RESEARCH AND INNOVATION SERVICES

TINFORMATION GUIDE FOR NEW FACULTY 2023-2024

BIG IDEAS. BETTER WORLD.



Research Services

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Welcome to Lakehead University!



Lakehead University is a relatively small university, but when it comes to research and innovation, we are small but in a big way!

Research is essential and very much valued and celebrated at Lakehead University. New faculty are especially excited about their research careers, and the Office of Research Services (ORS) and Innovation, Partnerships and Economic Development (IPED) are here to help you fulfill your research goals as you start your career at Lakehead. You can access the <u>Vice-President Research and Innovation</u> <u>Organizational Chart</u> for a complete overview of our portfolio.

In this Research and Innovation Information Services Guide for New Faculty, you can learn more about our internal grants, our peer mentoring systems, dedicated research facilitators, external research funding opportunities, regulatory requirements for research including research ethics approvals, technology transfer, and commercialization, etc. The ORS takes great pride in learning about the different research interests of each faculty member and will help you develop your grant writing expertise so that you can better compete for valuable research funding. We work very closely with the Deans and the Faculty of Graduate Studies to ensure that you are able to make the necessary connections to establish your research as an integral part of your academic career. Issues such as open access, research data management, knowledge mobilization plans, equity, diversity and inclusion plans, research ethics approval, intellectual property (IP), and research policies can be complicated. It is our responsibility to help you navigate through areas such as these, and, throughout the year, we offer many professional development opportunities and information sessions. If you are looking for industry partners or need assistance with intellectual property management, IPED is here to help you.

Since 2015, Lakehead University has been ranked as one of Canada's top research universities in our peer category by Research INFO\$OURCE, Canada's leading research ranking agency. This includes being ranked #1 for five years in a row from 2015 to 2019 and #1 in 2022 for not-for-profit research income. We also led the country in our category for increase in publication growth from 2002-2022. These rankings demonstrate our strong commitment to being a research-intensive university. While we take pride in these rankings, our greatest satisfaction is helping the individual researcher get their program underway and ensuring that they feel part of the strong research culture that exists at Lakehead University. I encourage you to read the information contained within this *Information Guide* including our staff contact information, and to visit the <u>Research and Innovation Website</u>. I also invite you to visit our offices to find out more about how we can help you.

Andrew P. Dean, Ph.D.

Vice-President, Research and Innovation

| Phone: | (807) 343-8010 ext. 8201 |
|-----------|--------------------------|
| Location: | UC 2003 |
| Email: | vpresearch@lakeheadu.ca |

Who to Call for...

Office of Research Services and Administration

- Contact: Anne Klymenko, Director Office of Research Services, (807) 343-8010 ext. 8223 Email: anne.klymenko@lakeheadu.ca
 - Information or concerns related to services provided by the Office of Research Services.
 - > Guidance in interpreting university research policies and procedures.
 - Information regarding the application of Lakehead University's indirect costs policy.
 - > Advice on preparing large-scale collaborative research proposals.
 - Information regarding institutional research programs (e.g. Canada Foundation for Innovation (CFI), Canada Research Chairs (CRC), Industry Research Chairs, Lakehead University Research Chairs, etc.).
 - Support for equity, diversity and inclusion initiatives within the CRC program and research enterprise.
 - Advice or consultation regarding Lakehead University's research integrity policy and procedures or to discuss training opportunities within the classroom.

General Research Inquiries and Romeo Research Portal Database

Contact: Bonnie Knott, Administrative Officer Office of Research Services, (807) 343-8010 ext. 8934 Email: research@lakeheadu.ca

- ➤ For general inquiries regarding research services.
- ➤ To schedule a meeting with the Director, Research Services.
- > To obtain information on accessing the Romeo Research Portal.
- ➤ For support when using the Romeo Research Portal to apply for SRC funding, human ethics, animal care, or biosafety applications; renewals or amendments.

Research Communications and Event Planning

Contact: Bethanie Kramer, Office of Research Services Events Coordinator & Administrative Officer Office of Research Services, (807) 343-8010 ext. 7289 Email: events.research@lakeheadu.ca

- Research and Innovation Week event planning.
- ➤ Research and Innovation Workshop Series registration.







➤ Social media communications.

External Funding Opportunities and Institutional Programs

- **Contact:** Andrew Hacquoil, Research Facilitator (Institutional Programs) Office of Research Services, (807) 343-8010 ext. 8092 Email: ahacquo1@lakeheadu.caFor information on the various funding opportunities available to support research.
 - To sign-up for the weekly Research and Innovation Funding Opportunities Bulletin.
 - For assistance with major institutional funding applications such as the Canada Foundation for Innovation, Early Researcher Award, Banting Postdoctoral Fellowship Awards, etc.
 - ➤ For assistance with preparing media releases related to research.

Appointment of Postdoctoral Fellows and Visiting Professors /Students

- To obtain information on the appointment process for postdoctoral fellows, including official letters of appointment signed by the VPRI.
- To arrange for letters of invitation to visiting professors /research students (visiting undergraduate and graduate research students).

Proposal Development and Research Strategies in the Social Sciences, Humanities and Health

Contact: Nicole Westlund Stewart, SSHRC/CIHR Research and Knowledge Mobilization Facilitator Office of Research Services, (807) 343-8010 ext. 8862 E-mail: sshrc.research@lakeheadu.ca



- Pre-award assistance with proposal strategies and grant writing in the social sciences and humanities.
- Information on SSHRC, CIHR (health research in the social sciences and humanities), foundations, and other granting programs supporting SSHRCrelated research.
- Knowledge mobilization strategies and partnership development with the not-forprofit sector, health sector, public sector and with Indigenous groups.
- Information on how to participate in internal peer review and professional development programs.
- Assistance with developing interdisciplinary research teams and large research team grant applications.
- > Assistance with identifying research mentors.
- Facilitation of the annual SSHRC and CIHR Enhancement programs and other professional development workshops throughout the year.

Proposal Development and Research Strategies in the Natural Sciences and Engineering and Health

Contact: Dr. Alexandria (Lexi) Haslehurst, Research Facilitator (Natural Sciences, Engineering and Health) Office of Research Services, (807) 343-8010 ext. 8290 E-mail: nserc.research@lakeheadu.ca

- Pre-award assistance with proposal strategies and grant writing in the natural sciences, engineering and health (health and biomedical research in the sciences and engineering).
- Information on funding opportunities and strategies to leverage funds for industry-partnered research.
- Information on how to participate in internal peer review and professional development programs.
- Information on NSERC, CIHR (health and biomedical research in the sciences and engineering), and other granting programs supporting NSERC-related research.
- Assistance with developing interdisciplinary research teams and large research team grant applications.
- > Assistance with identifying research mentors.
- Facilitation of the annual NSERC and CIHR Enhancement programs and other professional development workshops throughout the year.

International Research Collaborations, Partnerships, and Faculty and Student Research Mobility

Contact: Jill Sherman, International Research Facilitator Office of Research Services, (807) 343-8010 ext. 8014 Email: intl.research@lakeheadu.ca

- For information and assistance with international research funding opportunities and faculty/student research mobility opportunities (inbound and outbound).
- > Coordinator for Mitacs Globalink international programs.
- Pre-award assistance with proposals and grant writing on international funding opportunities, including US and EU funding agencies.
- Assistance with strategies for developing international research collaborations, institutional partnerships.
- > Support for international research MOUs.
- Secretariat for the CALAREO Consortium.

Research and Strategic Initiatives, Orillia

Contact: Dr. Rebecca Heffernan, Research and Strategic Initiatives Facilitator, Office of Research Services, Orillia, (705) 330-4008 ext. 2022 Email: orillia.research@lakeheadu.ca







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- For general inquiries and advice on strategies to increase research and innovation capacity at the Orillia campus.
- For assistance establishing research collaborations, opportunities, and community and private sector partnerships in Orillia, Simcoe County, and beyond.
- > For assistance developing funding applications and proposals.

