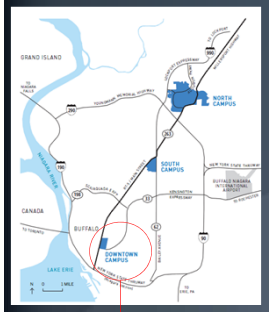
NYS Center of Excellence in Bioinformatics and Life Sciences: Current and Future CURCA Opportunities

UB Campuses



UB 2020
Strategic Strengths

- ❑ Artistic Expression and the Performing Arts
- ❑ Civic Engagement and Public Policy
- ❑ Cultures and Texts
- ❑ Extreme Events: Mitigation and Response
- ❑ Health and Wellness Across the Lifespan
- ❑ Information and Computing Technology
- ❑ Integrated and Nanostructured Systems
- ❑ Molecular Recognition in Biological Systems and Bioinformatics
- ❑ ***Undergraduate research opportunities to work within the UB 2020 initiatives***

NYS Center of Excellence in Bioinformatics and Life Sciences

Core Research Groups:	Core Facilities and Partner Institutes:
Cancer Biology	Proteomics
Cardiovascular Disease	Gene Sequencing
Developmental Genomics	Center for Computational Research
Translational Pharmacology	Microarray and Genomics Facility (RPCI)
Pathogens and Biodefense	Hauptman-Woodward Medical Research Institute
Neurodegenerative Disease	
Informatics and Ontology	
Center for Computational Research	

Research Seminar Series

- ❑ Freshman Discovery Seminar Series -Translational Pharmacogenomics: Linking Genetics Research to Drug and Diagnostics Development and New Treatment Approaches
- ❑ Roswell Park Cancer Institute – Pharmacology & Therapeutics Seminar Series
- ❑ Hauptman Woodward – Structural Biology in the 21st Century Seminar Series

Opportunities to attend seminars and learn about the newest research data.

Downtown Campus – Buffalo Niagara Medical Campus

Life Sciences Complex

Hauptman Woodward Institute

Center of Excellence in Bioinformatics and Life Sciences

Roswell Park Cancer Institute – Center for Genetics and Pharmacology

This poster is dedicated to Dr. Bruce A. Holm and his never ending desire to advance research programs at the University at Buffalo and throughout Western New York.

New York State Center of Excellence in Bioinformatics & Life Sciences

Previous Undergraduate and Health Science Professional Student Research Projects

Faculty Mentor	Project Title
Balthasar, Joseph,; Pharmaceutical Sciences	Ethanol pharmacokinetics in rats; Development of anti-drug antibodies; ELISA for anti-methotrexate IgG ; Antibody pharmacokinetics; Evaluation of methotrexate cytotoxicity in vitro; Development of anti-topotecan mAb; Sequence analysis of AMI, a monoclonal anti-methotrexate antibody; Development of ELISA for monoclonal antibodies; Investigation of the disposition of antibody fragments in rodents; Development of anti-topotecan diabodies; Development of anti-FcRn antibodies; Cloning monoclonal anti-drug antibodies; Investigation of the effects of anti-topotecan mAb on topotecan pharmacokinetics and pharmacodynamics; Development and cloning of new hybridomas
Ma, Qing; TPRC	Association between ABCC2 -24C>T Polymorphism and Tenofovir-Related Renal Damage in Patients with HIV Infection; Impact of substance use on the incidence of hyperlipidemia among patients with HIV infection; Effect of CYP3A4 polymorphisms on the pharmacokinetics of protease inhibitors in HIV patients; Frequency of CYP3A5 polymorphisms among HIV patients with different ethnic background; Effect of ABCB1 polymorphisms on the pharmacokinetics of antiretrovirals in HIV patients.
Morse, Gene; TPRC	High Performance Liquid Chromatographic Method for the Analysis of Disulfiram and its Metabolites in Human Plasma; Antiretroviral Clinical Pharmacology; Pharmacogenomics of antiretrovirals
Tsuji, Brian; TPRC	Vancomycin Pharmacodynamics; Colistin Pharmacodynamics in Critically Ill Patient; Comparative Pharmacodynamics of Daptomycin and Vancomycin; Lipoglycopeptides PKPD Comparative Review; Colistin Review; Vancomycin PKPD; Colistin PKPD; Imipenem Susceptibility
Gronostajski Richard; Stem Cell Research	Isolation and Characterization of T-box Genes; Construction of Chimeric Promoter Reporter Genes; Bioinformatic approach to NFI regulome; Construction of NFI Regulome Bioinformatic Database; Phenotype of *Nfix* Knockout Mouse; Effect of hyperoxia on *Nfib* heterzygous mice; Gene expression in *Nfib*-/- lungs; NFI Regulome database annotation; Chromatin structure of NFI-bound genes in *C. elegans;* NFIC in molar root development; NFI Regulome database enhancement; Chromatin Structure of NFI-bound genes in *C. elegans;* Role of NFI gene in *C. elegans* aging
Sinha, Lee Ann; Biochemistry	Understanding the function of the transcription factor Blimp-1 in the differentiation of keratinocytes
Alice Ceacareanu, TPRC-Oncology	Impact of repetitive freezing, hemolysis and dilution on cytokine and growth factor profiling by Luminex®; Diabetes Pharmacotherapy: a potential modifier of breast cancer prognosis ; Diabetes Pharmacotherapy: a potential modifier of breast cancer prognosis ; Oncology pharmacists: a workforce shortage?; Identification and correction of medication reconciliation errors in an oncology population cohort; Impact of high-fat diet on the development of insulin-resistance in Balb-c vs. SCID mice; Diabetes Pharmacotherapy: a potential modifier of breast cancer prognosis ; Synthesis, Characterization, and Biomedical Assessment of pH-Sensitive Brush Polymer-Drug Conjugates for Cancer Therapy; Impact of high-fat diet on the development of insulin-resistance in Balb vs. SCID mice; Impact of repetitive freezing, hemolysis and dilution on cytokine and growth factor profiling by Luminex.

Hunter James Kelly Research Institute

Industry Partners

Kinex Pharmaceuticals · ceno Technologies · CUBRC · AH Applied Healthcare Resource Management RM · Empire Genomics · ctg · OncoMed a BioPharma company

UB Center for Advanced Biomedical and Bioengineering Technology (UB CAT)

The University at Buffalo Center for Advanced Biomedical and Bioengineering Technology (UB CAT) is one of 15 centers across New York State supporting university-industry collaboration in research, education and technology transfer, with a strong focus on helping New York State-based businesses gain a technological edge on their competition