

NAME  
University of Pennsylvania

Dr. \_\_\_\_\_  
Cardiovascular Research Center, Massachusetts General Hospital  
13th Street, Building 149, 4th floor, Charlestown, MA 02129

June 1, 20XX

Dear Dr. \_\_\_\_\_:

I am writing to inquire about the availability of a postdoctoral position in your laboratory. My specific interest is in your use of chemical and genetic screens in zebrafish to identify small molecules that affect specific biological pathways and suppress disease phenotypes.

My long-standing interest has been in virology and the interaction between viruses and host cell pathways, however I have developed a great appreciation for the extraordinary power of the zebrafish as a research tool for drug and gene discovery. I find your studies with *D. rerio* exciting, and I am intrigued by the possibility of one day adapting your work to the study of viral diseases.

I am currently a Ph.D. candidate in the Microbiology, Virology and Parasitology program at the University of Pennsylvania in the laboratory of Dr. Paul Lieberman at the Wistar Institute. My doctoral dissertation, which I expect to defend in December, is a molecular study of the mechanism of DNA replication initiation at the lytic origin (OriLyt) of the Epstein-Barr virus (EBV). We have identified two important structural cis DNA elements required for viral origin activation: a DNA hairpin formed in the top strand of OriLyt (Rennekamp et al. J Virol 20XX) and a stable DNA-RNA hybrid formed during activation of the BHLF1 promoter located at OriLyt (manuscript in preparation). These important findings not only further our understanding of EBV infection but also have broader implications as the nature of origin selection and DNA replication initiation in human cell is of fundamental interest.

Before joining Dr. Lieberman's group, I worked in the laboratory of Dr. Paul Bates in the Department of Microbiology at Penn examining the roles of viral glycoproteins and cellular endosomal proteases in mediating viral entry into cells. I also worked for a brief time, as an undergraduate in the laboratory of Dr. Michael Granato examining neuronal development and axon guidance in zebrafish.

At this point in time I am seeking to apply my experience and training in cell and molecular biology to a new and exciting field, one that will provide me with new tools to address questions of vertebrate immunology and viral pathogenesis. My long-term plan is to develop new models for human viral disease in *D. rerio* with the goal of using chemical and genetic screens, such as yours, to identify small molecules that will perturb viral infections.

Given the opportunity, I am confident that I will be able to contribute successfully to your ongoing projects while at the same time developing the technical skill set and knowledge of zebrafish genetics that I will need to succeed in my future independent research

NAME  
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endeavors.

I have enclosed a copy of my curriculum vitae as well a list of references. If you require additional information please contact me via email or phone.

Thank you for your consideration. I look forward to hearing from you.

Sincerely,

NAME  
Ph.D. Candidate in Microbiology Virology and Parasitology  
University of Pennsylvania, School of Medicine

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Enclosures: References, Curriculum Vitae