Equity, Diversity and Inclusion (EDI)

Contact: Dr. Jocelyn Bel, Equity, Diversity and Inclusion Research Facilitator, Office of Research Services, (807) 343-8010 ext. 8926 E-mail: edi.research@lakeheadu.ca

- > Assisting with developing EDI plans in accordance with new funding guidelines.
- > Developing new EDI training programs.
- > Supporting the recruitment of Canada Research Chairs.
- > Promoting and supporting EDI practices in the research enterprise.

Ethical Procedures – Human Participants and Animal Care

- **Contact:** Sue Wright, Manager, Research Ethics and Contracts Office of Research Services, (807) 343-8010 ext. 8283 Email: susan.wright@lakeheadu.ca
 - For questions regarding management of the Research Ethics Board and Animal Care Committee.
 - Board membership management.

Research Agreements, Tri-Council Sub-Awards and Post-Award Administration

- Contact: Sue Wright, Manager, Research Ethics and Contracts Office of Research Services, (807) 343-8010 ext. 8283 Email: susan.wright@lakeheadu.ca
 - For the review, drafting and processing of standard research agreements, contribution agreements, external contractor agreements, and sub-contracts with external research sponsors and partners including Tri-council, other federal and provincial governments, Indigenous Groups and the not-for-profit sectors.
 - To request approval for amendments to agreements, extensions, change requests to budgets, etc.
 - > To obtain approvals for the establishment of research accounts.
 - For information on the hiring practices of research staff and students to be paid from research grants and contracts.





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Research Ethics Coordinator

Contact: Sheena Allard, Research Ethics Coordinator, Office of Research Services, (807) 343-8010 ext. 8283 E-mail: research.ethics@lakeheadu.ca

- General inquiries on the application and approval process for research involving human participants and animal care.
- > To schedule a meeting with the Manager, Research Ethics and Contracts.
- ➤ For information on the application and approval process for research involving human participants through the Lakehead University Research Ethics Board.
- For information on research involving animals through the Animal Care Committee.
- > To request conditional release of research funding prior to ethics approval.
- > To request an ethics training workshop for students.

Veterinary Technician

Contact: Currently Vacant

- ➤ General inquiries regarding animal care facilities.
- > Assistance with humane animal care best practices for research with animals.

Executive Assistant to the Vice-President, Research and Innovation

- Contact: Melissa Burton E-mail: ea.vpri@lakeheadu.ca
 - > To schedule a meeting with the Vice-President, Research and Innovation.

Administrative Assistant to the Associate Vice-President, Research and Graduate Studies

- Contact: Emily Brooks E-mail: admin.research@lakeheadu.ca
 - > For general inquiries regarding research centres.
 - To schedule a meeting with the Associate Vice-President Research and Graduate Studies.

Establishing or Connecting with a Lakehead Research Centre or Institute

Contact: Dr. Batia Stolar, Associate Vice-President, Research and Graduate Studies, (807) 343-8010 ext. 8827 E-mail: avp.research@lakeheadu.ca

- > For assistance in establishing new interdisciplinary research centres.
- > Information on existing research centres and how to participate.
- > Review and administration of research centres/institutes.









Nominations for Research Prizes

Contact: Dr. Batia Stolar, Associate Vice-President, Research and Graduate Studies, (807)343-8010 ext. 8827 E-mail: avp.research@lakeheadu.ca

- Information on university procedures for preparing university endorsed nominations for research prizes (i.e., Royal Society of Canada, Killam Awards, Polanyi Prizes, Herzberg Canada Gold Medal for Science and Engineering, Gairdner Foundation, etc.).
- > To obtain award nominations endorsed by the University President.

Internal Research Funding

Contact: Bethanie Kramer, Research & Innovation Events Coordinator & Administrative Officer Administrative Officer, Senate Research Committee (807) 343-8010 ext. 7289 Email: events.research@lakeheadu.ca



- For general information on internal research funding from the Senate Research Committee, Regional Research Fund, and VPRI Strategic Fund.
- ➤ For general assistance in interpreting program guidelines or completing application forms for internal research grant programs.

Technology Transfer, Intellectual Property (IP), Industry Research Partnerships and Economic Development

Contact: Ellen MacKay, Director, Innovation Development Office of Innovation, Partnerships and Economic Development, (807) 343-8010 ext. 8724 Email: emackay@lakeheadu.ca



- For advice and information regarding the protection of university IP through patent, copyright and trademark.
- > For the negotiation of university-industry research agreements.
- ➤ For commercialization, licensing and knowledge transfer services.
- For review of various IP related contracts, including material transfer agreements and confidentiality agreements.
- > For advice and assistance with the creation of university spin-off companies.
- > To provide marketing assistance for finding licensees for university-created IP.
- > For the overall management of *Ingenuity*, Lakehead's business incubator.

Contact: Bill Maloney, Director, Industry Research Partnerships Office of Innovation, Partnerships and Economic Development (807) 343-8010 ext. 8793 Email: bmaloney@lakeheadu.ca



- ➤ For assistance in accessing researchers, industry, government, businesses, etc. to identify potential research partnership opportunities.
- For assistance in accessing funds and preparing research proposals to support university-industry research projects and commercialization grants.
- Administration and support for the Mitacs Business Strategy Internships funding program.

Contact: Alyson MacKay, Manager, *Ingenuity* Office of Innovation, Partnerships and Economic Development (807) 343-8010 ext. 8324 Email: amackay@lakeheadu.ca

- ➤ For business development support.
- ➤ For general knowledge and assistance on locating small business development resources including funding opportunities.
- > For inquiries into accessing resources at *Ingenuity*.
- > For booking events and meeting space at *Ingenuity*.
- **Contact:** Kelly Fettes, Administrative Officer Office of Innovation, Partnerships and Economic Development (807) 343-8010 ext. 8871 Email: kafettes@lakeheadu.ca
 - For general inquiries regarding Technology Transfer, Intellectual Property, Industry Research Partnerships, Economic Development.
 - For assistance with scheduling, planning industry partnership or innovation events, educational workshops or administrative management of the Office of Innovation, Partnerships and Economic Development office.
 - To obtain meetings with either Director at the Office of Innovation, Partnerships and Economic Development.

University Instrumentation Laboratory (UIL) and Lakehead University Centre for Analytical Services (LUCAS)

- Contact: Dr. Francis Appoh, Director LUIL/PDNA, LUCAS, (807) 343-8010 ext. 8853 Email: francis.appoh@lakeheadu.ca
 - For information on the policies and procedures for accessing scientific instrumentation located in the LUIL and PDNA Labs.
 - > For information on the analytical testing services available through LUCAS.

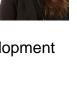
Laboratory Safety, Biosafety and Radiation Safety

Contact: Tiffany Moore, Lab Safety Officer Human Resources, Avila Building, AC 153 (807) 343-8010 ext. 8806



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Email: labsafety@lakeheadu.ca

- ➤ To arrange for general safety training.
- For information about identifying biohazards, or to obtain an application to work with biohazards.
- For information about activities involving radiation, lasers, laboratory or fire safety.
- > For access to the online chemical inventory system.

Research Accounting

Contact: Margot Ross, Manager, Research, Trust and Accounting Financial Services, (807) 343-8010 ext. 8730 Email: margot.ross@lakeheadu.ca

- For advice and information on the eligibility of research expenditures in accordance with Lakehead University policies and agency guidelines and the purchasing of research-related equipment and materials.
- For the preparation of financial reports and invoices for research grants and contracts.
- ➤ For access to the University financial system for electronic purchase orders and real time financial reporting of your grant funds.
- For the processing of research expense reimbursement requests such as travel claims.
- For access to the Concur Travel system for electronic travel requests and expense claims.

Media Relations

For Assistance with:

- Media events and media relations.
- Media training and other resources.

