Andy Johnson…understanding immunity

"The NIH-Oxford program has allowed me to develop as an independent scientist more quickly than would be possible in a typical graduate program. By coordinating research between 4 laboratories in 3 countries, I've learned both scientific and personal skills that will be important for my career… and it has been a lot of fun…"

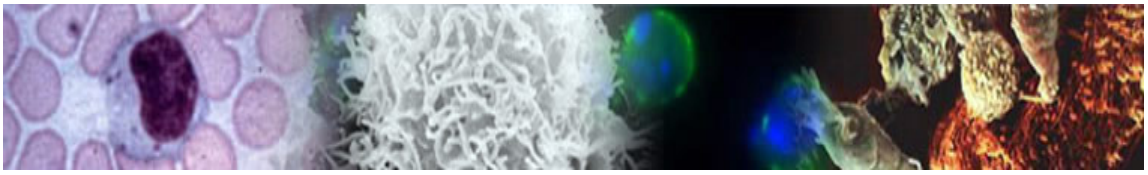
>

Andy Johnson grew up in rural Iowa and was inspired to pursue a lifetime career in medical research by his early teachers. He says, "I lost my grandmother and great-grandmother to cancer when I was 11. After returning from the 2nd funeral, I asked my 5th grade teacher what career I should pursue so that I could cure diseases. Her surprise answer, 'immunology', has been my interest ever since." Andy attended William Jewell College just north of Kansas

City in Liberty, Missouri where he majored in Biochemistry. During college, he was able to get a taste of research in labs at William Jewell as well as during a summer project at the University of Iowa. These cemented his commitment to research. Following his graduation with honors, Andy matriculated in the NIH program as an NIH-Oxford scholar in 2003. He wanted a challenge and sought to do something exciting and out of the ordinary. Taking advantage of the participation of Oxford faculty member, Richard Cornall in a large genome scale random mutagenesis project in mice directed by Professor Christopher Goodnow who is the Director of the Australian Phenomics Facility and the Immunogenomics Laboratory in Canberra, Australia. He began an exciting tri-continental project beginning with a stint at the NIH to learn immunology from Ron Schwartz and biochemistry from Mike Lenardo. He then traveled to Canberra to carry out a screen for mice defective in apoptosis and immune activation. During nine months of work in Australia, he identified seven mouse strains with immune abnormalities and then traveled to England to begin the genetic mapping in Richard Cornall's group in the Nuffield Department of Medicine at Oxford. He participated fully in college life at Oxford – including playing on the Oxford basketball team. He is currently at NIH engaged in the molecular characterization of a mouse with defective thymic selection of CD4+ T lymphocytes that disrupts normal immune responsiveness. The gene encodes one member of a family whose functions were previously unknown thus leading to an exciting path of discovery on the molecular mechanisms underlying the adaptive immune response. At present he is finishing work on a major paper and will graduate in the next six months. For what comes after, Andy says, "In the future, my goal is to study the development and maintenance of immunological memory, which has important implications for fighting infectious disease and cancer."

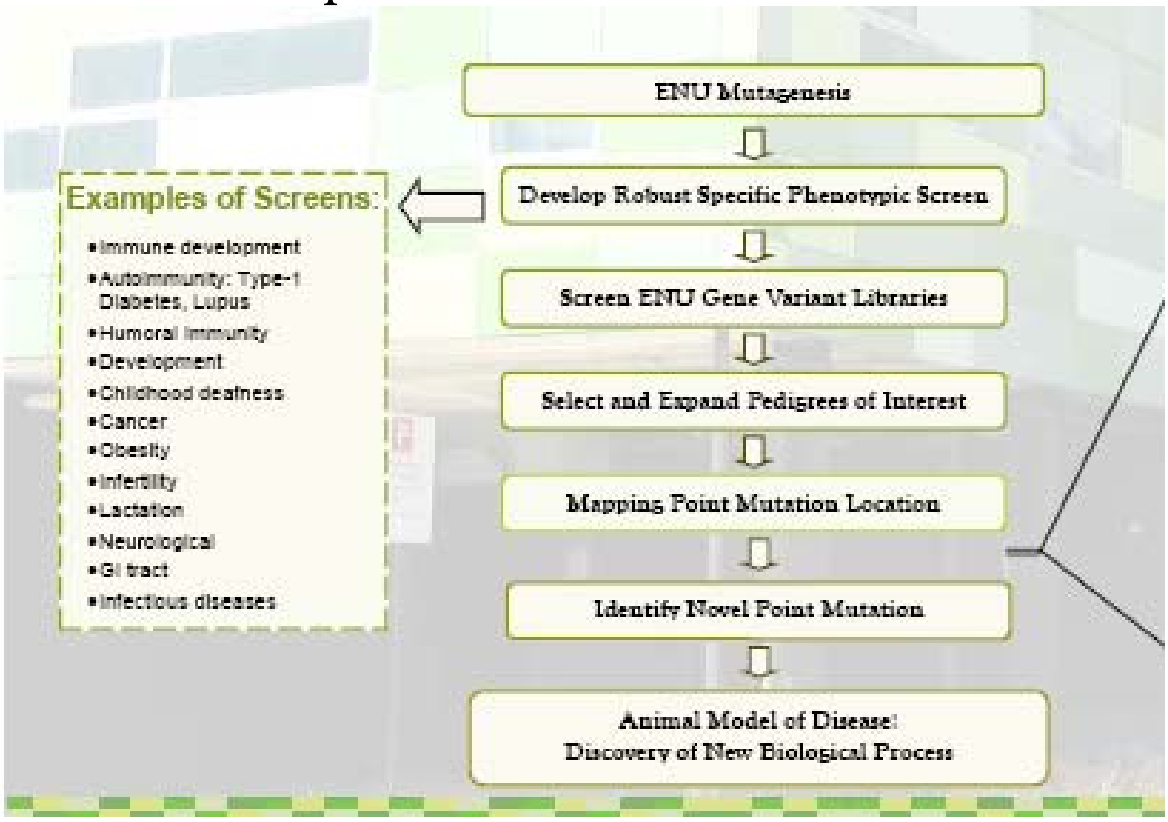
Immunology@NIH

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES | NATIONAL INSTITUTES OF HEALTH



NIH has the largest immunology faculty in the world with expertise in all areas of contemporary adaptive and innate immunity including vaccine development, translational and tumor immunology. See: http://www.immunology.nih.gov/

Genetic and “phenomics” research in Australia:



“Phenomics” research – understanding the detailed effects of genetics mutations on organismal phenotype using random mutagenesis in experimental mice – is the dedicated mission of the Australian Phenomics Facility at the Australian National University http://www.apf.edu.au/.