ID der Kurzfassung : **425**

Impact of oil palm plantation use on the gut microbiome of Malaysian macaques

Inhalt

Some wildlife species in SE Asia have partly adapted to human-modified agricultural landscapes, including southern pig-tailed macaques (Macaca nemestrina) which regularly forage in oil palm plantations. Our previous research suggests that their plantation use is associated with adverse health effects, but the underlying mechanisms remain unclear. Because the gastrointestinal tract is a key interface between environment and host health, this project investigates how pesticide exposure through plantation foraging alters the gut microbiome of wild pig-tailed macaques. We hypothesize that microbiome composition and function is associated with plantation use and changes with pesticide treatments. To do so, we collected 287 faecal samples of 30 individuals from two groups over 12 months in Segari Melintang Forest Reserve, Peninsular Malaysia, including targeted sampling before and after two pesticide treatment events. Microbiome composition and function will be analysed using 16S rRNA gene and shotgun metagenomic sequencing. By investigating how agricultural practices shape the microbiome of a wildlife species living at the human–environment interface, this study adopts a One Health perspective, highlighting the gut microbiome as a potentially sensitive indicator of contamination and providing insights that can inform both wildlife conservation and more sustainable agricultural management.

Keywords

Primates, Microbiome, Pesticides,

Registration ID

125

Professional Status of the Speaker

PhD Student

Junior Scientist Status

Yes, I am a Junior Scientist.

Autor: SIMON, Miriam

Co-Autoren: Dr. BINTI MOHD RAMELI, Nurul Iza Adrina; Dr. ROLLE-KAMPCZYK, Ulrike (UFZ Helmholtz); Dr. ARIFIN, Norsyahida (Universiti Sains Malaysia); Prof. VON BERGEN, Martin (UFZ Helmholtz); Dr. RUPPERT, Nadine (Southeast Asia Biodiversity Research Institute & Center for Integrative Conservation, Xishuangbanna Tropical Botanical Garden, Chinese Academy of Sciences); Prof. WIDDIG, Anja (Universität Leipzig)

Vortragende(r): SIMON, Miriam

Track Klassifizierung: Conservation, Biodiversity & Wildlife Health

Typ des Beitrags: Both options possible

Eingereicht von **SIMON, Miriam** <miriam.simon@uni-leipzig.de> am **Montag, 22. Juni 2026**