Thunder Bay Contact

Brandon Walker, Media, Communications and Marketing Associate (807) 343-8010 ext. 8372 Email: brandon.walker@lakeheadu.ca

Orillia Contact

Jaclyn Bucik, Media, Communications and Marketing Associate (705) 330-4010 ext. 2014 Email: jaclyn.bucik@lakeheadu.ca

Graduate Studies

- Contact: Trish Sokoloski, Manager Faculty of Graduate Studies, (807) 343-8010 ext. 8099 Email: trish.sokoloski@lakeheadu.ca
 - For information on all student funding opportunities to support graduate training (Masters and Ph.D.).
 - For assistance in the submission of graduate scholarship applications (e.g., NSERC, SSHRC, CIHR, OGS, etc.).
 - To arrange payment of stipends and awards to graduate students from faculty research grants.

Office of Research Services

The Office of Research Services (ORS) is delighted to welcome you to Lakehead University. This guide is intended to help you begin the development of a successful research career at Lakehead.

The mandate of the ORS is to support and facilitate research and scholarship activities in accordance with the University's Strategic Plan and Research Plan.

ORS is the first point of contact for faculty members who are seeking financial support for their research or assistance in administering their program of research. We provide researchers with up-to-date access to information on major research funding programs, as well as a multitude of other research funding sources. We also serve as the central point of contact for all major research funding agencies, keeping abreast and advising researchers of upcoming changes in the funding environment and associated guidelines and application procedures, as well as new funding directions and initiatives.

We can assist with your proposal and post-award administration

The ORS provides assistance to researchers in preparing funding proposals, particularly those of a large-scale collaborative nature. ORS also initiates and coordinates visits and webinars to the University by program officers of granting agencies in order to provide University researchers with access to first-hand information about new programs and directions of these agencies. In addition, we act as a resource to the Senate Research Committee and its various sub-committees.

All research grant applications as well as contract proposals are reviewed by ORS staff prior to their submission to ensure compliance with the policies and requirements of the University and the particular funding agency. Once awarded, all research contracts with the federal and provincial governments and not-for-profit sector are negotiated by ORS on behalf of the University and its researchers. Research contracts with industry and IP related agreements are negotiated by the Office of Innovation, Partnerships and Economic Development (IPED).

We can help you develop your Equity, Diversity and Inclusion (EDI) Plans for Research Proposals

Many funding agencies are requiring EDI plans to be developed as part of research proposal submissions (ie. New Frontiers Research Fund, Tri-agencies, CFI, etc). Staff in the ORS have extensive training in developing EDI plans and can support you in developing your own EDI action plan for your research team. This fall, the ORS will launch the new Certificate Program for Inclusive Research Leadership that is open to all faculty members. This certificate program will assist faculty members with developing their EDI plans, proposals, and establishing best practices within their research group. The EDI Research Facilitator is available to help researchers develop EDI research strategies within their research proposals.

We can help facilitate interdisciplinary research collaborations and connect you to Indigenous communities, health agencies, not-for-profit community partners and government organizations

Collaboration has emerged as a key requirement in many federal and provincial research programs. Lakehead's ORS, through its Research Facilitators, helps to connect researchers in the natural sciences and engineering, social sciences, humanities and health with academic colleagues, not-for-profit organizations, government, Indigenous communities, and other universities seeking to develop sustainable solutions to social, environmental, health, and cultural challenges. The SSHRC and Knowledge Mobilization Research Facilitator, actively works to connect researchers to Indigenous communities, health agencies, not-for-profit community partners and all levels of government. The ORS also works closely with IPED to make connections with industrial partners.

We can help you with your research ethics, regulatory requirements and the responsible conduct of research

The ORS administers the University's research ethics programs (Research Ethics Board and Animal Care Committee) and works with Human Resources to deliver our Biosafety and Radiation Safety program as it relates to research. The Director of Research Services is also available for consultations regarding research integrity matters.

We can help you promote your research achievements

In collaboration with Lakehead University Media Relations, we can assist you with preparing media releases and events, promoting new research funding awarded to you, exciting research and innovation impacts and results as well as recognition of national and international awards and prizes.

Location

The Office of Research Services is located in the Centre for Advanced Studies in Engineering and Sciences (CASES) building at 955 Oliver Road, Thunder Bay. Please don't hesitate to reach out and meet our staff. We are committed to assisting you with

all your research needs. All researchers are encouraged to visit the ORS website for additional information at http://research.lakeheadu.ca/or contact:

Anne Klymenko, Director Office of Research Services, (807) 343-8010 ext. 8223 Email: anne.klymenko@lakeheadu.ca

Internal Deadlines

Please note that <u>all external funding applications must be submitted to the ORS</u> for internal review at least two weeks prior to the external deadline. Please refer to the Policy for Application and Administration of External Research Grants and Contracts.

Tri-Agency and CFI Research Programs

Natural Sciences and Engineering Research Council (NSERC)

The Natural Sciences and Engineering Research Council of Canada funds visionaries, explorers and innovators who are searching for the scientific and technical breakthroughs that will benefit our country. We are Canada's largest supporter of discovery and innovation. We work with universities, colleges, businesses and not-for-profits to remove barriers, develop opportunities and attract new expertise to make Canada's research community thrive. We give Canadian scientists and engineers the means to go further because we believe in research without borders and beyond frontiers.

For forms, guidelines, and other NSERC funding opportunities, please go to http://www.nserc-crsng.gc.ca/index_eng.asp

Social Sciences and Humanities Research Council of Canada (SSHRC)

The Social Sciences and Humanities Research Council (SSHRC) is the federal research funding agency that promotes and supports research and training in the humanities and social sciences.

For forms, guidelines, and more information on SSHRC funding opportunities, please go to http://www.sshrc-crsh.gc.ca/home-accueil-eng.aspx

Canadian Institutes of Health Research (CIHR)

The Canadian Institutes of Health Research (CIHR) is Canada's federal funding agency for health research. Composed of 13 Institutes, we collaborate with partners and researchers to support the discoveries and innovations that improve our health and strengthen our health care system.

For more information: http://www.cihr-irsc.gc.ca/e/193.html

Canada Foundation for Innovation (CFI)

John R. Evans Leaders Fund (JELF)

Our mandate is to increase the capability of Canada's universities, colleges, research hospitals and non-profit research organizations to carry out high quality research by investing in research infrastructure.

The CFI funds up to 40 percent of a project's research infrastructure costs. This funding is then leveraged to attract the remaining investment from partners in the public, private and non-profit sectors. One of CFI's major programs is the John R. Evans Leaders Fund (JELF). The John R. Evans Leaders Fund enables a select number of an institution's excellent researchers to undertake leading-edge research by providing them with the foundational research infrastructure required to be or become leaders in their field. In turn, this enables institutions to remain internationally competitive in areas of research and technology development, aligned with their strategic priorities.

Universities are provided with funding envelopes under the JELF. A CFI JELF internal call for proposals is usually sent out in the fall.

For more information on the CFI in general, please go to http://www.innovation.ca

Funding/Award Opportunities Resources

A special weekly Research and Innovation Bulletin is emailed to faculty members alerting them to any upcoming calls for proposals or awards. This Bulletin also includes information on internal and external research-related news items and upcoming events (including funding agency information sessions). This bulletin is sent via a special distribution list maintained by the Office of Research Services. The Office of Research also maintains an external funding opportunities and awards database.

Grant Writers

The Office of Research Services maintains a list of grant/professional writers on its web site who are available to faculty members to aid in the planning, writing and/or editing of grant proposals. Information on the services that each individual grant writer offers can be accessed by clicking on "Services Offered" under his or her name. A particular grant writer can then be contacted through the use of an online form.

