

Examples of Bio 3EP3/3IR3 topic areas -

	Supervisor	Co-Supervisor
• Research assistant at GERAS (Geriatric Education and Research in Aging Sciences) Centre, St. Peter's Hospital	Afeez Hazzan	Lovaye Kajiura
• Clinical placement with a Naturopath (focus on IV therapy)	Agnes Matacz	Jon Stone
• Application of pedagogy in curriculum design and implementation for Mol Bio 3D03	Ana Campos	
• Creation of protocols for testing the effects of chemical substances on Hydra	Ana Campos	Kimberly Dej
• Establishing the threshold for acute thermal stress in control genotypes of <i>D. melanogaster</i>	Ana Campos	
• The role of autophagy in coping with thermal stress in <i>Drosophila</i>	Ana Campos	
• Clinical placement with a Speech Pathologist working with Aphasia patients	Barbara Kybilius	Lovaye Kajiura
• Molecular mechanisms of atouresclerosis development	Bernardo Trigatti	Suleiman Igdoura
• Utilizing the CRISPR/Cas9 System in <i>C. briggsae</i> to understand gene function in development	Bhagwati Gupta	
• Exploring how mutations in the serotonin pathway affect electrotaxic behaviour in <i>C. elegans</i>	Bhagwati Gupta	
• Mapping <i>Cbr-lin(sy5216)</i> in <i>Caenorhabditis briggsae</i>	Bhagwati Gupta	
• Pharmacy placement	Bhupinder Nagra	Lovaye Kajiura
• Low complexity sequences in the proteome of <i>Plasmodium falciparum</i>	Brian Golding	
• Lead contamination in Hamilton	Chad Harvey	
• Salivary cortisol as a stress hormone in a clinical setting	Christoph Fusch	Lovaye Kajiura
• Effects of Nutraceuticals on cognitive function in the cricket model	Dave Rollo	
• Development of crickets under perceived signals of MIK	Dave Rollo	
• Predictive model for childhood obesity using genetic and environmental predictors	David Meyre	Brian Golding
• Interaction between sleeping patterns and genetic predisposition to obesity	David Meyre	Grant McClelland
• Life history aspects of nutritional interventions in crickets	David Rollo	
• Development of synthetic enzymes for inhibitory transmission in immature auditory brainstem	Deda Gillespie	Rosa DaSilva
• Estradiol and circadian rhythm in the female mouse	Denys deCatanzaro	Graham Scott
• Allergy immune response and available peptide treatments (allergen immunoassay, ELISpot, T-cell assay)	Elena Tonti	Robin Cameron
• Characterization of GPC-6 mutation in association with short stature and limb anomalies	Elizabeth McCready	Suleiman Igdoura
• Expression analysis of plant genes	Elizabeth Weretilnyk	
• Phenotypic analysis of <i>Eutrema salsugineum</i> responses to mineral deficiencies	Elizabeth Weretilnyk	
• Genotyping plants by PCR	Elizabeth Weretilnyk	
• Clinical placement with Physician Halton Family Centre	Enas Abuelalaa	Bhagwati Gupta
• Clinical placement with Physician Halton Family Centre	Frances Battaglia	Rosa da Silva
• Urban forest project with the Hamilton Naturalists Club	Giuliana Casimirri	Susan Dudley
• The effect of waste water effluent on round goby	Graham Scott	
• The effects of high-altitude ancestry on renal adaptations to hypoxia	Graham Scott	
• The effects of wastewater effluent on gill morphology	Graham Scott	
• Altitude-Based Differences in Cardiac muscle lactate oxidation between	Grant McClelland	

