

**POSTDOCTORAL POSITIONS**  
**available immediately for qualified applicants**

**Virus-host Interactions, Pathogenesis, Bioinformatics, RNA Picornaviruses**

**What we do:** (a brief sketch)

The RNA picornaviruses are a diverse group of highly virulent human and animal pathogens, including polio, rhino, coxsackie, hepatitis A and foot-and-mouth disease virus (among others). Our group studies all aspects of picornaviruses, using cardioviruses (EMCV) & aphthoviruses (equine rhinitis A) as models for the more pathogenic members of the family. We have developed infectious cDNA clones and combine high-tech recombinant engineering and cell biology with bioinformatics approaches to unravel the virus lifecycle, step by step.

**Current projects** include: investigation of “toxic ribosome” synthesis by cardioviruses as a novel mechanism of host translational shutoff; viral RNA translation via internal ribosome entry sites (IRESes); host transcriptional shutoff by viral proteases; virus-induced chromatin rearrangements that lead to cell death; molecular determinants of viral pathogenesis; viral polyprotein processing via novel proteolytic mechanisms; viral RNA replication mechanisms; and vaccine development for cardioviruses and aphthoviruses.

We are also experimentally active in the development of advanced computer methods for analyzing viral sequences, the prediction of the topological folding of large viral RNA genomes, computer-based visualization of virus surfaces and genomic-based virus taxonomy. We collate widely used web-based databases of viral protein and RNA sequences.

**The University of Wisconsin-Madison** has strong and interactive programs in biochemistry, molecular biology, and virology. The Institute for Molecular Virology houses laboratories with diverse research interests in RNA and DNA viruses of animals, plants, and insects. Collaborative interactions between campus researchers within the Department of Biochemistry, the Program in Microbiology, Program in Cellular & Molecular Biology, and McArdle Laboratory for Cancer Research are widespread.

Qualifications include a Ph.D. and experience in recombinant DNA techniques. The salary ranges from \$25,000 to \$30,000 per year, depending upon experience. Please send a letter of interest, curriculum vitae, and the names & addresses (including Tel/FAX/email) of three references to:

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