**Center for Advanced Host Defenses, Immunobiotics and Translational Comparative Medicine.**

**MISSION:**

CAHDIT’s mission is to conduct innovative, integrated, interdisciplinary biomedical research against infectious diseases with the following goals:

- Develop novel prophylactic vaccines and immunotherapeutic agents.
- Deliver effective next-generation molecular diagnostics.
- Discover new early stage medical interventions for treatment of diseases.

In alignment with the University’s Innovative, Integrated Health Initiative, CAHDIT’s research activities seek to prevent, diagnose and treat infectious diseases of both human and veterinary animals, fight potential bioterrorism agents, prevent zoonotic transmission, and to promote more cost-effective production of globally consumable animal protein.

**HISTORY and VISION:**

CAHDIT was established in 2009 initially as a center at the College of Veterinary Medicine (CVM). However, considering the need to conduct interdisciplinary research and involvement of researchers from all over the University, CAHDIT became a University Center in 2012. The Center addresses two of the Iowa Board of Regents’ Strategic Plan priorities: “To provide needed service and promote economic growth in Iowa”, and “to discover new knowledge through research and scholarship.”

CAHDIT seeks to become one of the top centers in the nation in the field of vaccine and anti-microbial drug development against human and veterinary pathogens. It is in a strong position to mobilize and cross-fertilize the talents and resources of several local Federal agencies (USDA/ARS National Animal Disease Center, National Veterinary Services Laboratories, and APHIS) as well as the human medical expertise at University of Iowa’s College of Medicine in Iowa City. Two world-renowned veterinary vaccine companies now make their home in the Ames ISU Research Park, presenting ripe opportunities for market delivery of CAHDIT-developed products. As such, a corollary function of the center is to provide support for business intellectual property development and related entrepreneurial skills training. In support of the University’s academic mission, the Center will be actively involved in the training of M.S., Ph.D., post-doctoral, and dual degree professional and graduate students, as well as visiting scientists from abroad.

**ORGANIZATION:**

CAHDIT is led by two Co-Directors: Drs. Peter Nara and Michael Cho. Dr. Nara is a world-renowned vaccinologist with expertise in infectious diseases. Having started up a biotechnology company, he also brings entrepreneurial skills. Dr. Cho is a molecular virologist with expertise in AIDS vaccine development and management experience in multi-project Program Project Grants. The Center will have both Internal and External Scientific Advisory Boards, and it will be comprised of five Research Teams, including (1) Infectious Diseases, (2) Bioengineering and Chemistry, (3) Protein Biochemistry and Structural Biology, (4) Computational Biology and Bioinformatics, and (5) Immunology/Cell Biology/Vaccinology (see figures below).
Fig. 1. Organizational chart of CAHDIT.

Fig. 2. CAHDIT Research Teams.