For more information about writers: https://www.lakeheadu.ca/research-and-innovation/researchservices/resources/writing/grant-roster

Senate Research Committee

The Senate Research Committee allocates internal seed grants to enhance research capacity development including the facilitation of external grant applications, and scholarly productivity of Lakehead University faculty members. Funds are for the support of research activities covered under the Tri-Councils' (NSERC, CIHR, SSHRC) mandates. Preference for funding is given to full-time eligible Lakehead faculty members, although in special circumstances part-time faculty and post-doctoral or research fellows may be considered. Limited funds are available, so faculty are expected to develop their research to the point where applications can be made externally to NSERC, CIHR, SSHRC or other external funding sources. Senate Research Committee funds should be regarded as supplementary. The Committee considers requests from eligible faculty on the basis of merit, need, and the availability of funds. All funds are awarded on a competitive basis, although support is preferentially awarded to new faculty and to those who currently hold, or are currently applying for, external Tri-Council funds. Please note that these internal funds are generated through the success of Lakehead University faculty in external Tri-Council competitions.

Senate Research Committee - Internal Research Funds and Deadlines

| Fund | Deadline | |
|--|----------------------|--|
| Applications for the following internal funding opportunities (except RGILS) are only available through the Romeo Research Portal. To access the portal, log into MyInfo, then select "Romeo Research Portal " under the web utilities icon. | | |
| Research Development Fund maximum grant per year - \$7,000 | January 20 | |
| Conference Travel Fund maximum grant per year - \$1,000 | May 10 October 10 | |
| Open Access Publication Fund - Pilot Program maximum grant per year - \$2,000 | Open Deadline | |
| Publication Assistance Fund maximum grant per year - \$1,500 | January 20 | |
| Visiting Scholar Grant maximum grant per year- \$1,000 | January 20 | |
| Senate Research Committee Regional Research Fund maximum grant per year - \$1,000 | March 31 | |
| Research Grant in Lieu of Salary (RGILS) To access guidelines & application form, click here | Open Deadline | |
| Distinguished Researcher Award | January 10 | |
| Research Excellence Award | January 10 | |
| Research Support Award | January 17 | |

Please visit: https://www.lakeheadu.ca/research-and-innovation/researchservices/funding-prizes/internal for more information, or contact:

Bethanie Kramer, Administrative Officer, Senate Research Committee 955 Oliver Road - UC 2003, Thunder Bay (807) 343-8010 ext. 8201 Email: bkramer@lakeheadu.ca

Other Internal Research Funds and Deadlines

| Fund | Deadline |
|--|--|
| Vice-President Research and Innovation Strategic Fund | Research Facilitation Fund: Strategic Research Opportunity Grant: Anytime University of Minnesota Duluth Research Collaboration Grant: Anytime Emergency Research Equipment Repair Fund: Anytime Lakehead University's Research Bridge Fund - November 1 International Research Partnership Award - TBA |

Please visit https://www.lakeheadu.ca/research-and-innovation/researchservices/funding-prizes/internal for more information, or contact:

Melissa Burton, Executive Assistant Vice-President, Research and Innovation 955 Oliver Road - UC 2003, Thunder Bay (807) 343-8010 ext. 8201 Email: ea.vpri@lakeheadu.ca

Faculty of Graduate Studies

The Faculty of Graduate Studies (FGS) is responsible for the administration and development of graduate programs at Lakehead University. All graduate student funding is administered through this Office, including Graduate Assistantships. The Office administers both internal scholarships, awards and bursaries, and external scholarships such as CIHR, NSERC, OGS, and SSHRC.

To supervise graduate students you must be a member of the FGS. In some departments or schools, new faculty take on the role of graduate supervision immediately; talk to your Chair/Director and Graduate Coordinator about the practice in

your particular department or school. For detailed information on Graduate Supervision, and how to apply to become a member of the Faculty, see the Graduate Supervision Policy at: https://www.lakeheadu.ca/programs/graduate/regulations/responsibilities

Faculty having any questions regarding their graduate program, graduate regulations or funding for their graduate students should contact the FGS. For more information, contact:

Trish Sokoloski, Manager Faculty of Graduate Studies, (807) 343-8010 ext. 8099 955 Oliver Road, FB 2010, Thunder Bay Email: trish.sokoloski@lakeheadu.ca

Research Support Services at the Library

The Lakehead Library can help Lakehead researchers make their results public by:

- Submitting articles to Knowledge Commons, Lakehead's institutional repository which allows researchers to meet grant requirements for open access;
- Assisting with creating data management plans (DMPs) that may include documentation on file formats, file-naming conventions, organization, data security and data-sharing.
- Assistance with compliance with Tri-Agencies Open Access Policy and placing data sets in Dataverse, a repository that makes data visible on the Web.
- Providing publisher information help with finding an open access journal or a
 journal that permits self-archiving within a grantor's timeframe; help with avoiding the
 predatory publisher trap, and providing information on publishers who offer
 discounted Article Processing Charges to Lakehead researchers.
- Assistance with tracking metrics such as article-level usage counts, journal impact factors and alt-metrics where available, with establishing research identifiers and with understanding author rights. In addition, for journal editors, the library offers hosting on Open Journal Systems (OJS).

More details at http://libguides.lakeheadu.ca/scholcomm. For more information, contact:

Madeline Donnelly, Scholarly Communications & Data Services Librarian Tel. 807-343-8110 Ext. 8315 Email: mdonnel1@lakeheadu.ca

Research Accounting

The Office of Financial Services has a team dedicated to assisting researchers with the financial administration of their grants. The department of Research Accounting is responsible for administering and monitoring all research accounts and for preparing financial statements and reports to the funding agencies. We provide advice on the eligibility of expenses, arrange for account transfers and cost recoveries, prepare invoices to sponsors, and maintain signing authority and access to the research accounts. We can assist with the budget management and payroll costing. Research Accounting is located in the basement of the University Centre in UC0002. More details are available at: https://www.lakeheadu.ca/faculty-and-staff/departments/services/finance/research-trust-accounting. For more information contact:

Margot Ross Manager, Research, Trust and Accounting Financial Services, (807) 343-8010 ext. 8730 955 Oliver Road, UC 0002C, Thunder Bay Email: margot.ross@lakeheadu.ca

How to Set Up a Research Account

To ensure that all ethical protocols are in place prior to account establishment and to capture data for our records and statistics, all research accounts are to be authorized and established by ORS. **ORS requires the following documents before** establishing a research account:

- 1. Copy of signed Agreement (contract) or Letter of Award (grant).
- 2. Copy of Research Proposal and any updates.
- 3. New updated budget if one is not included in the Agreement or Proposal (or if the amount awarded is different than requested).
- 4. Completed and signed Research Proposal Approval Form (RPAF).
- 5. If applicable, ethical approval from the appropriate certification committee/board (i.e., REB, ACC, Biosafety).

If a project involves research with human participants or animals, contact Sue Wright at extension 8283. If the project involves biohazardous materials contact the Laboratory Safety Officer at extension 8806. Please note that a research account will <u>not</u> be established until ethical approval is in place or until early release of funds approvals are in place. For more information, contact:

Sue Wright Manager, Research Ethics and Contracts Office of Research Services, (807) 343-8010 ext. 8283 Email: susan.wright@lakeheadu.ca

Research Ethics Board

The Board of Governors of Lakehead University has established the Research Ethics Board (REB) which is committed to the ethical integrity of all research involving humans conducted in its jurisdiction or under its auspices, by its faculty, staff or students, regardless of where it is conducted.

The REB is guided by the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans 2 (TCPS 2).

The Lakehead University Research Ethics Board Terms of Reference is available at: https://www.lakeheadu.ca/about/policies-procedures/terms-of-reference

The following forms are available through the Romeo Research Portal at https://erpwp.lakeheadu.ca/. To log in, use your myInfo username and password.

- Researchers Agreement Form (submission form)
- Request for Renewal form (under Events)
- Request for Amendment for an Approved Project form (under Events)
- Final Report form (under Events)
- Request for Early Release of Funds form

Ethics proposals are submitted to the Office of Research Services. The ethical review process for minimal risk research generally takes 3 weeks.

