



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

Costa Rica operates on Central Standard Time (CST). All events will be at CST

Opening remarks 9:00-9:25 am CST

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 CST

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 CST

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

Dr. 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 CST

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 CST

10:55-11:15 am CST

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 CST

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 CST

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

Dr. 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 CST

Understanding and harnessing the diversity of plant chemistry and metabolism

Dr. Ryan Nett, 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

12:15-12:25 pm CST

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

12:25-12:45 pm CST

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.

12:45-1:05 pm CST

Basic of barcodes and their uses

Dr. 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 1:05 pm – 2:30 pm CST

Natural product supplements

2:30-2:50 pm CST

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

Gaston Salinas, CEO of Botanical Solutio

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 CST

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 CST

3:30-3:50 pm CST

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 CST

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 CST

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