

## 2023 Global Senior Scholar Exchange Program Host Application

### HOST APPLICANT

**NAME (FIRST, MIDDLE INITIAL, LAST): JOSE E. MANAUTOU**

Institution: University of Connecticut

Department: Pharmaceutical Sciences

### ORGANIZATIONAL OVERVIEW:

- Department Chair: José Manautou
- Number of Faculty/Staff and Disciplines Represented: 19 faculty in three interrelated disciplines: Pharmacology & Toxicology, Pharmaceutics and Medicinal Chemistry.

For Academic Institutions:

- Current Number of Students in Master's Program: none
- Current Number of Students in PhD Program: 48
- Current Number of Students in other Toxicology-related Programs: none
- Number of students recruited per year: 8-12

### APPLICANT'S STATEMENT OF IMPACT: (250-500 words)

What attributes, skills and experiences do you plan to offer to a visiting Scholar to enable them to enhance their toxicology capabilities within their program, research and within their region? Specifically, discuss where your focus would be during the year of the exchange compared to the next 2-5 years of your Host-Scholar relationship.

The Department of Pharmaceutical Sciences, housed in the School of Pharmacy, is a vibrant, active unit, which strives to excel in all three facets of its mission: research, teaching and service that includes public engagement. The faculty are highly regarded internationally and publishes extensively in the leading journals in their respective fields. The teaching mission of the Department is accomplished through active graduate programs in each of the disciplines, including a toxicology track. The Department has a strong research focus centered in drug discovery and development that is multi-faceted and highly interdisciplinary. The Department also has a rich history of toxicology training, education, and service by faculty to the discipline. The visiting scholar will have the opportunity to work on a collaborative project that will capitalize on the outstanding resources, high-end equipment, and facilities available in the Department and campus core facilities. The long-term research interests at the host laboratory are on biochemical and molecular mechanisms of xenobiotic-induced hepatotoxicity and defining compensatory responses to liver injury that enhance tissue resistance to toxicant re-exposure. This line of research relies on in vivo and in vitro approaches with genetically altered mice and cell lines. The laboratory also employs transcriptomic and system biological approaches to

identify novel genetic determinants of susceptibility to drug-induced hepatotoxicity. The research interests of the ideal visiting scholar will line up with the current work at the host laboratory. The immediate focus will be on developing a research plan on a project of mutual interest that can be continued at the visiting scholar's home institution. The expectation is that the visiting scholar will be train in techniques and experimental approaches new and/or inaccessible to them at the home institution. The host has a proven record of training and hosting scientists from developing countries underrepresented in the sciences. Two Fulbright scholars one from South America, the other one from Africa have trained at UConn and carried on their projects at their home institutions. Scheduling the stay at UConn during the Spring, will give the visiting scholar the opportunity to listen and interact with world-renowned toxicology scholars that come to UConn as part of the UConn Toxicology Scholars Colloquium Series. The visiting scholar will also have access to experimental protocols and certain reagents that he/she can take to the home institution. As with the two Fulbright scholars, there is the anticipation that the relationship with SOT visiting scholar will be long-term.

**GENERAL RESEARCH, COURSEWORK AND TEACHING CAPABILITIES: (250-500 words)**

This would be dependent upon scholar's interests, the type of institution, and the graduate and undergraduate programs. Generically, the host will work with the scholar to design a realistic research plan that can be accomplished within the allotted time for the visit. The host will present 2-3 research presentations that describe on-going and prior projects. A series of lectures that are taught to pharmacy students and graduate students can be taught at the scholar's home institution. Lectures in scientific, grant writing and ethical considerations in scientific publishing can also be provided. The host has a presentation that describes the value of membership in SOT. This was last presented in Lima Peru, at the University of San Marcos in 2017. That presentation also covered the opportunities available through SOT for the professional development and benefits of Hispanic toxicologists. Such presentation can be tailored for the region/country of the scholar.

**PROPOSAL FOR ENGAGEMENT WITH SCHOLAR'S INSTITUTION (250-500 WORDS)**

The benefits of a face-to-face exchange is such that the scholar and host can best establish a collaborative working partnership. Interacting directly at your institutions provides a holistic and unrehearsed interaction that can best provide attention of the needs and desires for furthering toxicology in the scholar's region. Although technological advances have allowed us to all collaborate during the pandemic and times of geopolitical unrest, there is no equal substitute for face-to-face interaction over the course of several weeks.

**PLEASE DESCRIBE WHAT CONTENT AND MATERIALS YOU AIM TO SHARE WITH YOUR SCHOLAR AND OVER WHAT TIMEFRAME (HOURS, DAYS, WEEKS) THEY WILL BE SHARED. INDICATING THE AUDIENCE, SUCH AS TRAINEES, FACULTY, COLLABORATORS OF THE SCHOLAR, IS HIGHLY ENCOURAGED. ALTHOUGH THE SCHOLAR IS NOT YET PAIRED, AN ITEMIZED, ESTIMATED BUDGET (UP TO \$5000) SHOULD BE PROVIDED TO ENSURE RESOURCES FOR MATERIALS, TRAVEL AND LODGING ARE DIRECTED APPROPRIATELY FOR YOUR VISIT TO THE SCHOLAR'S INSTITUTION.**

If, for whatever reason, some content will be presented virtually, cite rationale and how it will be delivered/shared (e.g., videoconference, webinar, video chat, etc.) and over what time frame. Of course, with virtual materials and discussions, budgets should be adjusted accordingly.

Given the current status with the pandemic and the opening up of countries, as well as private and academic institutions, the strong preference is an in-person visit to the scholar home institution. Without knowing who the scholar would be, the country and type of academic institution and/or department it becomes difficult to pinpoint exactly what content and material would be shared. Assuming that the research interests are a match, the above description under Applicant Statement of Impact provides some of this information. It is anticipated that the host would spend 5 days at the scholars' institution, bringing expertise in liver toxicology as described above. The host will advise on laboratory protocols for the collaborative research. The host will also meet individually with faculty and students.

The last time that the host's department offered the graduate course Advanced Toxicology (2021), it was virtual and synchronous. This opened up the option of recruiting additional participating faculty from across the USA who are experts in various disciplines of toxicology where the Department has no in-house expertise. All lectures in the course are recorded and archived. With the permission from the participating faculty, course content can be made available to trainees and others interested at the scholar's home institution.