

University of Alberta

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Soils, Water, Air, Manures and Plants (SWAMP) Research Associate

Faculty of Agricultural, Life and Environmental Sciences - Department of Renewable Resources

Competition No. - **A108219692D1**

Closing Date - **Will remain open until filled.**

The Department of Renewable Resources requires a Research Associate to complete research on the organic chemistry of peat and related plant materials, with the focus on the physico-chemical transformation of organic matter by decomposition and humification. This includes the design of experiments, appraisal methods, data collection protocols and standards, preparation of samples, analysis using a diversity of spectroscopic methods and interpretation of research results, mentoring and supervision of graduate and summer students. This Research Associate position will be working to enhance and complement the Department's existing strength in environmental analytical chemistry. The successful candidate will report to Professor William Shotyk, Bocock Chair for Agriculture and the Environment.

Under the direct supervision of Dr. W Shotyk in the Department of Renewable Resources, the responsibilities of the Research Associate will include but are not limited to the following:

- Functioning as the key component of a collaborative team including soil scientists petroleum geochemists and environmental toxicologists and fostering communication and sample sharing among research collaborators
- In consultation with the Principle Investigator, designing experiments, appraising research methods, and developing data collection protocols and standards
- Leading the analysis and interpretation of research results
- Assisting in the writing of grant applications, research reports and preparation of presentations and manuscripts for publication
- Presenting research results in laboratory meetings, local seminars as well as national and international conferences
- Assisting in the mentoring and supervision of graduate students and summer students
- Assisting with the collection and description of peat cores from remote bogs in Northern Alberta; preparing the cores for physical and chemical analysis
- Performing routine measurements of density, moisture and ash content
- Creating and managing an inventory and database of samples collected
- Carrying out leading edge research activities, to describe in detail their extent of decomposition and humification, including instrumental chemical analysis (CHNS-O) and spectroscopic (FTIR, NIR, NMR, UV-Vis, molecular fluorescence) and isotopic methods (stable isotope ratio mass spectrometry)

Qualifications

- PhD in Soil or Agricultural Chemistry and at least five years of post-doctoral research experience
- In-depth knowledge of peat sample preparation and analysis, with emphasis on the organic fraction

- Hands on experience and trouble-shooting skills with the relevant instrumental methods for chemical analysis (CHNS-O) and spectroscopic (FTIR, NIR, NMR, UV-Vis, molecular fluorescence) and isotopic methods (stable isotope ratio mass spectrometry)
- Experience with analysis and interpretation of complex, natural organic materials, including humic materials and pyrogenic compounds
- Excellent organizational, communication and interpersonal skills are required with a proven ability to work as a key part of an interdisciplinary team
- Excellent written and verbal communication skills in English
- At least 10 first author publications and 20 total publications in peer-review journals as demonstration of research and communication abilities (a longer publication record will be an advantage)

In accordance with the Trust/Research Academic Staff agreement, this position has an expected appointment of three years with the possibility renewal and offers a comprehensive benefits package and annual salary range of \$55, 943 to \$76, 931, salary will be commensurate with qualifications. Salary will be effective July 1, 2014.

A complete application will include a statement of research interest and qualifications, curriculum vitae, a list of publications as well as arrangements made for three (3) references who may be contacted to provide supporting letters

How to Apply

Apply Online

Note: Online applications are accepted until midnight Mountain Standard Time of the closing date.

All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority. If suitable Canadian citizens or permanent residents cannot be found, other individuals will be considered.

The University of Alberta hires on the basis of merit. We are committed to the principle of equity in employment. We welcome diversity and encourage applications from all qualified women and men, including persons with disabilities, members of visible minorities, and Aboriginal persons.