

Wintersemester 2009/2010

Gebäude GEO I  
Hörsaal H6

# BayCEER Kolloquium

**Vortragsreihe Ökologie und Umweltforschung****Donnerstag 10.12.2009, 16:15 Uhr, H6****Anschließend Postkolloquium mit Bier und Brezeln im Foyer H6**

## Dr. Guido Wiesenberg

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### **Lipids in plants and soils: New insights and challenges regarding formation, incorporation and turnover**

During the last decades knowledge significantly improved concerning lipidic compounds in the environment. However, some of the key processes remain still unknown and underestimated. As well known, lipids as main components of plants can be strongly influenced by a changing environment as their biosynthesis occurs very fast. While most effects are not sustainable, long term changes like rising CO<sub>2</sub> concentration, drought, and others might significantly influence lipid composition in plants as well as incorporation and preservation of lipids in soils. Depending on their chemism, a part of lipidic compounds is known to be of a higher recalcitrance in soil than bulk organic carbon. However, the knowledge concerning the incorporation mechanisms of plant derived lipids in soils is still limited. Commonly they are regarded to be mainly incorporated into soils by litterfall. While for bulk organic carbon the belowground allocation of carbon is well known, this incorporation pathway is frequently ignored and underestimated for lipids. An additional incorporation pathway might be via aeolian deposition of dust of abraded plant waxes and fossil fuels including coal dust. In some soils charred biomass remaining after fires might contribute a major part to the soil lipid pool. The main challenges of ongoing research on lipids in the environment will be to elucidate the environmental effects on the lipidic proportions of plants and to determine the incorporation and preservation mechanisms relevant for lipids in soils.

Die Vortragsreihe ist eine interdisziplinäre Plattform zur Information und Diskussion für Studierende, Forschende und Lehrende

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