development

- Ensure proposal compliance with solicitation guidelines
- Work in consultation with SPS to ensure compliance prior to submission
- Edit proposals and provide technical reviews
- Proposal coordination for multi-institution proposals
- Assist with supplemental documents: draft standard university text; format proposal documents



Serving you better

ORA supports the university's research and scholarly community in the pursuit of external research funding. ORA works closely with new investigators to help secure initial research funding, and with established investigators to pursue large, multi-disciplinary research grants.

Contacts

ubgrants@buffalo.edu

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

Alex Desha
Proposal Manager
adesha@buffalo.edu

Did you know?

What faculty say about ORA:

- *"Excellent, responsive, knowledgeable and a pleasure to work with..."*
- *"Exceptional job in putting together a most professional package"*
- *"The help I received was invaluable .."*
- *".. my proposal was so much better after ORA's editing ..."*
- *"Programs improved my grant writing abilities .."*
- *"Got my first grant funded in first attempt! Thanks to*



University at Buffalo

Office of Research Advancement

Research and Economic Development

SPONSORED PROJECTS SERVICES (SPS)

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

Securing Funding

SPS guides and assists university faculty and research staff in their efforts to secure sponsored funding / awards through proposal development and the submission process.

Managing Awards

SPS provides guidance to faculty and research staff to administer and manage sponsored funding / awards prudently, ensuring research meets sponsor commitments, compliance requirements, and university expectations.

Contacts



Jeff Schieder
Director, Pre-award
716.645.4408
Jeffrey.Schieder@buffalo.edu

Mary Kraft
Director, Post-award
716.645.4420
Mary.Kraft@buffalo.edu

Paulette Ziff
Assistant Director, Operations
716.645.4414
Paulette.Ziff@buffalo.edu

Sponsored Awards

SPS serves the UB research community with professional staff who specialize in facilitating and administering the life cycle of sponsored funding / awards.

SPS staff members help create budgets, submit proposals, negotiate agreements and accept awards. SPS establishes accounts, manages expenditures, liaises with and invoices sponsors, and assists with closing awards.

Did you know?

- Approx. 1,800 proposals are submitted annually.
- Approx. 1,600 awards are active at any time.
- Last year, UB had \$178M in externally funded project expenditures.



Serving you better

SPS works in teams to support the research community. To contact the team that supports your unit please visit the SPS website, scroll to the bottom of the page under Staff Directory and select Find Your SPS Representative.



University at Buffalo

Sponsored Projects Services

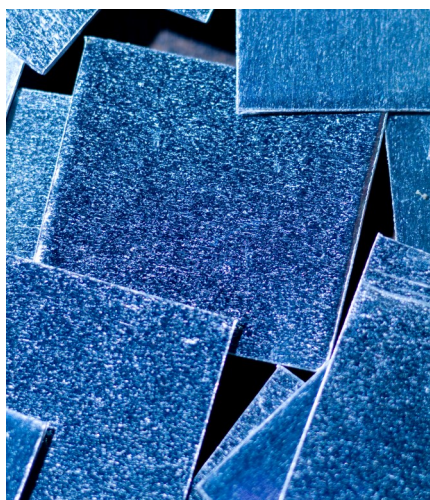
Research and Economic Development

RESEARCH INFORMATION SYSTEMS (RIS)

We build relationships with university departments and schools at all levels to create, enhance, and maintain a rich research IT infrastructure. We provide services of the highest quality with a customer service focus.

Services

- Research Administration Analysis
- Application Development
- Application Support
- Training and Development



Click portal support

Click automates the submission, review and approval processes while managing all major administrative aspects of the research and compliance lifecycle – from proposal development and submission through compliance checks, negotiations, award setup and award management to eventual project closeout.

Serving you better

We are dedicated to supporting UB's research efforts, both on the administrative and program side, providing integrated information services, resources and technologies to the UB community.

RIS has two branches of service: Electronic Research Administration (ERA) and Project Support. ERA develops and maintains administrative systems such as Click, OnCore and Central Study Registration. Project Support develops systems for investigator research projects at a reasonable rate.



Contacts

Tom Wendt
Director,
RIS
716.829.3320
wendt@buffalo.edu

...
Michael Grogan
Senior Programmer/Analyst,
RIS
716.829.3270
grogan@buffalo.edu

...
Paul Reinhardt
Manager,
RIS
716.887.2482
per@buffalo.edu

Did you know?

RIS has introduced Project Support, an initiative aimed at giving investigators quality systems development at reasonable rates.

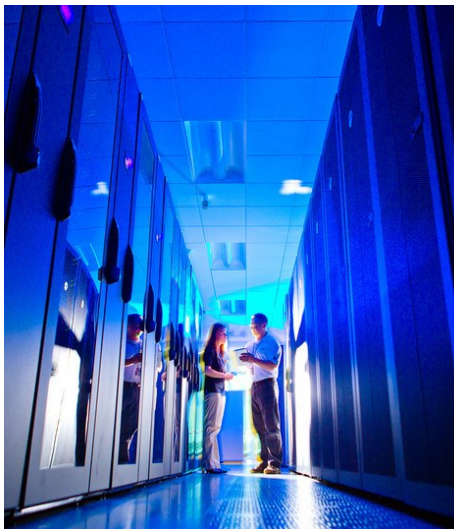
RIS supports a variety of administrative and research systems.

