



**Global Health, Biodiversity, and Therapeutics Hybrid Seminar,  
Harvard University Herbaria and University of Costa Rica  
Costa Rica August 20, 2024**

**Please note that all talks are on Costa Rica Time (Central Standard Time),  
which is two hours behind EDT (Eastern Daylight Time)**

**Opening remarks 9:00-9:25 am Costa Rica Time**

*María Laura Arias Echandi MSc*

Vicerrectora de Investigación de la Universidad de Costa Rica

*Dr. Luis Esteban Hernández*

Decano de la Facultad de Farmacia de la Universidad de Costa Rica

*Prof. Donald Pfister*, former director of the Harvard Herbarium and curator of the Farlow Library and Herbarium. Harvard Faculty of Arts and Sciences

*Veronica Vargas, Ph.D.* Research Associate, Harvard Faculty of Arts and Sciences

***Intellectual Property***

9:25-9:45 am

**The current state of Access and Benefit Sharing (ABS) for genetic resources in Latin America**

*Dr. Jorge Cabrera Medaglia, Professor at the University of Costa Rica.*

This talk will present the latest developments in implementing Access and Benefit Sharing in Latin America and the Caribbean.

***Finding New Natural Products for Diseases***

9:45-10:05 am

**The MEDINA Foundation pioneering work in natural-products-based drug discovery for neglected diseases**

*Olga Genilloud, Scientific Director MEDINA Foundation, Spain*

This Foundation is dedicated to discovering drugs for neglected diseases overlooked by pharmaceutical companies, such as antibiotics and antiparasitic molecules.

10:05-10:25 am

**Phytochemicals in cancer prevention**

*Dr Omer Kucuk, Emory University, United States*

Phytochemicals have great potential in cancer prevention because of their safety, low cost, and oral bioavailability. In this presentation, their potential for cancer prevention will be discussed.

*Coffee break* 10:25-10:55 am

10:55-11:15 am

**National Cancer Institute's Program for Natural Product Discovery**

*Dr. Tanja Grkovic, Staff Scientist at Natural Products Branch, DTP, National Cancer Institute, USA*

An overview of the current research and collaborations of the NCI will be presented.

11:15-11:35 am

**Screening for novel therapeutics for treating dementia**

*Dr. Antonio Currais, Staff Scientist, Salk Institute for Biological Studies, USA*

A brief review of cell-based and animal models of aging and dementia to identify therapeutics from natural products.

11:35-11:55 am

**The quest for natural products with antitrypanosomal and anticancer potential using computational biology and chemistry.**

*Miguel Angel Chavez, Computational Biology and Chemistry, Universidad Catolica de Santa Maria – Peru*

Computer-aided drug discovery applied to compounds derived from natural sources can speed up drug design and save costs.

11:55-12:15 pm

**Understanding and harnessing the diversity of plant chemistry and metabolism**

*Ryan Nett is an Assistant Professor of Molecular and Cellular Biology at Harvard University*

Understanding plants' diverse chemical compounds and metabolic processes is crucial for their adaptation, survival, and applications in medicine and biotechnology.

***Funding Opportunities***

12:15-12:30 pm

**Funding opportunities for natural products research**

*Flora N. Katz, Ph.D. Director, Division of International Training and Research Fogarty International Center, National Institute of Health, USA*

*Large extract banks and local capacities*

12:30-12:50 pm

**Natural Products-based Bioprospecting Program at INDICASAT: Tackling the Panamanian Biodiversity Hotspot for Drug Discovery**

*Dr. Marcelino Gutiérrez – INDICASAT Center for Biodiversity and Drug Discovery*

Panama is one of the megadiverse zones of the planet. Our program explores different taxa of biodiversity as a source of novel molecules with biomedical applications.

12:50-1:10 pm

**Basic of barcodes and their uses**

*Matthew E. Smith, University of Florida, Gainesville, Florida*

The talk will describe how to build molecular barcoding capacity-building projects at the country level.

*Lunch 1:10 pm – 2:30 pm*

*Natural product supplements*

2:30-2:50 pm

**Exploiting the plant *Quillaja Saponaria* as a source of therapeutic compounds - industrial production**

*Gaston Salinas, CEO of Botanical Solutions*

BSI has developed “ABM-01” based on a plant native to Chile. This product is the active ingredient used in producing therapeutics.

2:50-3:10 am

**Exploring Costa Rica’s potential for novel drug development**

*MSc. Gustavo Carazo Berrocal, Director of the Industrial Department, Pharmacy Faculty, University of Costa Rica.*

The research projects of the Pharmacy Faculty of the University of Costa Rica

**Coffee Break** 3:10-3:30 pm

3:30-3:50 pm

**Validating the Bioactivity of Panama's '*Desbaratadora*': In Vitro Approaches**

*Dr. Carmenza Spadafora, Center for Cellular and Molecular Biology of Diseases (CBCMe), Panamá*

Updates on searches for cancer therapeutics

3:50-4:10 pm

**Using natural extracts in the fight against COVID-19 and its sequelae**

*Dr Tamara Rubilar, Universidad Nacional de la Patagonia San Juan Bosco, Argentina*

Updates on the project that searches therapeutics for COVID-19.

4:10-4:30 pm

**Herbal medicines from the Araucania Region: an opportunity for Human and Societal well-being**

*Dr. Pamela Leal-Rojas and Dr. Adinson Altamirano, Department of Natural Resources, Faculty of Agricultural and Environmental Sciences, University of La Frontera, Chile*  
Adopting a holistic perception of bioactive compounds offers a new opportunity for sustainable development and supporting women 's businesses in the Araucania.

**Closing remarks**

*German Madrigal, Director, Department of Pharmacy, University of Costa Rica*  
*Dra. Giselle Tamayo, Director, Center for Research of Natural Products*