Battelle Memorial Institute, Pacific Northwest Division, Management & Operating Contractor of the U.S. Department of Energy’s Pacific Northwest National Laboratory (PNNL) for the U.S. Department of Energy (DOE) is requesting proposals for a High-Resolution, Accurate-Mass (HRAM) - Mass Spectrometer (MS) with Electrospray Ionization (ESI) Interface.

**HRAM-MS w/ESI Interface Specifications**

- The HRAM-MS mass range shall have a minimum of at least m/z 50 with a maximum of at least m/z 8000
- The HRAM-MS mass accuracy shall be equal to or less than 3 ppm based on external calibration method
- The HRAM-MS mass resolution shall be greater than or equal to 400,000 at m/z 200
- The HRAM-MS shall be capable of precursor mass isolation at m/z width of 0.7 with no signal loss
- The HRAM-MS shall be capable of fragmentation of isolated precursor masses by high energy dissociation
- The HRAM-MS shall be included one or more ESI interfaces that allow for interfacing with liquid chromatography systems producing flow rates between 10 nL/min to 500 uL/min
- The HRAM-MS shall incorporate a gas phase separation (commonly known as ion mobility) at the instrument interface between the ESI interface and mass spectrometer inlet
- The HRAM-MS shall be fully controlled by computer(s) and software provided by the vendor
- The HRAM-MS shall instrument footprint shall be 3 feet or less by 4 feet or less in width/depth. Height is not a consideration
- The HRAM-MS shall be a true benchtop system, meaning that it could be placed on top of a table

> Contractor shall provide up to 2 weeks (10 business days) of support and training by a research and development specialist on instrument control to enable coupling and successful operation of the HRAM-MS in tandem with a PNNL owned custom-built FT-ICR system

\(^A\)The HRAM-MS is to be coupled to a PNNL owned custom-built FT-ICR platform. Instrument must fit on a platform that rolls in and out of the PNNL owned custom-built FT-ICR system.