



CUNY ADVANCED SCIENCE RESEARCH CENTER

Biomolecular NMR Facility

The **Biomolecular Nuclear Magnetic Resonance Facility** features three state-of-the-art Bruker AVANCE III HD NMR spectrometers operating at 600, 700, and 800 MHz suitable for the **full complement of biomolecular NMR studies on proteins, nucleic acids and other biomolecules** to shed light on their structural, dynamical and binding properties.

All three spectrometers are equipped with either cryogenically-cooled or room temperature probes offering a wide range of ^1H , ^{13}C , ^{15}N , ^{19}F , ^{31}P , and ^2H solution NMR capabilities, plus a broadband (multinuclear) solid-state probe for use on the 600 MHz spectrometer.

With a growing list of active users, the Biomolecular NMR Facility is **open to all academic, start-up and industry users**.

For more information:
asrc.cuny.edu/nmr



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Available Instrumentation

The Biomolecular NMR Facility houses three high-field NMR spectrometers capable of performing a wide range of solution and solid-state NMR studies.

Bruker AVANCE III HD 800 MHz spectrometer

*Ascend Ultrashield Plus 18.8 T standard bore magnet
5-mm TCI CryoProbe (^1H - ^{13}C / ^{15}N - ^2H + XYZ)
5-mm TXI (^1H - ^{13}C / ^{15}N - ^2H + Z)
24-holder SampleCase for automated sample changing*

Bruker AVANCE III HD 700 MHz spectrometer

*Ultrashield 16.4 T standard bore magnet
5-mm QCI-F CryoProbe (^1H - ^{19}F - ^{13}C / ^{15}N - ^2H + Z)
5-mm QXI (^1H - ^{19}F - ^{31}P / ^{13}C - ^2H + Z)
5x96-tube rack SampleJet for high-throughput screening*

Bruker AVANCE III HD 600 MHz spectrometer

*Shielded 14.1 T standard bore magnet
5-mm TCI CryoProbe (^1H & ^{19}F - ^{13}C / ^{15}N - ^2H + Z)
5-mm TXI (^1H - ^{31}P / ^{13}C - ^2H + Z)
Phoenix 1.6-mm HXY, 40 kHz solid state probe
24-holder SampleCase for automated sample changing*

Additional facility resources include two laser systems (Coherent) dedicated for studies of photoreceptors or other photochemical systems, a high pressure system (Daedalus) to gain insights into macromolecular motions and conformational dynamics, and a Gilson robotic liquid handler for high-throughput NMR sample preparation.