



DON RUBIN, M.D.

Zirus Board of Directors

Don Rubin, MD, is the scientific founder and Executive board member of Zirus. As such, Dr. Rubin is the lead inventor of the application of the gene trap to infectious disease to discover host targets involved in viral replication. His laboratory is presently located at Vanderbilt University, where he is a Professor of Medicine, Microbiology and Immunology. He is also currently the Associate Chief of Staff for Research and Development at the affiliated VA Medical Center.

Dr. Rubin is a pioneer in understanding virus host interactions. He was trained as a physician at Cornell University Medical College, and completed his training at The Mt. Sinai Hospital, NY, and the Peter Bent Brigham Hospital and Harvard Medical School, Boston, MA. At Harvard, his post-doctoral work was in the laboratory of Bernard N. Fields, Chief of Infectious Diseases at PBBH and Chairman of Microbiology and Molecular Genetics at HMS. Dr. Rubin's first position was at Harvard Medical School, which was followed by over ten years at University of Pennsylvania.

Dr. Rubin has a number of research firsts. He was the first to show how gut enzymes affect the replication of viruses and how viral genes influence virulence after ingestion. Dr. Rubin was the first to show gut associated T-cell suppressor cells (T-regs) to a virus. His work was the first to show how pathogens enter systemic circulation via m-cells overlying Peyer's Patches. This work led to elucidation of a replicative pathway that involved virus infection of epithelial cells via receptors located on the basolateral surface (back side of the cell). Steve London, working in Dr. Rubin's laboratory, was the first to show how T-cells regulate virus infection in the gut. Dr. Rubin's laboratory was the first to use severe combined immunodeficiency (SCID) mice to sort out roles of adaptive and innate immune responses to virus. The finding that cell proliferation was essential for virus replication was demonstrated in his laboratory, where models of targeting viruses to proliferating tissues were developed.

He has won teaching awards at the University of Pennsylvania and Vanderbilt University. Dr. Rubin has served as a reviewer for major peer-reviewed journals and the Pasteur Institute (FR) and Medical Research Counsel (UK). Dr. Rubin has 56 original papers and 23 reviews.