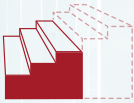


SIMPOSIO
MAX PLANCK / COLOMBIA
FRONTERAS DE LA CIENCIA
2019



11 y 12
de septiembre

**Auditorio Alfonso
López Pumarejo**
**Universidad Nacional
de Colombia**

Wednesday,
September 11

07:30-08:15 ♦ Registration

08:15-09:00 ♦ Opening

Dra. Dolly Montoya Castaño. Rector UNAL

Dr. Klaus Botzet. Chargé d'Affaires at the German Embassy in Bogotá, Colombia

Dr. Walter Stühmer. Representative for Max Planck Society

Dr. Diego Fernando Hernández. Director Colciencias

09:00-09:20 ♦ Structural Biology

NMR spectroscopy: natural compound configuration, droplets in immunology and neuroprotection

Dr. Christian Griesinger. Department NMR based Structural Biology, Max Planck Institute for Biophysical Chemistry

09:20-09:40 ♦ Structural Biology

Marine Natural Products Bioprospection In Colombia: From The Biodiscovery To Some Insights In The Mechanism Of Action Of Cytotoxic Compounds

Dr. Freddy Alejandro Ramos. Departamento de Química, Universidad Nacional de Colombia

09:40-09:50 ♦ Q&A Session

09:50-10:20 ♦ Coffee Break

10:20-10:40 ♦ Bio Nano Engineering

Droplet-Based Microfluidics for Synthetic Biology and Biomedical Applications

Dr. Iliia Platzman. Department of Cellular Biophysics, Max Planck Institute for Medical Research

10:40-11:00 ♦ Bio Nano Engineering

Nano-Bioengineering Tools for Diagnosis and Intervention of Diseases

Dr. Jahir Orozco Holguín. Max Planck Tandem Group in Nanobioengineering, Universidad de Antioquia

11:00-11:10 ♦ Q&A Session

11:10-11:30 ♦ Glycobiology and New Vaccines
Parasitic Glycolipids as Tools for Biomedical Research

Dr. Daniel Varón Silva. Department Biomolecular Systems, Max Planck Institute of Colloids and Interfaces

11:30-11:50 ♦ Glycobiology and New Vaccines
Study of the peptide-MHC interaction and its impact on the development of synthetic vaccines

Dr. Carlos Fernando Suárez Martínez. Instituto de Inmunología de Colombia, Universidad del Rosario

11:50-12:00 ♦ Q&A Session

12:00-12:20 ♦ Bioprocess Engineering

Next-generation production platforms for viral therapies and vaccines

Dra. Yvonne Genzel. Department of Bioprocess Engineering, Max Planck Institute for Dynamics of Complex Technical Systems

12:20-12:40 ♦ Bioprocess Engineering

Biotechnology research for rare diseases in Colombia: proteins, virus, and small molecules

Dr. Carlos Javier Alméciga Díaz. Director Instituto de Errores Innatos del Metabolismo, Pontificia Universidad Javeriana

12:40-12:50 ♦ Q&A Session

12:50-14:30 ♦ Lunch

14:30-14:50 ♦ Electrophysiology

Emergence of orientation domains in a synthetic hybrid neural circuit

Dr. Walter Stühmer. Department Molecular Biology of Neuronal Signals, Max Planck Institute for Experimental Medicine

14:50-15:10 ♦ Electrophysiology

LbCLC-A of Leishmania is voltage dependent and its function is associated with parasite volume regulation and differentiation

Dra. Marcela Camacho. Departamento de Biología, Universidad Nacional de Colombia

15:10-15:20 ♦ Q&A Session

15:20-15:40 ♦ **Neural Circuits**

Postsynaptic biochemical computation underlying synaptic, circuit and behavioral plasticity

Dr. Ryohei Yasuda. Department Neuronal Signal Transduction, Max Planck Florida Institute for Neuroscience

15:40-16:00 ♦ **Neural Circuits**

Vibrissal primary motor cortex (vM1) functional interactions during motor command generation

Dr. Alejandro Múnera. Departamento de Ciencias Fisiológicas, Universidad Nacional de Colombia

16:00-16:10 ♦ **Q&A Session**

16:10-16:40 ♦ **Coffee Break**

16:40-17:00 ♦ **Solar Research**

Activity of the Sun and Sun-like stars

Dr. Alexander Shapiro. Minerva Group: Solar Variability and Climate, Max Planck Institute for Solar System Research

17:00-17:20 ♦ **Solar Research**

Structure and dynamics of the solar atmosphere

Dr. Santiago Vargas. Observatorio Astronómico Nacional, Universidad Nacional de Colombia

