

## UEC Nomination Form

*Please complete and return to CLS by December 6, 2021*

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1. Full Name: Fardausi (Shathi) Akhter
2. Position (Title) or Institution and/or PI (if graduate student): Research Scientist, Agriculture and Agri-Food Canada, Indian Head, SK.
3. Years of Synchrotron Experience at various synchrotron facilities: 11 years
4. History of CLS Service (Advisory Committees, Beam teams, teacher/mentor at workshops, etc): I have been serving as a peer review committee member since 2020.
5. The CLS has four main scientific areas designated as strategic areas of research. Please indicate which area best aligns with your own research area [Agriculture, Advanced Materials, Health, or the Environment] : Agriculture and the Environment (equal weight)
6. Brief description of why research at the CLS is critical to your research program (100 words)  
I am interested in understanding the physiological mechanisms of nutrients and elements (including trace elements) uptake by plants and wildlife. Traditional methods, such as ICP-MS and HPLC, provide crucial information on the bulk concentration in plant or animal tissues. CLS beamlines, such as VESPERS, BIOXAS, and Mid-IR, provide complementary information on the nutrients or elemental distribution, which helps explain the mechanisms of their uptake and fate within the organisms.
7. Please list a maximum of 3 publications which best represent your synchrotron work at the CLS

Akhter F, Fairhurst G, Blanchard P, Machin K, Blyth R, Thompson J, Feng R, and Soos C (2020). An investigation of the localization of trace elements within feathers using microprobe synchrotron x-ray fluorescence. *X-Ray Spectrometry*. 1-9. DOI: <http://dx.doi.org/10.1002/xrs.3140> Corresponding author. (CLS)

Akhter F, Omelon C, Gordon R, Macfie SM, and Moser D (2014) Localization and chemical speciation of cadmium in the roots of barley and lettuce. *Environmental and Experimental Botany*. 100:10-24. (CLS and APS)

*The CLS reserves the right to limit the number of elected UEC members from non-Canadian institutions to two or fewer. In the event that more than two members from non-Canadian institutions are elected, the lowest vote getter will be replaced by the highest vote getter non-elected nominee from a Canadian institution.*