



Open Call: Fulbright Specialist Program Engineering Education Project

The Fulbright Specialist Program (FSP) is seeking a highly qualified professional to serve as a Specialist for the approximately 6-week project **“Hollow Fiber Membranes for Water Treatment”** to take place in **Cairo and Giza, Egypt** beginning in **June 2021 or mid-September 2021**.

The Fulbright Specialist Program (FSP), part of the larger Fulbright Program, was established in 2001 by the U.S. Department of State, Bureau of Educational and Cultural Affairs (ECA). The program pairs highly qualified U.S. academics and professionals with host institutions abroad to share their expertise, strengthen institutional linkages, hone their skills, gain international experience, and learn about other cultures while building capacity at their overseas host institutions. Grant benefits include international round-trip economy class airfare, transit allowance, all applicable visa fees, a daily honorarium, enrollment in a limited health benefits program, lodging, meals, and in-country transportation.

Host Institution: National Research Center

Proposed Timeframe: Approximately 2 weeks (15 days) beginning in mid-June 2021, although given the quickly approaching timeline, the host institution is also open to beginning the project in mid-September 2021. *Please note that dates may be flexible based upon the selected candidate's availability, and may be subject to change in consultation with the host institution and selected candidate and based upon external factors such as host country entry requirements related to COVID-19.*

Location of Project: Cairo and Giza, Egypt

Project Activities

The National Research Center (NRC) has been leading an initiative to develop an approach for Hollow Fiber Membrane (HFM) treatment of Egyptian water sources, with the aim of treating Mediterranean or Red Sea waters with salinity reaching up to 45,000 total dissolved solids. The NRC has successfully piloted small-scale spinning, coating and post treatment of HFM, beginning with the development of an optimized polymeric mix for HFM preparation. The developed fibers have proved to be successful for ultrafiltration application, and work on nanofiltration and Reverse Osmosis (RO) applications is underway.

The NRC is requesting a Specialist to consult on the development of HFM modules, especially for RO, including consulting on membrane module design, appropriate adhesive for potting for the locally developed hollow fibers, potting techniques, successful module testing, and design for multi-spinnerets system.

During the approximately 2-week visit, the Specialist will work with senior staff on activities that include but are not limited to:

- Advising on potting, adhesive selection and development, and training staff on recommended potting procedures;
- Consulting on development of high-pressure module design of membrane-based module arrays, and training senior and junior staff on design and construction of RO modules; and
- Supporting the development of a preliminary design for a commercial small-scale HFM production unit, including training senior and junior staff on process design and optimization of a multi-spinneret system.



The Fulbright Specialist Program is sponsored by the U.S. Department of State with funding provided by the U.S. Government and administered by World Learning.





Preferred Qualifications

The Specialist should have experience in HFM module design and hollow fiber membrane potting, and possess familiarity with the types of adhesives appropriate for potting of polymeric hollow fiber for RO application.

How to Apply

Applicants must meet all program eligibility criteria, including U.S. citizenship. A complete list of U.S. applicant eligibility criteria can be found at <https://fulbrightspecialist.worldlearning.org/eligibility-specialists>.

If interested, please send your CV/resume and a personal statement by **Wednesday, May 26, 2021** explaining why you believe that you could effectively serve as the Fulbright Specialist for this project to: fulbrightspecialist@worldlearning.org. **Please limit your statement to no more than 400 words and include information regarding your availability.** A copy of the full project description is available, upon request, to aid in the development of CVs and personal statements.

Additionally, please note that if you are selected as a potential candidate for this project, you will be required to submit an official application to join the Fulbright Specialist Roster. For more information regarding the application process and the program, visit <https://fulbrightspecialist.worldlearning.org>.



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