

# 13a: From Source to Sink and Back in Time – Potential and Limitations of Aquatic and Terrestrial Biomarkers as Paleoenvironmental Indicators

**Session chaired by Bernhard Aichner, Zhonghui Liu,  
Ken Sawada & Nikolai Pedentchouk**

- 09:00** Discovery of Alkenones with Variable Methylene Interrupted Double Bonds in *Emiliania huxleyi*: Implications for Biosynthetic Pathways  
**Zheng Y, Dillon J, Zhang Y & Huang Y**
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- 09:15** Evaluating Sedimentary Chlorins as a Proxy for Primary Productivity and Nutrient Utilization  
**Raja M & Rosell-Melé A**
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- 09:30** Perylene in Lake Biwa, Japan  
**Itoh N**
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- 09:45** Comparison of Organic Temperature Proxies (UK'37, LDL) in the East Sea (Sea of Japan)  
**Gal J-K, Kim J-H, Lee D-H, Kang SJ, Hwang J & Shin K-H**
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- 10:00** Constraints on the Application of Long Chain Diol Proxies in Sediments of the Iberian Atlantic Margin  
**de Bar M, Dorhout D, Sinninghe Damsté J & Schouten S**
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- 10:15** The C32 Alkane-1, 15-Diol as a Tracer for Riverine Input in Coastal Seas  
**Lattaud J, De Jonge C, Kim J-H, Zell C, Sinninghe-Damsté J & Schouten S**
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- 10:30** Transport of Soil Organic Carbon in the Upper Catchment of the Amazon River Traced by Branched GDGTs  
**Kirkels F, Ponton C, Feakins S, West J & Peterse F**
- 
- 10:45** Stable Isotope Probing Reveals the Preferential Growth of Branched GDGT Source Microorganisms Under Aerobic Conditions in Peat  
**Huguet A, Meador TB, Laggoun-Défarge F, Könneke M, Derenne S & Hinrichs K-U**
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- 11:00** Mass Spectrometry Imaging of Molecular Biomarkers on Intact Sediment Sections  
**Wörmer L, Moros M, Schimmelmänn A & Hinrichs K-U**
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- 11:15** Multiproxy Characterization of Sedimentary Biomarker Archives Using Ultrahigh Resolution Mass Spectrometry  
**Radovic J, Silva R, Larter S & Oldenburg T**
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- 13:45** The Stable Carbon Isotopic Composition of Marine Phytoplankton throughout the Phanerozoic  
**Witkowski CR, Schouten S & Sinninghe Damsté JS**
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- 14:00** Marine Ecosystem Across the Cenomanian-Turonian Boundary Reconstructed by Biomarker Analysis  
**Ando T, Sawada K, Nakamura H, Takashima R & Nishi H**
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- 14:15** Paleoenvironmental Reconstruction of the Late Cretaceous Songliao Paleo-Lake by Molecular Biomarkers  
**Hu J, Cao H, Tong X, Xi D & Peng P**
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- 14:30** Lignin Phenol Biomarker Records in the late-Quaternary California Sediment  
**Nakakuni M, Dairiki C, Shimada M, Ishiwatari R & Yamamoto S**
- 
- 14:45** Toward the Molecular Based Reconstruction of Paleovegetation and Palaeoenvironment by Plant Terpenoid Biomarkers: Maturity Related Biases  
**Nakamura H, Sawada K, Ando T, Miyata Y, Takashima R & Niche H**
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- 15:00** Paleolipidomics of Resistant Macromolecules in Terrestrial Plant Fossil: Paleochemotaxonomy and Paleoenvironmental Reconstruction  
**Sawada K, Miyata Y, Nakamura H & Takahashi M**
- 
- 15:15** Challenging GDGT Proxies' Assumptions of Archaea Ecology: Compound-Specific  $\delta^{13}\text{C}$  and Genetic Insights from Orca Basin, Gulf of Mexico  
**Lichtin S, Warren C, Pearson A, Near T & Pagani M**
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- 15:30** Reconstruction of Late Holocene Flooding History by GDGT Proxies in Beppu Bay Sediments  
**Yamamoto M, Kuwae M, Irino T, Ikehara K & Takemura K**
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- 291 Biomarkers in “Extreme” Oils  
**Ablya E & Slivko I**
- 292 Variations in Terrestrial Plant Biomarker Compositions in a Sediment Core of IODP Site U1423 over the Last 4 Ma: Paleovegetation and Transport of Terrigenous Matter  
**Aoyagi C, Sawada K, Furota S, Irino T & Igarashi Y**
- 293 Role of Climate and Fluvial Architecture on Temporal and Spatial Variation in C4 Plant Abundance: A Compound Specific Isotopic Evidences from the Late Miocene Siwalik Deposit of NW India  
**Ghosh S & Sanyal P**
- 294 Late Cretaceous Paleoenvironments in the Termit Basin, Niger  
**Liu B, Zhang G, Mao F & Liu J**
- 295 Can Biomarkers in Non-Fossiliferous Chattanooga Shale (Late Devonian) Show Evidence of the Earliest Land Forest on the Southern Appalachian Landmass?  
**Lu M, Lu Y, Ikejiri T, Ibrahim Ç, Pashin J & Hogancamp N**
- 296 Carbon Isotope Ratios in Plant Wax N-Alkanes in Sediments from the Eastern Mediterranean Sea Since the Last Glacial Period  
**Mohamed KSS, Naraoka H & Okazaki Y**
- 297 Paleo-Environmental Analysis during 1.5 Ma from Organic Matter in Lake Biwa (Japan) Sediment  
**Ochi Y, Urabayashi K & Yamamoto S**
- 298 Evolution of Lipid Biomarkers as Indicators of Environmental Changes in an Anoxic Lagoon: “Lac de Tunis”  
**Quertani N, Hamouda R & Belayouni H**
- 299 Solar Output Controls Periodicity in Lake Productivity and Wetness at Southernmost America  
**Pérez-Rodríguez M, Gilfedder B-S, Hermanns Y-M & Biester H**
- 300 The Impact of Oxidic Degradation on Long Chain Diol Proxies: A Laboratory Study  
**Reiche S, Rampen SW, Sinninghe Damsté JS & Schouten S**
- 301 Paleoenvironmental Reconstruction by Biomarker and Kerogen Analyses of Sediments Around the Triassic-Jurassic Boundary from North America  
**Tateshita Y, Sawada K & Ikeda M**
- 302 Geochemical Comparison of Source Rock and Crude Oil and the Analysis of Hydrocarbon Accumulation of T Block in Oriente Basin, Ecuador  
**Xie Y, Ma Z, Yang X & Liu Y**
- 303 Source Rocks Variation and its Links to Sequence Stratigraphy in the Upper Cretaceous of the Oriente Basin, Ecuador  
**Yang X-F, Xie Y-F, Ma Z-Z, Zhang Z-W, Liu Y-M, Zhou Y-B & Wang D-D**

### 13e: Environmental Isotopes of Organic Aerosols in the Atmosphere

- 304 Molecular Distribution and Stable Carbon Isotopic Composition of Low-Molecular-Weight Dicarboxylic Acids during Biomass Burning Aerosols in Northeast China  
**Cao F, Kawamura K, Zhang S-C & Zhang Y-L**

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