For additional information about the ethical review process, contact:

Dr. Claudio Pousa Chair, Research Ethics Board (807) 343-8110 ext. 7721 claudio.pousa@lakeheadu.ca Sue Wright Manager, Research Ethics and Contracts (807) 343-8010 ext. 8283 susan.wright@lakeheadu.ca

Animal Care Committee

The Lakehead University Animal Care Committee is overseen by the Vice-President, Research and Innovation. It was established in the 1970s to ensure the ethical use of animals used in teaching and research. The Committee composition and Terms of Reference are governed by the Canadian Council on Animal Care and Ontario's Animals for Research Act. The administration office for the Committee is the Office of Research Services.



The Committee's role is to ensure that research and teaching activities involving animals at Lakehead University is conducted within the guidelines of the Canadian Council on Animal Care and the Animals for Research Act. Animal Utilization Protocol forms must be completed for all animal use including research, teaching, testing, and field studies, and submitted to the Committee via the Romeo Research Portal for approval. Researchers are

invited to the Committee meetings to discuss their protocols and are encouraged to bring along students who will be involved in the research. Protocols are reviewed on an annual basis under the guidelines of the Canadian Council on Animal Care. The Committee also provides training for researchers to enable them to become familiar with animal care issues.

Further information on Animal Care is available at: https://www.lakeheadu.ca/researchand-innovation/ethics/animals

Applications, amendments, and renewals for Animal Utilization Protocols are available through the Romeo Research Portal at: https://erpwp.lakeheadu.ca/. To log in, use your MyInfo username and password.

For more information, you may also contact:

Dr. Christine Gottardo Chair, Animal Care Committee (807) 343-8010 ext. 8466 christine.gottardo@lakeheadu.ca Sue Wright Manager, Research Ethics and Contracts (807) 343-8010 ext. 8283 susan.wright@lakeheadu.ca

Biosafety Committee

Lakehead's comprehensive risk management program for biological hazards, the Biosafety Program, is the responsibility of the Biosafety Committee, which reports to the Vice-President, Research and Innovation. All faculty, researchers, and students who work with biological hazards must acquire prior approval and act in accordance with the program.

A biological hazard is an agent of biological origin that has the ability to produce deleterious effects on human beings. Biohazards can include bacteria, viruses, fungi,

parasites, and plants. Biohazards may not be as well known, or as visible as chemical or physical hazards, however, they are capable of causing very serious health effects to exposed individuals.

For information about identifying biohazards, or to obtain an application to work with biohazards, contact the Lab Safety Officer, Human Resources at (807) 343-8806.

For additional information, please visit the Human Resources Health and Safety website at https://www.lakeheadu.ca/faculty-and-staff/departments/services/hr/health-safety, or contact:

Tiffany Moore, Lab Safety Officer Human Resources, (807) 343-8010 ext. 8806 955 Oliver Road, AC 153, Thunder Bay Email: labsafety@lakeheadu.ca

Laser Safety

Lakehead University must adhere to laser safety standards on campus to ensure compliance with applicable provincial legislation, guidelines and standards. Work with Class 3 and Class 4 lasers at Lakehead University must meet the requirements set by the Ontario Ministry of Labour and ANSI standards 136. Prior to laser work commencing, the Laser Safety Officer will review SOPs, PPE and training to ensure that the standard set in ANSI 136 is met.

For additional information, please visit the Human Resources Health and Safety website at: https://www.lakeheadu.ca/faculty-and-staff/departments/services/hr/health-safety/tb/lab-safety or contact:

Tiffany Moore, Lab Safety Officer Human Resources, (807) 343-8010 ext. 8806 955 Oliver Road, AC 153, Thunder Bay Email: labsafety@lakeheadu.ca

Radiation Safety

It is a requirement of federal legislation that all activities involving radioactive materials are licensed by the Canadian Nuclear Safety Commission (CNSC); therefore, Lakehead University must maintain control of radioactive hazards on campus to ensure compliance with applicable federal legislation, guidelines and regulatory documents.

For additional information, please visit the Human Resources Health and Safety website at: https://www.lakeheadu.ca/faculty-and-staff/departments/services/hr/health-safety/tb/lab-safety or contact:

Tiffany Moore, Lab Safety Officer Human Resources, (807) 343-8010 ext. 8806 955 Oliver Road, AC 153, Thunder Bay

Working with Media Relations

Connecting you with local, national and international media outlets, including radio, TV, print and online news sites, the Office of Media Relations helps to share your story in a way that will maximize exposure and help keep you focused on what you do best.

Our media relations team can assist researchers wanting to share their findings, impacts, discoveries and innovations. We also serve as the office reporters go to for information about Lakehead University and its researchers.

Why talk to the media?

The media can be a powerful and influential tool. Here at Lakehead, we rely on the provincial and federal governments and funding agencies to support research, scholarly activity, and student training. It is important that we demonstrate to governments, agencies, taxpayers, and sponsors that their money is well spent. One of the most effective ways to get that message across is through the media.

Our media relations team works closely with Faculty Deans and the Office of Research Services to identify stories that demonstrate how the University is pursuing its research mission. Captivating stories of successful research not only make a persuasive argument for attracting world-class faculty and students, but also encourage on-going financial support for research.

You are the expert!

The media often calls upon Lakehead University faculty members and researchers to share their expertise in an interview. By responding to a media opportunity, faculty obtain greater public awareness of their work and the University receives recognition for its scholarly efforts in the social, cultural, and economic life of our region and country.

Remember, you are the expert. If you are unsure about something, tell the journalist that and promise to get back with an answer right away or refer them to another faculty member who might be more qualified to answer that question. Stay within your area of expertise and responsibility. If you are asked to speak on behalf of Lakehead University, please refer the journalist to your campus's Media Relations representative (see contact information below).

Communicating information successfully to the media requires a well-prepared strategy and an understanding of what the media expects from you. Upon request, our media relations team will provide researchers with media training designed to assist them in becoming more effective in their interactions with print, radio, and broadcast reporters. To begin the process of planning a research-related media event, and to ensure potential communication embargos have been removed by the research sponsors, please contact:

Andrew Hacquoil, Research Facilitator (Institutional Programs) Office of Research Services (807) 343-8010 ext. 8223 ahacquo1@lakeheadu.ca

To access media training opportunities or additional media relations support for yourself or your research group, please contact:

Thunder Bay Campus

Brandon Walker, Media, Communications and Marketing Associate (807) 343-8010 ext. 8372 brandon.walker@lakeheadu.ca

Orillia Campus

Jaclyn Bucik, Media, Communications and Marketing Associate (705) 330-4010, ext. 2014 jaclyn.bucik@lakeheadu.ca

Research Policies and Procedures

Faculty should be familiar with the following Lakehead University research-related policies found at: https://www.lakeheadu.ca/about/policies-procedures/policies

- Animal Care Committee Policy
- Application and Administration of External Research Grants and Contracts
- Approval Authority Policy
- Biosafety Policy
- CFI Infrastructure Operating Fund (IOF) Lakehead University Institutional Allocation Plan
- Conflict of Interest
- Disposal of Equipment
- Guidelines on the Use of Students as Research Subjects
- Intellectual Property
- Policies and Procedures for the Establishment of Research Centres and Research Institutes
- Policy for Application and Administration of External Research Grants and Contracts
- Policy for Recovery of Overhead (Indirect Costs) on University-Administered Research Funds
- Policy Framework for Research Ethics Involving Humans
- Postdoctoral Fellows
- Procurement Policy
- Recovery of Overhead (Indirect Costs) on University-administered Research Funds
- Research Integrity
- Travel Expense Policy

Office of Research Services Forms

All forms concerning Office of Research Services can be found at https://www.lakeheadu.ca/research-and-innovation/forms

Office of Innovation, Partnerships and Economic Development

"Development through Innovation"

Lakehead's Office of Innovation, Partnerships and Economic Development (IPED) is responsible for the management and commercialization of the University's intellectual property (i.e. licensing and start-up companies), and the handling of legal and other issues related to IP protection, development and marketing. IPED also assists researchers in transferring knowledge and innovations to those outside the University community.

