



UNIVERSIDAD DE
COSTA RICA

Central American Research Symposium, Texas Tech 2024

Gabriela Murillo, PhD
Biochemistry Department
School of Medicine

About our educational system

- Costa Rica has 5 public universities:
 - **Universidad de Costa Rica**
 - Instituto tecnológico de Costa Rica
 - Universidad Nacional
 - Universidad Estatal a Distancia
 - Universidad Técnica Nacional



Our institution



- Founded in 1940
- 27,450 students
- 6 Headquarters (Central, Pacific, Atlantic, North, South and West)
- #544 QS Top University Rankings

Institutional Main Pillars



UNIVERSIDAD DE
COSTA RICA



Research

- University with the largest investment in research in the country
 - Engineering Arts
 - Social Sciences
 - Food Sciences
 - **Health Sciences**
 - **Neurosciences Center**
 - **Clodomiro Picado Institute**
 - **CIHATA**
 - **INISA**
 - **INIFAR**
 - **CIET**



Internationalization

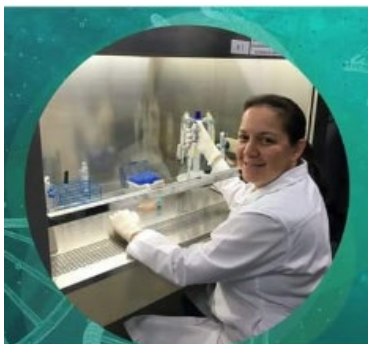


- OAICE (Office of International Affairs and External Cooperation)
- More than 47 cooperative alliances with countries around the world
 - University of Georgia
 - University of Mississippi
 - Texas A&M
 - University of Kansas
 - Michigan State University
 - Iowa State University
 - **Texas Tech University** (2022-2026 School of Musical Arts)



What we do in the Biochemistry Department

Our research team



Gabriela
Azofeifa, Ph.D.



Elvira
Salas, Ph.D.



Natalia
Ortiz, Ph.D.



Adrián
Pinto, Ph.D.



Silvia
Quesada, Ph.D.



Ernesto
Vargas, Ph.D.



Georgina
Gómez, Ph.D.



Catalina
Murillo, M.S.



Lorena Torres,
Lab
Technician

Our facilities

General lab



Animal research



Cell Culture



Molecular Biology



Microbiome



Current research:

1. Evaluation of the beneficial potential of polyphenols and other bioactive compounds derived from foods and natural products from Costa Rica
2. Determination of the biological activity of extracts obtained from medicinal plants and various synthetic bile salts
3. Cancer
 1. Cholesterol biosynthesis pathway influence in metastatic gastric cancer cells.
 2. Butiric acid as an enhancer of drugs used in gastric and liver cancer
 3. Impact of legume derived dietary fiber on the development of colorectal cancer and modulation of the intestinal microbiota.
 4. Induced immune modulation after chemotherapy treatment in several cell lines: breast, glioblastoma and lung.
4. Biochemical characterization of lionfish (*P.volitans*) venom from the Costa Rican Caribbean

Current Research:

5. Evaluation of nutritional status and adequate consumption of macro and micronutrients in the Latin American population.

Estudio Latinoamericano de Nutrición y Salud

**2023: Costa Rica National
Science Award
Dra. Georgina Gómez Salas**



Cross-sectional study carried out in a representative sample of the urban population of eight Latin American countries including Costa Rica, with the objective of evaluating the relationship between diet quality, physical activity and sociodemographic variables with the risk of obesity in this population.

