CURRENT RESEARCH OPPORTUNITIES

Graduate Program:	Anatomy & Cell Biology, Biochemistry, Epidemiology and Biostatistics, Family Medicine, Medical Biophysics, Microbiology & Immunology, Pathology & Lab Medicine, Physiology & Pharmacology, Neuroscience, Surgery
Research Cluster(s):	
Supervisor(s):	Dr. Anthony Nichols
Keywords:	Cancer therapeutics, cancer genomics, immunotherapy
Vacancies:	5
MSc/PhD or Postdoc Available?:	Msc, PhD, Postdoctoral
Description:	The Nichols lab is carrying out high impact studies in human papillomavirus positive head and neck squamous cell cancer (HNSCC) and anaplastic thyroid cancer (ATC). We are employing immunocompetent models to study novel immunotherapy combination therapies for patient treatment, and characterizing tumours using a variety of advanced platforms including exome and whole genome sequencing, single cell sequencing, spatial transcriptomics, genome-wide CRISPR screems to answer our questions.
To Apply:	Applicants must independently apply to the Pathology & Laboratory Medicien program using the online Western application portal, **including a clear reference to the supervisor**
Application Deadline:	None at this time
Contact Information:	Questions regarding the application process, or inquiries about the program may be addressed to the Academic Programs Coordinator, for more information about the description/design of the project, you may contact Dr. Hoffman directly: Anthony.nichols@lhsc.on.ca

CURRENT RESEARCH OPPORTUNITIES

Graduate Program: Anatomy & Cell Biology, Biochemistry, Epidemiology and Biostatistics, Family Medicine, Microbiology & Immunology, Pathology & Lab Medicine, Physiology & Pharmacology, Neuroscience, Surgery

Research Cluster(s): Cancer Biology & Biochemistry

Supervisor(s): Dr. Gabriel DiMattia Ph.D

Keywords: Clear cell cancer of the ovary, epigenetics, hypoxia, transcription

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Vacancies: 2

MSc/PhD Available?: PhD (4 years) & MSc (2 years)

Description: Our primary focus is on epigenomic changes associated with autonomous spheroid formation in ovarian clear cell cancer (OCCC). Spheroids are 3D avascular structures responsible for metastasis of all epithelial ovarian cancers. Our goal is to uncover the key H3 epigenetic marks which accompany spheroid formation and which presumable contribute to the transcriptional program that facilitates survival of OCCC spheroids. OCCC spheroids that proliferate in suspension will be used in ChIPseq and RNAseq studies. Our goal is to identify 'epigenome-based drugs' which will kill spheroids.

To Apply: Applicants must independently apply to the Biochemistry program using the online Western application portal, **including a clear reference to the supervisor**

Application Deadline: None at this time

Contact Information: Questions regarding the application process, or inquiries about the program may be addressed to the Academic Programs Coordinator,for more information about the description/design of the project, you may contact Dr. DiMattia directly: dimattia@uwo.ca

CURRENT RESEARCH OPPORTUNITIES

Graduate Program:	Anatomy & Cell Biology, Biochemistry, Epidemiology and Biostatistics, Family Medicine, Microbiology & Immunology, Pathology & Lab Medicine, Physiology & Pharmacology, Neuroscience, Surgery
Research Cluster(s):	Cell, Stem Cell and Cancer; Imflammation & Cancer
Supervisor(s):	Dr. Samuel Asfaha
Keywords:	Stem cells, inflammation, colities and cancer
Vacancies:	2
MSc/PhD or Postdoc Available?:	PhD (4 years)
Description:	The Asfaha lab's primary interest is in gastrointestinal stem cells and their role in tissue regeneration and cancer. The lab has been strongly focused on distinguishing amongst the role of various epithelial stem cells in gut healing. We previously demonstrated that cytokeratin 19 (K19) marks a radio-resistant intestinal stem cell population distinct from classical Lgr5+ stem cells. We also discovered a subset of Dclk1+ cells are long-lived and serve as a cellular origin for colon cancer. Thus, our lab is now focused on how does in inflammation (i.e. colitis) leads to cancer.
To Apply:	Applicants must independently apply to the Pathology & Lab Medicine program using the online Western application portal, **including a clear reference to the supervisor**
Application Deadline:	None at this time
Contact Information:	Questions regarding the application process, or inquiries about the program may be addressed to the Academic Programs Coordinator, for more information about the description/design of the project, you may contact Dr. Asfaha directly: sasfaha2@uwo.ca