CENTER FOR COMPUTATIONAL RESEARCH (CCR)

Offering access to high performance computing resources and expertise in scientific computing, simulation, data analytics and visualization.

Capabilities and Services

- Supercomputer with more than 30,000 processor cores and high-performance networks; 3 PB high performance GPFS based file system; more than 1.7 PFlop/s of peak performance compute capacity.
- Support staff with expertise in scientific computing, computational science, parallel processing, data analytics, modeling and simulation, and software development.
- Support for scientific and medical visualization.



Serving you better

CCR—a leading academic supercomputing facility—offers assistance in advanced computing, scientific and medical visualization, software engineering, parallel computing and data analytics. There are no direct charges for computer time, however, queue priority is based on direct funds budgeted to CCR from faculty grants. Faculty should: include direct funds in grant proposals for projects requiring significant time and expertise; include a percent credit to CCR on the Sponsored Projects Services approval form; and acknowledge CCR support in publications.

Training and Accounts

- CCR offers courses, training and workshops in high performance computing as well as how to access and run on CCR resources.
- Primary accounts reside with faculty member.
- Faculty-based clusters supported.

Contacts

Matthew Jones, PhD
Director, CCR
716.881.8958
jonesm@buffalo.edu

Support:
ccr-help@ccr.buffalo.edu

Did you know?

CCR is 24/7 operation

- Over 650 users
- Faculty users run over 6 million jobs annually (more than 16,000 jobs / day)
- CCR delivers more than 3.8 million CPU days of computing annually

BUSINESS AND ENTREPRENEUR PARTNERSHIPS (BEP)

Helping move innovations to impact.

We connect faculty researchers to the resources needed to fund and conduct research, commercialize technology, partner with industry or launch a startup.

How We Help Our Faculty Partners

We partner with faculty, startups, mature companies, students and the WNY community to spur innovation that creates lasting impacts. Our staff extends over several centers and programs connecting you to technology transfer, commercialization services, startup support teams, funding, core research facilities, incubation space, industry contacts and enable student internships and experiential learning opportunities.

How We Help You Engage With Industry

- Educate on best-practices—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 and identify a technology opportunity
- Act as main point-of-contact, arrange meetings, keep momentum
- Coordinate contract support for faculty-industry collaboration

Promoting faculty & industry opportunities



Funding Available

Through our centers and programs, there are many opportunities for funding. We support technology commercialization and industry partnerships through:

- Matching grants
- Industry Sponsored Research
- Prove out/de-risk technology / POC grants (commercialization)
- Industry projects
- Collaborative faculty (Blue Sky)
- Funding Internships
- Federal Funding Support

[QUICK FACTS]

Funds and resources exist to help UB technology impact society

Programs are in reach to either start and launch a business or bring your technology to market by licensing to industry

BEP has a staff of 38 professionals ready to help you make industry connections and protect your intellectual property

BEP facilitates many programs and grants to help build and grow industry partnerships or commercialize technologies

Did you know?

We connect hundreds of Businesses to technology, innovation, knowledge, talent, and funding EVERY YEAR!



University at Buffalo

Business and Entrepreneur Partnerships

Research and Economic Development

NYS CENTER OF EXCELLENCE IN BIOINFORMATICS & LIFE SCIENCES (CBLS)

UB CENTER FOR ADVANCED TECHNOLOGY IN BIG DATA AND HEALTH SCIENCES (UB CAT)

Here is how we unlock potential discoveries.

We foster a culture of innovation that drives discovery in life sciences to directly impact our regional businesses, our state economy and the communities we call home.

Inspire. Connect. Innovate.

We connect researchers, businesses and key players in the life sciences to our technology-based research and economic development centers (CBLS and UB CAT). Through our world class facilities and NYS grant funds, we drive innovative faculty-industry collaborations and job growth in New York State.

Let our resources get to work for you!

Fostering creativity and partnerships



Accelerate and Grow

- Collaborate with more than 250 experts engaged in biological, physical and computational research
- Find the funding and consultation services you need to grow through UB and our expansive ecosystem partners

Technology and Resources at Work for You

- Home to the region's brightest minds and cutting edge facilities for genomics, proteomics, supercomputing and more
- Access state-of-the-art equipment to support life sciences innovation from discovery through diagnostics and therapeutics
- Expand your network by connecting with business and technology leaders through our educational and entrepreneurial programs and networking events



Contacts



Norma Nowak, PhD
Executive Director, CBLS
716.881.8903
nknowak@buffalo.edu

Smitha James
Associate Director,
Scientific Operations and En-
gagement
716.881.8940
srjames@buffalo.edu

Alan Belicha, PhD
Director, Business Develop-
ment & Industry Engagemen
716.881.7571
abelicha@buffalo.edu

Eric Poniatowski
Grants Administrator
716.881.7570
emp7@buffalo.edu

Did you know?

