

**POSTDOC: Cross-scale modeling of viral emergence risk**

**UCLA Department of Ecology & Evolutionary Biology**

**Lloyd-Smith lab**

We seek a postdoctoral researcher to develop mathematical and statistical models of viral processes, linking data across scales to understand the determinants of zoonotic emergence risk. This position is linked to an exciting DARPA-funded project that brings together a world-class team of researchers across disciplines from virology to ecology to epidemiology, to study emergence risks from bat-borne viruses including Nipah and Hendra virus. The primary focus of this position is to design quantitative methods to integrate virological data collected in the lab and in the field, at scales from molecules to animals, with the goal of developing biological insight and practical predictors of the evolutionary and epidemiological risk posed by potential zoonotic viruses. The position offers the rare opportunity to interact closely with top empirical researchers in virology and allied fields, and to participate in designing on-going data collection to support future rounds of modeling. There will also be rich opportunities to collaborate with other groups on modeling zoonotic spillover, transmission dynamics and viral evolutionary dynamics.

The position is based in the lab of Jamie Lloyd-Smith at UCLA, where we combine diverse quantitative approaches with data to study the ecological and evolutionary dynamics of pathogen emergence (<http://www.eeb.ucla.edu/Faculty/lloydsmith/>). In addition to the rich intellectual environment of our lab, department, and broader UCLA campus, the postdoc will interact and collaborate with other members of the DARPA project team, across disciplinary boundaries, including virologists (Hector Aguilar-Carreno, Vincent Munster, Colin Parrish), ecologists (Raina Plowright (project PI), Peter Hudson, Hamish McCallum), immunologists (Aga Apple, Tony Schountz), physiologists (Liam McGuire), epidemiologists (Nita Bharti, Emily Gurley, Steve Luby), and quantitative biologists (Barbara Han, Megan Higgs, Olivier Restif). It is an extraordinary team working together to tackle important and ambitious problems.

We are looking for a dynamic and intellectually versatile person to join our team. The ideal candidate will have a PhD in a quantitative field, experience with data-driven modeling of biological systems, and a track record of research excellence. Strong quantitative and computational skills are essential, ideally including experience developing and analyzing mathematical models as well as the ability to collate, interpret and analyze diverse data sets. Excellent verbal and written communication skills are highly desirable, as is experience with infectious disease dynamics, virology, or systems biology. Finally, the successful candidate must be comfortable working both independently and as part of a larger interdisciplinary research team, and able to present findings clearly to experts from other fields.

UCLA has vibrant communities of researchers working on quantitative and computational biology, infectious diseases, and other related fields, and our research group has ties with the UCLA School of Public Health, School of Medicine, Institute of Quantitative and Computational Biology, and Institute of

the Environment and Sustainability. The university is situated in a prime location in west Los Angeles, within minutes of mountains, beaches, and urban amenities. Quality of life is excellent – Los Angeles is a fascinating multicultural city with rich art, music and culinary scenes, and the region has a wealth of natural beauty and opportunities for outdoor pursuits.

The position is available immediately, and can be renewed for up to three years. To inquire, please contact Jamie Lloyd-Smith <jlloydsmith@ucla.edu> with your CV, a brief statement of interest in the project and relevant experience, and your potential start date. Review of applications is on-going until the position is filled. Salary and benefits will be competitive, and commensurate with experience and qualifications.

The University of California is an Equal Opportunity/Affirmative Action Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, age or protected veteran status. For the complete University of California nondiscrimination and affirmative action policy, see: UC Nondiscrimination & Affirmative Action Policy (<http://policy.ucop.edu/doc/4000376/NondiscrimAffirmAct>).