CURRENT RESEARCH OPPORTUNITIES

Graduate Program:	Anatomy & Cell Biology, Biochemistry, Epidemiology and Biostatistics, Family Medicine, Microbiology & Immunology, Pathology & Lab Medicine, Physiology & Pharmacology, Neuroscience, Surgery
Research Cluster(s):	Cell cultures, genetically modified animal models, western blot, RT-PCR, Co-IP, fluoresecnt microscopy, molecular biology and biochemical techniques
Supervisor(s):	Dr. Tianqing Peng
Keywords:	Autophagy, Doxorubicin-cardiotoxicity, Diabetic cardiomyopathy, Mitochondrial stress, Spetic organ dysfunction
Vacancies:	2
MSc/PhD or Postdoc Available?:	MSc (2 yrs), PhD (4 yrs)
Description:	The first project is to investigate the molecular mechanism by which doxorubicin, an effective and widely used anti-cancer drug, causes cardiac injury, and to develop therapeutic approaches to prevent doxorubicin-induced cardiac injury by focusing autophagic flux and lysosomal dysfunction in cardiomyocytes. The second project is to determine the molecular mechanisms by which repletion of NAD+ reduces bacterial burden and protects organs against sepsis.
To Apply:	Applicants must independently apply to the Pathology & Lab Medicine program using the online Western application portal, **including a clear reference to the supervisor**
Application Deadline:	None at this time
Contact Information:	Questions regarding the application process, or inquiries about the program may be addressed to the Academic Programs Coordinator, for more information about the description/design of the project, you may contact Dr. Peng directly: tpeng2@uwo.ca

CURRENT RESEARCH OPPORTUNITIES

Graduate Program:	Anatomy & Cell Biology, Biochemistry, Epidemiology and Biostatistics, Family Medicine, Microbiology & Immunology, Pathology & Lab Medicine, Physiology & Pharmacology, Neuroscience, Surgery
Research Cluster(s):	immunomodulation/immunotherapy for transplant rejection and cancer
Supervisor(s):	Dr. Weiping Min
Keywords:	immune tolerance, immunotherapy, transplantation, cancer, siRNA/miRNA
Vacancies:	2
MSc/PhD or Postdoc Available?:	MSc (2 yrs), PhD (4 yrs)
Description:	MinLab is currently recruiting graduate (PhD or MSc) students to carry on exciting work that we are doing using immune modulation for cancer therapy, transplant rejection and autoimmunity. My laboratory has been the first in the world to define a bi-directional feedback loop between T regulatory cells (Treg) and tolerogenic dendritic cells (DCs). This finding sheds new light on how the immune system can be artificially "tricked" into permanently accepting foreign organs in transplantation without having to use systemic immune uppression. Additionally, my laboratory was the first to develop
To Apply:	Applicants must independently apply to the Pathology & Lab Medicine program using the online Western application portal, **including a clear reference to the supervisor**
Application Deadline:	None at this time
Contact Information:	Questions regarding the application process, or inquiries about the program may be addressed to the Academic Programs Coordinator, for more information about the description/design of the project, you may contact Dr. Min directly: weiping.min@uwo.ca

CURRENT RESEARCH OPPORTUNITIES

Graduate Program: Anatomy & Cell Biology, Biochemistry, Epidemiology and Biostatistics, Family Medicine, Microbiology & Immunology, Pathology & Lab Medicine, Physiology & Pharmacology, Neuroscience, Surgery

Research Cluster(s): Bioinformatics, Computational Genomics

Supervisor(s): Dr. Parisa Shooshtari

Keywords: Bioinformatics, Machine Learning, Data Analysis, Single-Cell Sequencing, Cancer, Autoimmunity

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Vacancies: 2

MSc/PhD or Postdoc Available?: MSc, PhD

Description: Computational Genomics Lab lead by Dr. Parisa Shooshtari is seeking one MSc student and one PhD student to join our team of bioinformatics researchers. Prospective student should have a strong analytical and computational background, and adequate knowledge of genomics. The student will develop computational, statistical and machine learning approaches to analyze multi-omics data, including single-cell sequencing datasets. Our objective is to uncover cellular and mollecular mechasisms underlying compex diseases, particularly different cancer types and autoimmune diseases.

