

Penn State University College of Medicine

Postdoctoral Position

A postdoctoral position is available to study translational control, and cap-dependent and cap-independent mechanisms, or the role of cis-acting elements on splicing of the surfactant proteins, or study genome-wide tag SNP associations of candidate genes with lung disease susceptibility in the prematurely born infant.

A successful candidate should have a strong background in molecular biology/genetics, be highly motivated, dependable, work well with others, exhibit superb communication skills, and have a great command of the English language in both speaking and writing.

Background: The system under study is the surfactant proteins, which are part of the lipoprotein complex called pulmonary surfactant. Pulmonary surfactant prevents the distal airspaces from collapsing at low lung volumes and via this function enables the lungs to carry out an essential for life function, the exchange of O₂/CO₂. Pulmonary surfactant and/or its individual components, in addition to its ability to lower surface tension and prevent lung collapse, play important roles in innate host defense, the regulation of inflammatory processes, and perhaps the initiation of parturition. Thus, a deficiency or derangement of surfactant and/or its components associates with virtually all pulmonary diseases. The surfactant proteins (SP-A1, SP-A2, SP-B etc) are considered good candidates for study because of their important functions (in surfactant-related functions and innate immunity), their natural genetic variability, and the fact that they are under the regulatory control of many agents including environmental pollutants.

Contact info

Joanna Floros, PhD

e-mail = jfloros@psu.edu

Phone = 717-531-6972

Mailing address = 500 University Dr, H085

Hershey PA 17033