

**Invitation to a Guest Lecture  
at the joint colloquium of the Institute of Biology and Environmental Sciences and the  
Department of Neuroscience**

**Module bio890: Current topics in biology**

## **Sigrid Liede-Schumann**

University of Bayreuth, Universitätsstr. 30, 95440 Bayreuth, Germany

### **Apocynaceae: the long road to a model family**

For many years, Apocynaceae was one of the least known families of Angiosperms, reflected by missing floristic treatments in many floras, and lacking knowledge about the distribution and ecological requirement of many species and genera. The complex floral structure of most members of the family was a further obstacle to the study of these plants. After Apocynaceae had been enlarged to comprise the former Asclepiadaceae and Periplocaceae, molecular evidence started to accumulate, confirming the basic structure of the family, comprising two basal grades and three subfamilies. Tribal and subtribal structure of the largest subfamily, Asclepiadoideae, has also been elucidated in the last 30 years, and for all tribes and subtribes, a backbone phylogeny is now available, often shifting established generic boundaries and questioning previous "genus defining characters". In contrast, striking floral characters, often used to circumscribe genera, have been identified as parallelisms, thus complicating the work of taxonomists, but offering new approaches to study the interplay of particular pollination guilds with the shaping of floral structures. Our studies have allowed to identify twelve shifts in speciation rate throughout the family and possible innovations triggering these shifts. The use of Next Generation Sequencing techniques for the study of such species-rich groups will be discussed using two examples.

**13.06.2023, 4 pm (s.t.), W04 1-162**

Host: Prof. Dr. Dirk Carl Albach (Systematik und Evolutionsbiologie), IBU

Members of all institutes are cordially invited to join the lecture.