Lab positions available (various)

Prof. Jeff Fredberg’s Lab

Who should be interested?
Trainees with backgrounds in biology, medicine, engineering, and physics work side-by-side on problems at the intersection of pulmonary sciences and environmental exposures. This faculty addresses three main problems: environmental contaminants & air pollution, lung infection, and asthma. The theme of pulmonary inflammation spans these foci.

Why should you apply?
Our Program offers access to excellent facilities and unique nanotechnologies, and is designed so that trainees will build successful careers as responsible members of the scientific community.

Contact Info: Prof. Jeff Fredberg (jjf@harvard.edu)

Full opportunity description below
Trainees with backgrounds in biology, medicine, engineering, and physics work side-by-side on problems at the intersection of pulmonary sciences and environmental exposures. These trainees benefit from working with each other, working with trainees not supported by this T32, and working with a well-funded, well-published, interdisciplinary faculty. This faculty addresses three main problems: environmental contaminants & air pollution, lung infection, and asthma. The theme of pulmonary inflammation spans these foci. A unique feature is our strong emphasis on engineering and physical sciences. Bridging the gap between the life sciences and the physical / engineering sciences has been a longstanding hallmark of our program. These themes foster exceptional levels of collaboration among a faculty with unusually diverse yet highly complementary expertise. They unify the faculty into a cohesive interdisciplinary team focusing on basic mechanisms of lung disease.

Our training approach recognizes that the breadth of interdisciplinary research teams is expanding. At the intersection of environment and health, in particular, teams increasingly need strong grounding in basic biology, genomics, bio-engineering, biophysics, and exposure and population sciences, as well as increasingly sophisticated analyses of disease models. Only then will they be prepared to study the interaction of susceptibility genes with environmental exposures. Hence, we adopt the approach that the modern trainee cannot be expected to do it all; rather, to succeed he or she will need the strongest possible disciplinary foundation together with the tools needed to work effectively with others outside their own discipline.

Our Program offers access to excellent facilities and unique nanotechnologies, and is designed so that trainees will: 1) master modern technologies of cell and molecular biology as well as integrative physiology; 2) learn the relative strengths and weaknesses of different approaches, 3) design experiments effectively and interpret data critically, 4) adapt well to change, and 5) build successful careers as responsible members of the scientific community.

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