



Infectious Diseases &  
Inflammation Program at the  
University of New Mexico  
Health Sciences Center,  
Albuquerque, NM  
<http://hsc.unm.edu/infect/>



**Training Program:** The Infectious Disease and Inflammation Program is under Dept. of Pathology leadership and part of an integrated Biomedical Sciences Graduate Program that offers students interdisciplinary training in basic cell and molecular biology and disease oriented research (<http://hsc.unm.edu/som/bsgs/index.html>).

Infectious diseases are the leading causes of death worldwide, and the third largest cause of death in the United States. The combined mortality of infectious diseases is about 10 million per year. Infectious diseases pose a unique potential for epidemics, such as the 1918 influenza pandemic that took 25 million lives. The healthy host can develop immune mediated responses to ward off infections. Sometimes, however, things can go awry and conditions referred to as "immune mediated" or "hypersensitivity" diseases develop. For example, diabetes and asthma are such diseases. Asthma is a high morbidity disease, particularly in young children. It is increasingly prevalent in industrialized countries around the world, and no one knows why. For that reason, infectious diseases and inflammatory diseases are linked.

We believe that the future of science is collaborative and interdisciplinary. The UNM IDIP embodies this philosophy. We have united a diverse group of scientists through new courses and journal clubs, and joint laboratory meetings toward the common goal of reducing the burden of infectious diseases and asthma worldwide. We are proud to have a prestigious National Institutes of Health training grant for graduate students who enroll in the Biomedical Sciences Graduate Program of the University of New Mexico Health Sciences Center. This grant provides graduate students with a uniquely broad, interdisciplinary training environment. We are creating a new class of interdisciplinary scientist, trained in cutting-edge technology in the field of infectious diseases, immunology and inflammation.

The UNM IDIP is a collaborative, interdisciplinary program of funded faculty from several departments who share an interest in reducing the burden of infectious diseases worldwide. The IDIP is also home to the Specialized Center of Research (SCOR) program for asthma, an inflammatory disease of the lungs. Asthma shares significant pathological and mechanistic similarities to infectious diseases that make it a natural fit with the infectious diseases component of the IDIP.

Our faculty comes from four departments at the University of New Mexico: Pathology, Molecular Genetics and Microbiology, Internal Medicine, and Biology. While our interests range from the basic immunology of asthma to pathogenesis of infectious disease, viral replication, the ecology of wild disease vectors, the actions of complement and the epidemiology of viruses, we have established a large number of collaborative interactions that are recognized through joint funding and joint publications. We are aggressively incorporating modern technologies into our armamentarium, ranging from functional genomics and proteomics to hyperspectral imaging, and noninvasive tracking of infectious diseases in the host.

The IDIP is recognized as a strong, well- funded program within and without the University of New Mexico. The faculty was recently rewarded for its impressive track record of funding, publication and educational activities with a construction grant from the National Institutes of Health that resulted in the construction of a new consolidated

research floor in the new CRF Building of the University of New Mexico School of Medicine. The IDIP's unique interdepartmental administrative structure is located on the new floor, as well as 8 of its principal investigators.

**Courses:** Descriptions for introductory courses offered by the [Biomedical Sciences Graduate Program](#) are given at: <http://hsc.unm.edu/som/bsgs/core.html>. In addition, IDIP at UNM offers a large number of graduate and undergraduate courses to provide specialized training in the area of infectious disease and inflammation. Below is a listing of course titles.

### Graduate:

- Biomed 609 Infectious Disease Epidemiology
- Biomed 625 Section I: Advanced Topics in Microbiology and Immunology
- Biomed 625 Section II: Host-Pathogen Journal Club
- Biomed 625 Section III: Virology Journal Club
- Biomed 620: Microbiology and Immunology Seminar
- Biomed 622: Inflammation and Host Defense
- Biomed 624: Molecular Immunology
- Biomed 633: Advanced Immunobiology
- [Biomed 652: Immunopathogenesis of Infectious Diseases](http://hsc.unm.edu/infect/biomed652.shtml)
- BioMed 505: Problem Based Bioethics
- Number to be determined: Advanced Virology

\*\*\* others pending- see MGM, Biology

### Undergraduate:

- Biology 450: Virology
- Biology 454L: Pathogenic Bacteriology
- Biology 456: Immunology

### Journal Clubs:

- Microbial Pathogenesis SIG
- Pulmonary Immunology and Infectious Diseases Journal Club
- Experimental Pathology Journal Club
- Signal Transduction/Cell Adhesion Journal Club

## Biomedical Sciences Graduate Program

The University of New Mexico – Health Sciences Center – School of Medicine – School of Pharmacy

