University of Mississippi

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10-19-2021

### **BioMolecular Sciences**

University of Mississippi. Department of BioMolecular Sciences

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### Vision

We are a department of leaders in inter-disciplinary life sciences dedicated to improving human and environmental health through education, biological and chemical research, and committed service.

## Mission

Our mission is to drive innovation through combined excellence in the disciplines of Pharmacognosy, Medicinal Chemistry, Pharmacology, and Environmental Toxicology in order to understand and improve human and environmental health. We will provide positive impacts to our school, the state of Mississippi, and the world, via education and mentored research at the undergraduate, graduate, and postdoctoral levels, and through our leadership in interdisciplinary chemical and biological sciences.

Faculty and students in our four divisions conduct research and educational activities broadly in the following areas:

**Environmental Toxicology** seeks to identify and resolve problems related to environmental health.

Medicinal Chemistry designs and synthesizes biologically active compounds based on structure activity relationships.

Pharmacognosy isolates and discovers the functions of natural products.

**Pharmacology** identifies the mechanisms of action and molecular targets of biomedical compounds.

## **Faculty Awards and Recognition**

**P1 Teacher of the Year** – James Stewart **P2 Teacher of the Year** – Noa Valcarcel **UM Faculty Achievement** – David Colby **Cumberland Pharmaceuticals, Inc.** – Joshua Sharp **Rho Chi initiates** – Noa Valcarcel & Vitor Pomin 25 Years of Service – Marc Slattery & John Rimoldi



# **Members of the Faculty**



Nicole Ashpole Paul Boudreau



Med Chem

David Colby

Pcog

Robert Doerksen

Med Chem

Jason Paris

Pcol

# **Graduate Student Awards and Recognitions**

Virginia Dolores Cantu Fellowship – Miguel De Leon

Inducted into Rho Chi – Moneerah Algahtani, Maali Alshammari, Zhi "Selina" Cheng, Mohammed Hawwal, Cellas Hayes, Mehjabeen Hossain & Benjamin Sawyer

Anne S. Chatham Fellowship in Medicinal Botany – Hayley Prescott

Graduate Student Council Research Grants – Tomayo Berida, Benjamin Sawyer, Alaa Qrareya, Salahuddin Mohammed & Mohammed Ahmed

Mini Grant for Teaching Assistants – Maggie Craze

**Ole Miss ACSA Scholarship Award** – Tomayo Berida

**UM Graduate School Ambassadors** – Maggie Craze & Tonia Aminone

**Diversity Incentive Award, UM Division of Diversity & Community Engagement** – Tonia Aminone

# **Faculty Awarded Grants**

Joshua Sharp & Samir Ross – NIH, GlyCORE: Glycoscience Center of Research Excellence

Sudeshna Roy & Robert Doerksen – NIH, Target-based chemotherapeutics development against Mycobacterium tuberculosis

**Courtney Roper** – SOT, Undergraduate Faculty Research

**Joshua Sharp** – NIH, Molecular Structure Determination by Mass Spectrometry and Computational Modeling

# **Department Achievements for** 2020 - 2021

Over 50 poster/podium presentations at regional, national and international conferences by faculty, research scientists and graduate students

55 publications • 3 patents

## **2021 Joseph Sam Distinguished Alumnus**



Dr. Joseph Sam had a vision of offering a graduate program in Pharmaceutical Chemistry. His vision was to develop a program that would train and educate future scientist in the field of drug development and discovery. The success of our graduate program can be attributed to the quality of its faculty and students. Yet no one has contributed more to the spirit and inspiration of these efforts than Dr. Joseph Sam.

G. Michael Wall, Ph.D. SVP & CSO at Nacuity Pharmaceuticals, Inc. & VP, Pharmaceutical Dev. at Sound Pharmaceuticals, Inc.

Medicinal Chemistry in PhD Class of 1988 – PhD advisor: John K. Baker



Kristie Willett. Chair

John Rimoldi

Med Chem

& Etox



Med Chem



Gregg Roman Pcol



Dale Nagle

Courtney Roper Etox



Pcog & Pcog



Noa Valcarcel-Ares



BMS Contributors: Ashpole, Paris, Rimoldi, Roman & Willett – NIH, NPN COBRE Phase III Center

Nicole Ashpole & Jason Paris – NIH, Anti-inflammatory Effects of Novel Minor Cannabinoids & Terpenes on Cellular & Murine Models of HIV & HIV Proteins

Kristie Willett – NIH, Mechanisms of developmental & reproductive toxicity from preconceptional BaP exposure

Nicole Ashpole – NIH, Influence of the Receptor for Advanced **Glycation End Products on Healthspan** 

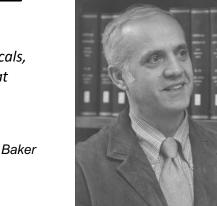
Joshua Sharp – NIH, Structural Analysis of the Mannose 6-Phosphate Receptors

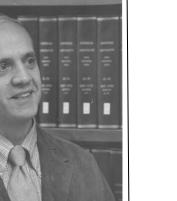
Deborah Gochfeld & Kristie Willett - USM/MDEQ/U.S., DOT, Impacts of water quality on oyster development to inform oyster reef restoration and sustainability on the Mississippi Gulf Coast

Hoang Le – ACS, Ole Miss, ACS Scent Club: Home Distillation of Local Fragrances

# **2021** Distinguished **Graduate Student Awards**

**Charles Hufford** – Hayley Prescott William Benson – Maggie Craze Edith Pritchard – Salahuddin Mohammed Marvin Davis – Cellas Hayes **Outstanding Pharmacognosy** – Hanan Albataineh **Outstanding Medicinal Chemistry** – Maali Alshammari BMS Student Adv. Excellence – Salahuddin Mohammed



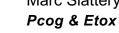


Joshua Sharp Pcol

MISSISSIPPI

BioMolecular

Marc Slattery



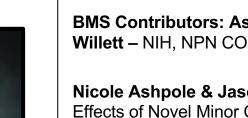






Cole Stevens







Sudeshna Roy Med Chem

Madar Pcol

Ziaeddin Shariat-

Vitor Pomin

Pcog

Deborah Gochfeld

Etox