The U.S. National Science Foundation Network for Advanced NMR (NSF NAN) applications and cyberinfrastructure are hosted by UConn Health. NSF NAN is part of a collaboration among UConn Health, University of Georgia and University of Wisconsin-Madison. The project is funded by the U.S. National Science Foundation (Award # 1946970). The broad mission of the project is to democratize the application of high-field NMR spectroscopy for applications in biomedicine, materials science, and chemistry.

NSF NAN provides the following Services and Resources:

- NMR instrument resources available at the NAN node NMR facilities, currently including the Mullen NMR facility at UConn Health, the National Magnetic Resonance Facility at Madison (NMRFAM) at University of Wisconsin-Madison (UW-Madison), and the Center for Complex Carbohydrate Research (CCRC) at University of Georgia (UGA).
- 2. Instrument time request submission and prioritization of requests for access to two 1.1 GHz NMR spectrometers, one located at NMRFAM and one located at CCRC.
- NMR knowledgebases including but not limited to sample preparation protocols, pulse sequences, parameter data sets and example experiment data, data processing scripts etc. to guide users through NMR experiments.
- 4. Harvesting and archiving of NMR experiment data from all NMR spectrometers located in the NAN node facilities.
- 5. Secure data storage in the UConn Health HPC data center with geo-dispersed backup and disaster recovery capabilities.
- 6. Web portal for users to access their own data and data that are made public.
- 7. Ability for the principal investigators to configure lab members and collaborators' access to the experiment data.
- 8. Ability for users to add and link experiment data to metadata including but not limited to project, study, and sample.
- 9. Ability for users to download data for which they have ownership or shared access and publicly available data.
- 10. Integration with the NMRbox platform for data processing.
- 11. Ability for NAN node facilities to add and update information about their instruments.
- 12. Ability for NAN node facilities to turn NAN data harvesting on and off.
- 13. Ability for NAN node facilities to configure NAN data harvesting default settings for individual users.
- 14. NAN Virtual Network Operations Center (NAN vNOC) that provides statistics on facility experiment data transfer and network and instrument status.

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