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To: [ECOLOG-L@LISTSERV.UMD.EDU](mailto:ECOLOG-L@LISTSERV.UMD.EDU)

Cc:

Sent: Wednesday, January 25, 2012 4:05 PM

Subject: [ECOLOG-L] NSF-REU in Soil Isotope Ecology at Colorado State University

Undergraduate Research Experience Studentship in Soil Isotope Ecology Spring and Fall 2012

We are seeking an undergraduate research assistant to participate in a study investigating the dynamics of C and N from leaf litter to the soil and atmosphere by the use of isotopic techniques (NSF DEB grant 0918482).

The research involves the development of an established laboratory method to extract amino sugars (proxies for microbial-derived organic matter) from soils and analyze them for their specific isotopic composition. Further, this method will be applied at our study site at the Konza tall grass prairie (KN), to trace C and N dynamics from litter to microbial residues, and their fate in the soil with respect to soil depth and physico-chemical stabilization. This study will enhance our understanding of the microbial contribution to litter-C and N stabilization in SOM.

The student will be involved in the development and application of the method to extract amino sugars from the soil and analyze their 15N and 13C values by a gas chromatography-combustion-Isotope Ratio Mass Spectrometer at the EcoCore analytical facility at Colorado State University (<http://ecocore.nrel.colostate.edu/>). The student will be mentored by Dr. Francesca Cotrufo and Dr. Karolien Denef, and will also be an integral part of Dr. Cotrufo's research group participating in lab meetings and discussions, (<http://lamar.colostate.edu/~fcotrufo/Francesca_Cotrufo/Research_Group.html>). This will be a most valuable educational experience for an undergraduate student, who will have great opportunities for high-quality interactions with scientists, from faculty to graduate students.

The selected student will receive a studentship of $4000, for 16 weeks of work, during the Spring and Fall semesters 2012. The proposed stipend support is aligned with the suggested NSF rate ($250 a week). The student will be encouraged to present results from this work at suitable venues and conferences.

The scholarship recipient shall:

1. Be an undergraduate student enrolled full-time and majoring in relevant disciplines; 2. Demonstrate an interest in soil ecology research; 3. Demonstrate outstanding academic credentials with an aptitude for research.

Analytical skills and previous experience working with soils and/or coursework on soil science, ecology, or environmental science is preferred.

If you are interested in this position, please contact Dr. Cotrufo or Dr. Denef at the addresses below. For application please send: 1) a letter stating your interest; 2) your resume and 3) the names and contact information of two references. Deadline for application is February 3rd.

M. Francesca Cotrufo

Professor, Department of Soil and Crop Sciences Senior Scientist, Natural Resource Ecology Lab NESB B250, Colorado State University Tel. 970 491 6056 [francesca.cotrufo@colostate.edu](mailto:francesca.cotrufo@colostate.edu)

Karolien Denef

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