IPED is integral in developing and maintaining linkages with research and business partners, including industry, community organizations, and all levels of government, and other universities.

IPED is responsible for the following main areas: Industry Liaison; Contract Creation, Review, and Negotiation; IP Commercialization Services; Commercialization Funding; Entrepreneurship, Economic Development, and Outreach Activities.

Industry Research Partnerships

IPED works closely with members of the University community and the University's

partners facilitating interactions between groups of researchers and specific sectors of the non-academic world. By connecting new and established companies with the technologies and resources of Lakehead University, IPED creates partnerships between Lakehead University researchers and industry in local and global markets. These strategic links generate new investment and long-term economic benefits for the University, its industrial partners, and the community.



Contract Review & Negotiation

IPED drafts and negotiates legal agreements such as:

- intellectual property assignments;
- licensing agreements;
- industrial grants;
- industrial research contracts and related partnership agreements;
- data sharing agreements;
- confidentiality, non-disclosure agreements, and material transfer agreements.

Researchers are always encouraged to contact IPED for assistance with negotiating such research agreements as early as possible.

IP Commercialization Services

IPED offers assistance in each of the five major steps of the IP Commercialization Cycle:

- **Research:** assisting with intellectual property and related clauses in research contracts, and all aspects of industry sponsored research including finding industry partners;
- **Discovery:** helping researchers determine which discoveries to consider moving through the commercialization cycle;
- **Disclosure:** helping researchers create valid invention disclosures, the first step in protecting your discoveries;
- **Evaluation:** evaluating a business, intellectual property, or potential products/services;
- **Commercialization:** including commercialization plan development and implementation, and where appropriate, new business creation and support.

Commercialization Funding

Several funding programs exist to help move inventions further down the innovation continuum, from concepts to prototypes to marketable products and/or services. IPED is here to assist University faculty and researchers with sourcing potential funding for IP commercialization.

Outreach Activities

IPED offers seminars and other continuing education periodically on request to faculty, staff, students, and the local community as a whole. Seminars can cover various topics, including intellectual property in general, steps to commercializing technology, and protection of inventions.

Ingenuity

Lakehead's business incubator, *Ingenuity,* is located in the Centre for Advanced Studies in Engineering and Science (CASES) building. *Ingenuity* provides students with pathways to business launch and success by providing resources such as one-on-one support, workspace and co-working space, prototype development, and connections to financial and marketing support. *Ingenuity* is home to 8 hot desks, 2 rentable offices, 2 private meeting rooms, a makerspace, media room, open common space, connections theatre, and community partnership area. *Ingenuity* provides hands-on learning opportunities for students to explore the world of entrepreneurship through workshops, competitions, events and open house seminars. *Ingenuity* welcomes students from all disciplines, as well as alumni and community members, who are interested in launching a business, whether it's for-profit, or not-for-profit.

For more information about IPED and more details about the services we provide, please visit IPED's website at https://www.lakeheadu.ca/research-and-innovation/iped or feel free to contact:

Office of Innovation, Partnerships and Economic Development

955 Oliver Road, FB 2004, Thunder Bay

Bill Maloney Director, Industry Research Partnerships (807) 343-8010 ext. 8793 bmaloney@lakeheadu.ca

Kelly Fettes

Administrative Officer (807) 343-8010 ext. 8871 kafettes@lakeheadu.ca

Ellen MacKay

Director, Innovation Development (807) 343-8010 ext. 8724 emackay@lakeheadu.ca

Alyson MacKay

Manager, *Ingenuity* (807) 343-8010 ext. 8324 amackay@lakeheadu.caeconomic

Research Centres and Institutes

Anishinaabe Kendaasiwin Institute (AKI)

The principle of Indigenous self-determination in research underpins the newly formed institute. The purpose of AKI is to support mino-bimaadiziwin amongst Anishinaabe peoples, nations and territories through research that is situated in Anishinaabe knowledges and good relationships that are respectful, reciprocal, and anti-colonial. The acronym for the institute, "AKI" means land in Anishinaabemowin. Contact:

Dr. Lana Ray (Anishinaabe Kwe, Waaskone Giizhigook), Director Tel: (807) 343-8010 ext 7130, AKI Director Tel: (807) 343-8010 ext 7131, AKI Admin Email: <u>admin.aki@lakeheadu.ca</u> https://www.lakeheadu.ca/research-and-innovation/facilitiescentres/anishinaabe-kendaasiwin-institute-aki-

Biorefining Research Institute (BRI)

The BRI's mandate is to develop cost-effective and environmentally-sound technologies and products from renewable resources as a substitute for imported oil-based fuels and petrochemicals that can create new opportunities for the Bioeconomy. Contact:

> Dr. Pedram Fatehi, Director Tel: (807) 343-8010 ext. 8697 Email: admin.bri@lakeheadu.ca https://www.lakeheadu.ca/research-and-innovation/facilitiescentres/bri

Centre of Excellence for Sustainable Mining and Exploration (CESME)

CESME will encourage and support research, education and outreach activities regarding the nature and impacts of mineral resource exploration and extraction, particularly in Northern Ontario. Contact:

Dr. Peter Hollings, Director Tel: (807) 343-8010 ext. 8329 E-Mail: peter.hollings@lakeheadu.ca http://cesme.lakeheadu.ca/

Research Centre for Sustainable Communities (RCSC)

The general aim of the RCSC is the development of an improved understanding of factors that influence the sustainability of communities. Contact:

Dr. Nandakumar Kanavillil, Director Tel: (705) 330-4008 ext. 2633 Email: nkanavil@lakeheadu.ca https://www.lakeheadu.ca/research-and-innovation/facilitiescentres/research-centre-for-sustainable-communities

Centre for Education and Research on Aging & Health (CERAH)

CERAH's mission is to conduct high quality knowledge translation through rigorous research and evidence-based education to advance health and social care for an aging population and promote the health & well-being of people aging across the life span. Contact:

Dr. Katherine Kortes-Miller, Director Tel: (807) 343-8010 ext. 7204 E-Mail: kkortesm@lakeheadu.ca https://www.lakeheadu.ca/research-and-innovation/facilitiescentres/cerah

Centre for Innovation and Entrepreneurship Research (CIER)

The primary purpose of the Centre for Innovation and Entrepreneurship Research is to promote and support research on innovation and entrepreneurship at Lakehead University. Contact:

Dr. Michael Dohan Tel. (807) 343-8010 ext. 8635 E-Mail: msdohan@lakeheadu.ca http://cier.lakeheadu.ca/

Centre for Health Care Ethics (CHCE)

The mission of CHCE is to foster high quality, ethical health care through research, education, and capacity building. Contact:

Dr. Kristen Jones-Bonofiglio, Director Tel: (807) 343-8010 ext. ext. 8079 E-mail: chce@lakeheadu.ca https://www.lakeheadu.ca/centre/chce

Centre for Northern Studies (CNS)

The CNS is a senate approved research centre comprised of faculty from various disciplines and programs who are active researchers in the field of northern studies. Contact:

Dr. Chris Southcott, Acting Director Tel: (807) 343-8010 ext. 8349 E-mail: chris.southcott@lakeheadu.ca https://www.lakeheadu.ca/research-and-innovation/facilitiescentres/northern-studies

Centre for Research on Safe Driving (CRSD)

The mandate of the CRSD is to contribute to the reduction of traffic-related crashes through the understanding of the fundamental processes that support safe driving and through the development of interventions to optimize safe driving. Contact:

Dr. Michel Bédard, Director Tel: (807) 343-8010 ext. 8630 E-mail: crsd@lakeheadu.ca http://crsd.lakeheadu.ca/

Centre for Rural & Northern Health Research (CRaNHR)