Our programs have exceeded \$230M in economic impact through start-ups, existing businesses, and the attraction of new industry.

NYS CENTER OF EXCELLENCE IN MATERIALS INFORMATICS (CMI)

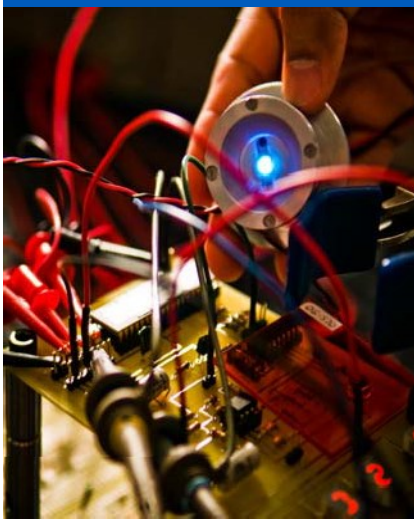
Here is how we connect people with materials innovation.

UB's unique expertise in Materials Informatics supports businesses in improving their products and systems through the practical application of data-driven processes.

Connect. Commercialize. Grow.

If a startup or a thriving company is looking to innovate, the CMI is here to help. As a solutions-driven center and community resource, we deploy the skills of UB researchers and partnering institutions to address society's material science challenges by supporting faculty-led initiatives, fostering entrepreneurship, and facilitating workforce development assistance programs.

Fostering creativity and collaboration



Focused Growth Areas

- Biological & Biomedical Materials & Devices
- Continuum & Multiscale Modeling
- Data Analytics & Machine Learning
- Design, Digital & Additive Manufacturing
- Inorganic Materials Synthesis & Processing
- Materials Characterization & Spectroscopy
- Photonic & Electronic Devices
- Polymeric & Macromolecular Materials Synthesis & Processing
- Quantum, Atomistic & Molecular Modeling

Put the CMI to Work for You

- Partner with over 60 UB materials scientists and advanced manufacturing experts
- Access advanced scientific and engineering equipment including precision laboratories, tools and equipment
- Connect with business and technology leaders from our region
- Participate in educational and entrepreneurial programming
- Access talent to catapult your own business to the next level
- Access grants to support your research and development



Contacts

Alan Rae
Director, PhD
716.238.1194
alanrae@buffalo.edu

...
Chris Janson
Business Development
Executive, CMI
716.888.4795
716.435.6165
crjanson@buffalo.edu

...
Adrian Levesque
Project Manager,
CMI / CCR
716.881.8932
apl3@buffalo.edu

Did you know?

In 2018-19 CMI supported five faculty seed projects in partnership with NYS businesses. Of those five, three have already attracted Federal grants in 2019, totaling \$2M!

TECHNOLOGY TRANSFER (TT)

Developing innovative technologies through the creative pursuits of our faculty and targeted research with industry partners. TT facilitates new technology commercialization and industry sponsored research projects that help companies build and problem solve.

Technology Transfer

Transferring faculty innovations into commercial opportunities is how UB benefits the public good. Contact the Technology Transfer office to begin the process with a New Technology Disclosure (NTD). TT will work with you to protect intellectual property and develop a commercialization plan that best fits your innovation.

Industry Sponsored Research

UB research expertise helps companies solve problems and grow. Faculty work with companies to develop a scope-of-work and with Sponsored Project Services on the budget. TT negotiates the contract and when appropriate and approved by the PI, may offer UB SWIFT.

- UB SWIFT reduces transaction time with preferred exclusive license terms in a ready- to-sign industry sponsored research agreement.

Other Services

- Confidential Disclosure Agreements (CDA) preserve intellectual property protections allowing the exchange of proprietary information in negotiating agreements and collaborations.
- Material Transfer Agreements (MTA) facilitate the transfer of materials into or out of your research lab.



Kate Rittenhouse-Olson, PhD (far left): UB Professor, Inventor and Founder, For Robin, Inc., — received more than \$2.4 million in National Cancer Institute STTR awards for an antibody treatment.

Tech Transfer FY 2011-2020:

- 852 New technology disclosures
- 107 Issued patents
- 149 Licenses and options
- 48 Proof-of-concept awards
- Two 43North winners
- 3 Equity exits

Contact

Jeff Dunbar, Director
716.645.8134
dunbarj@buffalo.edu

TT Office: 716.645.5500
techtransfer@buffalo.edu

Serving you better:

- Protecting intellectual property and licensing UB discoveries
- Facilitating faculty contract requests online through **CLICK**
- Streamlining industry / university contracting
- Generating revenues to recruit, retain, reward and re-invest
- Positioning university research for regional economic growth



Did you know?

You can jeopardize your patent rights if you make a public disclosure prior to filing a patent application. Please contact TT before you publish or present.