To Apply: Applicants must independently apply to the Pathology & Lab Medicine program using the online Western application portal, **including a clear reference to the supervisor**

Application Deadline: None at this time

Contact Information: Questions regarding the application process, or inquiries about the program may be addressed to the Academic Programs Coordinator, for more information about the description/design of the project, you may contact Dr. Shooshtari directly: pshoosh@uwo.ca

CURRENT RESEARCH OPPORTUNITIES

Graduate Program:	Anatomy & Cell Biology, Biochemistry, Epidemiology and Biostatistics, Family Medicine, Microbiology & Immunology, Pathology & Lab Medicine, Physiology & Pharmacology, Neuroscience, Surgery
Research Cluster(s):	Cardiovascular Disease, Human Genetics & Genomics, Molecular Biology
Supervisor(s):	Dr. Christina Castellani
Keywords:	Mitochondrial DNA, Methylation, Heteroplasmy, Epigenomics, Transcriptomics
Vacancies:	2
MSc/PhD or Postdoc Available?:	MSc (2 years) PhD (4 years)
Description:	Positions are available to explore the association of mitochondrial DNA (mtDNA) variation to nuclear DNA 'omics in cardiovascular disease. Research projects can comprise one of two main streams towards uncovering molecular mechanisms and pathways that may modify risk for disease. Project Stream 1: Genome analysis of large-scale genomic, methylomic and transcriptomic datasets. Must have interest in, or experience with, relevant coding languages. Project Stream 2: Developing and characterizing cell culture models of mtDNA variation. Experience with tissue culture or genome editing is ideal.
To Apply:	Applicants must independently apply to the program using the online Western application portal, **including a clear reference to the supervisor**
Application Deadline:	None at this time
Contact Information:	Questions regarding the application process, or inquiries about the program may be addressed to the Academic Programs Coordinator, for more information about the description/design of the project, you may contact Dr. Castellani directly: christina.castellani@schulich.uwo.ca

Schulich
MEDICINE & DENTISTRY

Western

CURRENT RESEARCH OPPORTUNITIES

Graduate Program:	Anatomy & Cell Biology, Biochemistry, Epidemiology and Biostatistics, Family Medicine, Medical Biophysics, Microbiology & Immunology, Pathology & Lab Medicine, Physiology & Pharmacology, Neuroscience, Surgery
Research Cluster(s):	Imaging
Supervisor(s):	Dr. Lisa Hoffman
Keywords:	Duchenne muscular dystrophy, microvasculature, heart and skeletal muscle, brain, molecular imaging
Vacancies:	2
MSc/PhD or Postdoc Available?:	PhD (4 years)
Description:	Overarching Objective: to rescue abnormal microvasculature in Duchenne muscular dystrophy (DMD) to reduce ischemia, chronic inflammation and fibrosis. Hypothesis: Delivery of Ang-1 will restore vascular integrity, and diminish ischemia, inflammation and development of fibrosis, re-establishing a microenvironment that supports repair. Students will use below methods to fully characterize abnormal microvasculature in both DMD mouse and patient samples, to improve endogenous tissue repair, minimize fibrosis, and enhance the efficacy of cell replacement therapy for the treatment of DMD.
To Apply:	Applicants must independently apply to the Anatomy & Cell Biology program using the online Western application portal, **including a clear reference to the supervisor**
Application Deadline:	None at this time
Contact Information:	Questions regarding the application process, or inquiries about the program may be addressed to the Academic Programs Coordinator, for more information about the description/design of the project, you may contact Dr. Hoffman directly: lhoffman@lawsonimaging.ca

CURRENT RESEARCH OPPORTUNITIES

Graduate Program: Anatomy & Cell Biology, Biochemistry, Epidemiology and Biostatistics, Family Medicine, Medical Biophysics, Microbiology & Immunology, Pathology & Lab Medicine, Physiology & Pharmacology, Neuroscience, Surgery

Research Cluster(s):

Supervisor(s): Dr. Noha Gomaa

Keywords: Health inequalities, life-course epidemiology, epigenetics

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Vacancies: 1

MSc/PhD or Postdoc Available?: Msc, PhD (3-4 years)

Description: The Society to Cell Oral Health Lab (S2CL) is accepting applications for a PhD candidate in the area of gene-environment interactions involved in oral diseases and related major health conditions, through a social determinants of health lens. Candidates will train in methods from epidemiology, data linkage and epigenetics and will work in an interdisciplinary and collaborative research environment while receiving team-based mentorship. For more information on our research and our team, please visit: https://www.schulich.uwo.ca/societytocell/index.htm

To Apply: Applicants must independently apply to the Pathology & Laboratory Medicine program using the online Western application portal, **including a clear reference to the supervisor**

Application Deadline: None at this time

Contact Information: Questions regarding the application process, or inquiries about the program may be addressed to the Academic Programs Coordinator, for more information about the description/design of the project, you may contact Dr. Gomaa directly: noha.gomaa@schulich.uwo.ca