As a well-established Lakehead University research centre, CRaNHR Lakehead continues to develop its program of research to support research priority areas identified in the Lakehead University Strategic Research Plan (2018-23), specifically, Social Justice, Indigenous Research, Health Research Across the Life Span, and Northern Studies. Contact:

Dr. Christopher Mushquash, Director Tel. (807) 343-8010 ext. 8239 Email: chris.mushquash@lakeheadu.ca https://www.lakeheadu.ca/research-and-innovation/facilitiescentres/rural-northern-health

Centre of Education and Research on Positive Youth Development (CERPYD)

The CERPYD at Lakehead University is focused on generating, disseminating and applying knowledge about children and adolescents and their well-being. Contact:

Dr. Edward Rawana, Director Tel: (807) 343-8010 ext. 8453 Email: cerpyd@lakeheadu.ca https://www.lakeheadu.ca/centre/cerpyd

Enhancing Prevention of Injury and Disability at Work (EPID@Work) Research Institute

The mandate of the EPID@Work Research Institute is to bring people together to reduce impacts of work-related injury and work disability through collaborative applied research and provision of education to enhance knowledge related to injury and disability. Information generated from our research will inform practice and policies aiming to improve health and social outcomes in Northwestern Ontario and beyond. Contact:

Dr. Vicki Kristman, Director Tel: (807) 766-7184 Email: epid.hbsc@lakeheadu.ca https://www.lakeheadu.ca/centre/epid

Green Process Research Centre (GPRC)

The Green Process Research Centre (GPRC) will be a hub for local and international researchers working on cutting-edge green technologies that will develop new products with the aim of transforming Canadian industries to adopt new sustainable processes with green products that will protect the environment. With its focus on sustainability, the vision of GPRC is well aligned with the Strategic Research Priorities of Lakehead University including Advanced Systems and Technologies and the Environment and Natural Resources. As a hub that brings together local, national, and international researchers, the GPRC also fits well with Lakehead University's internationalization mandate. Contact:

Dr. Pedram Fatehi, Director Tel: (807)-343-8010 ext. 8697 Email: pfatehi@lakeheadu.ca https://www.lakeheadu.ca/research-and-innovation/facilitiescentres/green-processes-research-centre

Lakehead Social History Institute (LSHI)

The Lakehead Social History Institute is a partnership of historical researchers at Lakehead University and in the Thunder Bay community. The Institute was constituted by meetings of persons interested in historical research. Contact:

Beverly Soloway Tel: (807) 343-8010 ext. 8852 Email: shi@lakeheadu.ca https://www.lakeheadu.ca/research-and-innovation/facilitiescentres/social-history-institute

Instrumentation Laboratory

The Lakehead University Instrumentation Laboratory (LUIL) is a multi-purpose, centralized facility which serves researchers and students from various faculties, providing access to the fundamental tools needed for modern research and training. The lab occupies 411 m² of space in the CASES and 65 m² of the Centennial Building respectively, on Thunder Bay campus.

The Laboratory houses more than five million dollars of research equipment and much of this equipment is unique to the region. Early in its development, the University decided to operate single versions of fundamental research tools such as a nuclear magnetic spectrometer, an electron microscope, and spectrometers in a central analytical facility. Sharing of equipment is essential to this strategy. This wide range of instrumentation, which is in first-class condition, is accessible to all members of the University community including undergraduate and graduate students under staff supervision.

The Instrumentation Laboratory is equipped to analyze the composition and structure of a wide range of materials, enabling our staff to provide valuable information towards solving industrial problems. Instrumentation Laboratory External Services is a member of LUCAS and provides accessibility to external users to the laboratory for a fee. Users may visit the laboratory to discuss results or consult with staff by phone. Proprietary information will be kept confidential.

For more information about the Instrumentation Laboratory and more details about the services we provide, please visit the LUIL website at:

http://lakeheadu.ca/centre/lucas/laboratories/luil or feel free to contact:

Dr. Francis Appoh Director, Analytical Testing Services LUCAS/LUIL/PDNA, Email: fappoh@lakeheadu.ca Phone: (807) 343-8010 ext. 8294/343-8010 ext. 8853

Dr. Guosheng Wu, Materials Scientist Contact for SEM, TEM and XPS materials analysis Email: gwu@lakeheadu.ca Phone: 807-343-8010 ext. 8294

Mr. Michael Sorokopud, Technician

Contact for NMR, XRD, FTIR analysis Email: msorokop@lakeheadu.ca Phone: 807-343-8010 ext. 8294 (NMR Laboratory, 807-343-8010 ext. 8488)

Mr. Greg Kepka, Technician Contact for Image Analysis, Optical, Chromatography, ICP, GC-MS, CHNS, analysis Email: gkepka@lakeheadu.ca Phone: 807-343-8010 ext. 8294

Lakehead University Centre for Analytical Services (LUCAS)

Lakehead University Centre for Analytical Services operations have a proven track record in producing timely and accurate reports, allowing users to maintain productivity by responding quickly to production problems. LUCAS facilities are multiple use, providing advanced testing services to regional as well as international clients using the latest in research equipment. The laboratories also welcome Lakehead University's brightest students providing the necessary training and hands-on access to the technologies of the future allowing them to develop essential skills to further their research careers or to secure jobs in fields that directly have an impact on Northern Ontario's economic future. LUCAS provides administrative and marketing support to member laboratories. Researchers who might be interested in attracting clients by providing services to commercial companies are encouraged to contact the Director of Analytical Services and Office of Research Services. For more information see http://lakeheadu.ca/centre/lucas

New faculty members are encouraged to contact:

Dr. Francis Appoh Director, Analytical Testing Services LUCAS/LUIL/PDNA, 343-8010 ext. 8853 Email: fappoh@lakeheadu.ca

or

Karen Maa Administrative Assistant, 343-8010 ext. 8590 Email: karen.maa@lakeheadu.ca

or any of the individual laboratory Directors for information about the services they offer.

The following research facilities are members of LUCAS:

Aquatic Toxicology Research Centre (ATRC)

The ATRC is an aquatic facility that can support a wide range of research into the evaluation and abatement of toxic effects from industrial wastes released into the environment. The ATRC also offers a full range of toxicity testing services to both industry and government, designed to meet current regulatory requirements. These services currently include acute testing with rainbow trout and daphnia. The ATRC is accredited to ISO17025 by the Canadian Association for Laboratory Accreditation (CALA) (see www.cala.ca directory for a list of tests). Contact:

Dr. Michael Rennie, Academic Director Tel. (807) 343-8010 ext. 7860 Email: mrennie@lakeheadu.ca

Tyson Bouchard, Toxicologist Tel. (807) 343-8010 ext. 8179 Email: tbouchar@lakeheadu.ca

Biotechnology Laboratory for Enzymes and Bioproducts (BLEB)

BLEB focuses on applied biotechnological analytical services in bioproduct analysis, biodegradation studies, enzyme assays, microbial characterization, and molecular biology studies like gene cloning and protein expression. Contact:

Dr. Wensheng Qin, Director Tel: (807) 343-8010 ext. 8467 Email biotechnologylab@gmail.com https://www.lakeheadu.ca/centre/lucas/laboratories/bleb

Biomass Utilization Research Laboratory (BURL)

BURL offers access to the unique pulping research facilities in the Chemical Engineering Department at Lakehead University. The lab contains similar equipment located at pulp and paper mills, as well as equipment that is able to recreate the pulping process. Though the facility is highly involved in research, its facilities are excellent for sampling and testing. Contact:

> Dr. Pedram Fatehi, Director Tel. (807) 343-8010 ext. 8697 Email: pfatehi@lakeheadu.ca

Lakehead University Molecular Archaeochemistry and Residue Services (LUMARS)

LUMARS research and services involve genetics method development. Emphasis on biological remains that have proved challenging to recover biomolecules from using conventional methods. LUMARS Services involve design and development of methods to retrieve macromolecules of interest from degraded remains. This has applications in numerous fields - principally archaeology, forensic and medical science. Contact:

