NMR Staff Resources

Dr. Ryan T. McKay - (780) 492-9950

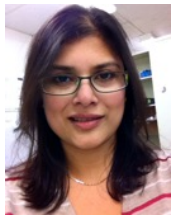
NMR Facility Supervisor

Office: E3-17A East Chemistry Bld.

Mark Miskolzie - (780) 492-2573

Senior NMR Spectroscopist

Office: WB-13 West Chemistry Bld.



Nupur Dabral - (780) 492-2573

NMR Spectroscopist

Office: WB-13 West Chemistry Bld.

Documentation, Reservations and Fees

The NMR Website (nmr.chem.ualberta.ca) is our primary source of documentation and contains the latest information, guides, instructions, and access to online reservations.

Online reservations are available to Department of Chemistry researchers and students. Bookings can be viewed showing individuals and laboratory.

Fees: please see the website for the latest information.

Training: all users of the NMR facility must receive instructions and safety materials from NMR facility staff before using the facility. Please contact staff at 492-2573 to book a training session.

Nuclear Magnetic Resonance Facility

Department of Chemistry

NMR Facility
Department of Chemistry
Room WB-13, West Chemistry Building
University of Alberta, Edmonton
Alberta, Canada T6G 2G2
Telephone: 1(780) **492-2573**
Website: **nmr.chem.ualberta.ca**

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About the Facility

The Nuclear Magnetic Resonance Spectroscopy (NMR) Facility in the Department of Chemistry is a fully equipped modern spectroscopic laboratory, including detection of a wide variety of nuclei, high resolution and ultra sensitivity instrumentation, broad sample temperature capabilities and liquid, semi-solid, and solids measurement. Examples of capabilities include: high volume **robotic sample handling**, liquids **variable temperature** acquisition from **-80** to **+100 °C**, small molecule identification / quantitation, multinuclear-multidimensional biomolecular acquisition for structure determination, 'nanoprobe' solids capabilities, and the latest in cryogenically cooled high sensitivity hydrogen and carbon probes.

Experienced NMR facility staff are available for academic, government, and commercial client sample submission, NMR optimization and acquisition, and analysis.

Samples and Certification

Samples can be submitted directly to the facility for preparation, spectrometer optimization, and acquisition by facility staff.

For high volume routine samples, training and facility certification can be provided to individuals and/or groups for access to instrumentation.

Please see our website for detailed preparation and certification instructions.

Instrumentation and Solids Access

Four **400 MHz** Instruments

- New Agilent 400 MR with ProTune
  - ^{1}H-$^{19}F/^{15}N$ to ^{31}P "oneNMR Probe"
  - Quartz insert - no ^{11}B background
- Two Inova spectrometers
  - ^{1}H-$^{19}F/^{15}N$ to ^{31}P with auto tuning
- Mercury console with Robotic Sample Handling
  - $^{1}H/^{19}F/^{13}C/^{31}P$ detection

Two **500 MHz** Instruments

- Two-Channel VNMRS with ProTune
  - ^{13}C enhanced "cold-probe"
  - Signal to noise 1500:1 (^{13}C) and 2200:1(^{1}H)
  - 12 Position Carousel AutoSampling System
- Four-Channel Inova with ProTune
  - ^{1}H-$^{19}F/^{15}N$ to ^{31}P

600 MHz Instrument with ProTune

- Three-Channel VNMRS
  - $^{1}H\{^{15}N/^{13}C\}$ Biomolecular probe

700 MHz Instrument

- Four-Channel dual receiver VNMRS
  - cryogenically cooled $^{1}H/^{13}C$ triple resonance Biomolecular probe with auto tuning.
  - Signal to noise 7000:1 for ^{1}H, and 900:1 for ^{13}C

300, 400 and 500 MHz wide bore **Solids NMR**

- access kindly provided by the *Rod Wasylishen Group*
- includes imaging and hyper-polarization