deer mice		
• Energy allocation across body mass of deer mice	Grant McClelland	
• Temperature adaptations in fish	Grant McClelland	
• Clinical placement in Cardiology clinic	Greg Curnew	Daniel, J.
• Design of interactive website for patient health goal setting and shadowing a Cardiologist	Greg Curnew	Kim Dej
• Investigating the effectiveness of different strategies in improving patient adherence to medications and healthier lifestyle choices in a cardiology clinic setting	Greg Curnew	
• Effect of deletion of putative regulators of RpoS on expression of RpoS in <i>E. coli</i>	Herb Schellhorn	
• RpoS-Regulated genes mediating bacterial persistence in <i>E. coli</i>	Herb Schellhorn	
• Cloning and Characterization of Genes Encoding Signature Proteins of Cyanobacteria	Herb Schellhorn	
• Clinical placement with Dentist Smile Smile Dental Office	Hyam Karam	Rosa da Silva
• Cellular basis of sexual size and shape dimorphism in the <i>Drosophila melanogaster</i> species complex	Ian Dworkin	
• Evolution of anti-predation traits in experimentally evolving populations of <i>D. melanogaster</i>	Ian Dworkin	
• The influence of insulin signaling on sexual size and shape dimorphism in the wings of <i>D. melanogaster</i>	Ian Dworkin	
• Ecological sampling - Ancaster Creek	James Quinn	
• Determine the effect of ER stress on peroxynitrite formation	Jeffrey Dickhout	Juliet Daniel
• Factors affecting social stigma regarding mental health/illness	Jennifer Brasch	Kim Dej
• Melanin phenotyping in a hybrid cross of the human fungal pathogen <i>Cryptococcus neoformans</i>	Jianping Xu	
• Quantitative genetic analysis of high temperature growth in a human fungal pathogen	Jianping Xu	
• Olfactory behavioural choice experiment using zebrafish as a model organism	Joanna Wilson	
• Fish development atlas and chemically induced alterations in development	Joanna Wilson	
• A computational model of a complex molecular system	Jon Stone	
• Refining a Karyotype protocol for tardigrades	Jonathon Stone	
• Elucidating the role of Kaiso in the apoptosis of breast cancer cells	Juliet Daniel	
• Expression profile of Kaiso and selected EMT markers in TNBC tissues from women of African ancestry	Juliet Daniel	
• Role of kaiso in cell proliferation and apoptosis	Juliet Daniel	
• TGF* receptor expression in breast and colon carcinoma tissues	Juliet Daniel	André Bédard
• Effects of migration on the synchrony of <i>S. cerevisiae</i> population growth rates	Jurek Kolasa	
• Clinical placement TOTAL PHYSIO Physiotherapy and Rehabilitation Clinic	Kaz Kusmierczak	Lovaye Kajiura
• Create topic modules for use as complementary material to Bio 2B03	Kim Dej	Rosa DaSilva
• Lab development for Bio 1A03	Kim Dej	Alastair Tracey
• Development of blended learning course modules (Bio 2B03)	Kim Dej	
• Clinical placement with Physicians - St. Josephs Hospital	Kjetil Ask	Daniel, J.
• Exploring the use of various media for knowledge translation in healthcare	Kjetil Ask	Rosa DaSilva
• Molecular Biology of Eosinophils - how Ca ²⁺ -spikes strengthen eosinophil adhesion and cause cytoskeletal changes	Luke Janssen	Juliet Daniel

• Accessibility of Ontario's Environment Bill of Rights, Application of ecological and environmental principles to Hamilton specific cases	Lynda Lukasik	Jurek Kolasa
• Visual development lab - developmental trajectory of visual tactile simultaneity window	Maurer, D.	Jon Stone
• Purification and crystallization of the XRCC4-XLF-DNA complex	Murray Junop	Kim Dej
• Effects of diet on secretion of organic anions by insect Malpighian tubules	Natalie D'Silva	Mike O'Donnell
• Analyze water samples from Georgian Bay sites that contain or do not contain juvenile muskellunge and compare nutrients and water quality	Pat Chow-Fraser	
• Relationship between biotic and abiotic variables for coastal wetlands of Georgian Bay	Pat Chow-Fraser	
• Investigating the efficacy of novel microgel drug carriers and targeted drug delivery via the intranasal route	Ram Mishra	Bhagwati Gupta
• Measurement of DA, 5-HT & glutamate in freely moving rats using the amphetamine model of schizophrenia	Ram Mishra	Bhagwati Gupta
• Optimizing nanogel loading of lurasidone	Ram Mishra	Bhagwati Gupta
• Clinical placement with a Physician - Team Maple Walk in Clinic and Family Practice	Razzaqner, M.	Rosa Da Silva
• Determining the cellular localization of PHLDA1 and how PHLDA1 contributes to apoptosis	Richard Austin	Suleiman Igdoura
• Examination of the role of ANAC059 and ANAC092 during Age Related Resistance (ARR) in Arabidopsis	Robin Cameron	
• Investigating the roles of p120-catenin and singed in cardioblast migration during Drosophila embryogenesis	Roger Jacobs	
• The role of calcium signaling on collective cell migration	Roger Jacobs	
• Integrating the Learning Portfolio into the Bio 1A03 course	Rosa Da Silva	Kim Dej
• The effects of nitric oxide on the cardiac activity of the Brown Marmorated Stink Bug, Halyomorpha halys	Rosa Da Silva	
• Junior youth empowerment program at Nancy Campbell Collegiate Institute	Sana Zareey	Kim Dej
• Developing an ELISA assay for monitoring placental dysfunction in early pregnancy	Sandeep Raha	Kim Dej
• comparing measurements of snow pack depth to growth and density of shrub cover in the Wolf Creek Research Basin, Yukon	Sean Carey	Susan Dudley
• Clinical placement with Dentist Britania Dental Centre	Sherif Sorial	Rosa da Silva
• Comparing arthropod diversity between three prairie sites	Susan Dudley	
• **Conservation corridor	Susan Dudley	Chad Harvey
• **Greenhouse outreach	Susan Dudley	
• Kin recognition in plants	Susan Dudley	
• CPR effectiveness and use in developing countries	Tapas Mondal	Bhagwati Gupta
• Enrolling patients into the Heart Centre Biobank - biorepository and registry of individuals and families with congenital heart disease	Tapas Mondal	Roger Jacobs
• Clinical placement with Optometrist - Blink Vision Lab	Vikas Sharma	Kim Dej
• PRMT expression during skeletal muscle remodelling	Vladimir Ljubicic	Grant McClelland
• The link between environmental toxicant exposure and dietary factors to endometriosis	Warren Foster	Kim Dej

** These projects are available on an ongoing basis - contact Dr. Dudley for details