> Dr. Tamara Varney, Director Tel: 807-343-8010 ext. 8204 Email: tamara.varney@lakeheadu.ca http://lucas.lakeheadu.ca/lugen/

Lakehead University Geospatial Data Centre (LUGDC)

LUGDC offers services associated with geospatial data mapping. LUGDC has equipment consisting of a large area scanner, GPS units, GPS digital cameras, large format scanner and tablets with GIS software in the Geography Department. The heart of the Geospatial Data Centre is a geospatial server and a growing collection of regional, national and international spatial data. Services include: map creation, data acquisition, spatial analysis, and image analysis, Contact:

> Dr. Robert Stewart, Director Tel: 807-343-8010 ext. 8430 Email: rob.stewart@lakeheadu.ca http:/gdc.lakeheadu.ca

Lakehead University Environmental Laboratory (LUEL)

LUEL offers multi-parameters testing of soils, sediments, biological tissues, vegetation, waters, and specific chemicals. The laboratory focuses on developing analytical methods to fit specific requirements. The laboratory provides hands-on training of undergraduate and graduate students. LUEL is also accredited to ISO17025 by the Canadian Association for Laboratory Accreditation (CALA) for total suspended solids in water, and mercury, methylmercury and metals in biological samples (see http://www.lakeheadu.ca/centre/lucas/services for a list of tests). Contact:

Dr. Amanda Diochon, Director Tel. (807) 343-8010 ext. 8444 Email: adiochon@lakeheadu.ca

Lakehead University Fire Testing and Research Laboratory (LUFTRL)

LUFTRL offers unique fire testing services to association standards and industry requirements as well as custom testing for research and development. Available services include but not limited to, evaluation of fire resistance of construction materials, products and building components and/or assemblies, and development of testing protocols to assess the fire resistance of non-standardized products. In addition, LUFTRL offers consultancy services to industry clients and engineering firms in the field

of structural fire engineering through conducting required fire resistance tests and/or developing computer models; as well as technical advice on the compliance of materials with regulatory requirements and conformity assessment services to demonstrate compliance with local, provincial and/or national and international codes and standards for fire safety applications. Contact:

> Dr. Sam Salem, Founder and Director Tel: (807) 343-8010 ext. 8011 E-mail: sam.salem@lakeheadu.ca

Lakehead University Instrumentation Laboratory (LUIL)

The Lakehead University Instrumentation Laboratory is a multi-purpose, centralized facility which serves researchers and students from three faculties, providing access to spectrometers, electron and laser microscopes, and analyzers needed for modern research and training of Canada's future scientists. The Laboratory manages some of the University's most advanced research equipment, much of which is unique to the region. The LUIL provides extensive, hands-on training programs in the use of SEM/EDS, TEM, CONFOCAL Microscopes, NMR, FTIR, ICP-AES/MS, XPS and XRD Spectrometers to students before they begin their research projects. The facility is supported and used by regional resource and health care industries as well as government agencies for multi-party projects in the fields of mineral exploration, process control, material science, and bio-remediation. Contact:

Dr. Francis Appoh, Director, Analytical Testing Services LUCAS/LUIL/PDNA Email: fappoh@lakeheadu.ca Phone: (807) 343-8010 ext. 8294/343-8010 ext. 8853

Lakehead University Materials Characterization Services (LUMCS)

LUMCS provides chemistry and materials science consulting, plus a full range of chemical analysis and computation services. Contacts:

Dr. Stephen Kinrade, Co-Director Tel. (807) 343-8010 ext. 8683 Email: stephen.kinrade@lakeheadu.ca

Dr. Robert Mawhinney, Co-Director Tel. (807) 343-8010 ext. 8245 Email: rcm@lakeheadu.ca

Lakehead University Mineralogical and Experimental Laboratory (LUMINX)

LUMINX is designed to serve as a bridge between the minerals industry and university researchers by providing advanced mineralogical and geochemical services that are not routinely available from commercial firms:

• Quantitative or qualitative phase and chemical composition analysis of solids.

- Mineralogical/petrographic assessment of geological samples.
- Fluid inclusion microthermometry.
- Characterization of gold- and platinum group-bearing phases, sulphides, and diamond indicator minerals.
- Analysis of high-tech and industrial minerals, and mineral synthesis.
- Compositional analysis of natural and synthetic glasses.
- Solubility testing of natural and synthetic materials.

Contacts:

Dr. Andrew Conly, Co-Director Tel. (807) 343-8010 ext. 8463 Email: andrew.conly@lakeheadu.ca

Dr. Shannon Zurevinski, Co-Director Tel: (807)-343-8010 ext. 8015 Email: shay@lakeheadu.ca

Lakehead University Wood Science Testing Laboratory (LUWSTL)

The LUWSTL offers state-of-the-art testing for the mechanical and physical properties of wood and wood products. We have 3 universal wood testing machines with all tools for mechanical tests for solid wood and engineered products as well as an impact testing machine. The lab can also do small scale hot press runs for composite research as well as large ovens for physical property research projects. A Bomb Calorimeter is in the lab to conduct thermal testing for several industries. We have equipment to conduct pellet testing or thermal, ash, durability, fines, bulk density etc. We have a Taber tester for flooring product wear studies. Wood identification is also conducted in the labs for various clients. The labs have fiber analysis equipment for measuring fiber length and width as well as vessel dimensions for hardwoods. We also have a conditioning chamber to prepare all samples and the labs can operate following ASTM or CSA or any standards required. The LUWSTL has a portable wood processing technologies program to aid communities in becoming involved in the value-added forest sector and to promote small scale manufacturing of value-added products. To this end the LUWSTL has a Wood Mizer LT40HD Portable Bandsaw mill and also a portable twin edger and a solar powered drying kiln. We have been conducting research and testing of engineered wood products in the Mass Timber area. In collaboration with other labs on campus we are also working on bio-products utilizing biomass and wood waste. This includes bio-fuels, bio-energy and also bio-chemicals. We also have the capacity to do full Fuel Specifications for boilers system designing.

Contact:

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Lakehead University Agricultural Research Station (LUARS)

LUARS, a facility with 36 acres well laid out plot ranges, at 5790 Little Norway Road off Hwy 61, has a strong and unique expertise in on-station and on-farm research, especially in the areas of crop, soil and nutrient management and has decades of experience behind it. LUARS could be an asset to the other LUCAS Labs and would welcome collaborative research with all. In addition to LU researchers, students and Post Doctorate Fellows, our clients could include industry (seed, fertilizer, pesticide, procurement and processing), other universities, and Farmers' and Government organizations.

LUARS has strengths in small plot research in the following fields:

- Screening of high yielding, better quality and disease resistant varieties.
- Evaluation of new fertilizers/blends of fertilizers and agro-chemical products including root inoculants, growth hormones and pesticides.
- Identifying potential new/and alternate crops and cropping systems for higher and sustained agricultural production suitable for NWO; leading to development of small-scale industries. For example, a stone grinding flour mill and a canola crushing plant for edible oil in the past.
- Developing new agronomic practices for improving productivity.
- Medium to long term testing for increasing soil and crop productivity and cutting down costs.

Contact:

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Paleo-DNA Laboratory (PDNA)

The PDNA Laboratory is one of the top ancient DNA research laboratories in the world. The laboratory is specifically designed to accommodate low-copy number, degraded, or ancient samples and vigorously control contamination. This laboratory provides academic support to faculty and students of Lakehead University as well as extension services to the public in the form of paternity testing, universal genetic identification, canine DNA testing, and ancient DNA analysis. The PDNA Laboratory was one of the first Canadian laboratories to develop mitochondrial DNA analysis techniques and DNA training courses emphasizing mitochondrial DNA analysis. The PDNA Laboratory, as part of its commitment, offers tours, presentations, and activities with the aim of improving the teaching and learning of science in the field of molecular biology. Contacts:

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