17:20-17:30 ♦ **Q&A Session**

17:30-17:50 ♦ **Molecular Signalling In Plants**

Terra incognita of protein-small molecule interactome

Dr. Aleksandra Skirycz. Department Molecular Physiology, Max Planck Institute for Molecular Plant Physiology

17:50-18:10 ♦ **Molecular Signalling In Plants**

Study of the metabolism of solanum lycopersicum plants during the infection of phytophthora infestans, by mass spectrometric techniques

Dr. Chiara Carazzone. Departamento de Química, Universidad de los Andes

18:10-18:20 ♦ **Q&A Session**

Thursday, September 12

09:00-09:20 ♦ **Biogeochemical Cycles**

ATTO: The Amazon Tall Tower Observatory

Dra. Susan Trumbore. Department Biogeochemical Processes, Max Planck Institute for Biogeochemistry

09:20-09:40 ♦ **Biogeochemical Cycles**

Sources of organic matter in two contrasting tropical coastal environments: the Caribbean Sea and the eastern Pacific

Dra. Carme Huguet. Departamento de Geociencias, Universidad de los Andes

09:40-09:50 ♦ **Q&A Session**

09:50-10:10 ♦ **Global Change Ecology**

Timescales of carbon cycling in tropical forests

Dr. Carlos A. Sierra. Department of Biogeochemical Processes, Max Planck Institute for Biogeochemistry

10:10-10:30 ♦ **Global Change Ecology**

Contributions from tropical landscape ecology research in Colombia to global change ecology

Dra. Dolors Armenteras. Laboratorio de Ecología del Paisaje y Modelación de Ecosistemas, Departamento de Biología, Universidad Nacional de Colombia

10:30-10:40 ♦ **Q&A Session**

10:40-11:10 ♦ **Coffee Break**

11:10-11:30 ♦ **Nanochemistry**

Dynamics at surfaces - Hydrogen atom adsorption on surfaces studied in scattering experiments

Dr. Oliver Bünermann. Department Dynamics at Surfaces, Max Planck Institute for Biophysical Chemistry

11:30-11:50 ♦ **Nanochemistry**

Graphene heterostructures for efficient energy conversion

Dra. Yenny Hernandez. Departamento de Física, Universidad de los Andes

11:50-12:00 ♦ **Q&A Session**

12:00-12:20 ♦ Law and Society

Rule of Law in Argentina

Dr. Agustín Casagrande. Department II: legal history of the Iberian monarchies in the early Modern and Modern period, Max Planck Institute for European Legal History

12:20-12:40 ♦ Law and Society

Transformative Constitutionalism in Latin America

Dr. René Urueña. Facultad de Derecho, Universidad de los Andes

12:40-12:50 ♦ Q&A Session

12:50-14:20 ♦ Lunch

14:20-14:40 ♦ Cooperation With Max Planck
Study or do research abroad to succeed in Colombia - Opportunities for scientific training in and cooperation with Max Planck Institutes

Dr. Andreas Trepte. Max Planck Liaison Office for Latin America

14:40-15:00 ♦ Microbiome Science

The interplay between host genotype and gut microbiomes impacts diet and health

Dr. Jillian Waters. Department of Microbiome Science, Max Planck Institute for Developmental Biology

15:00-15:20 ♦ Microbiome Science

Developmental biology of non-model, tropical plants. Case studies in early floral evolution, convergent fruit evolution, and plant parasitism

Dr. Favio González. Instituto de Ciencias Naturales, Universidad Nacional de Colombia

15:20-15:30 ♦ Q&A Session

15:30-15:50 ♦ Archaeogenetics

The early differentiation of Central and South Americans

Dr. Cosimo Posth. Department of Archaeogenetics, Max Planck Institute for the Science of Human History

15:50-16:10 ♦ Archaeogenetics

Complete mitogenome of ancient human bones from northeastern Andes in South America

Dra. Andrea Casas-Vargas. Instituto de Genética y Departamento de Antropología, Universidad Nacional de Colombia

16:10-16:20 ♦ Q&A Session

16:20-16:40 ♦ Computational Linguistics

On the search for the drivers of linguistic and cultural diversity

Dr. List, Johann-Mattis. Department of Linguistic and Cultural Evolution, Max Planck Institute for the Science of Human History

16:40-17:00 ♦ Computational Linguistics

word2set: WordNet-Based Word Representation Rivaling Neural Word Embedding for Lexical Similarity and Sentiment Analysis

Dr. Sergio Jimenez Vargas. Instituto Caro y Cuervo

17:00-17:10 ♦ Q&A Session