

Subramaniam Srikumaran, BVSc, MS, PhD
CRWAD Fellow Inductee

Dr. Srikumaran is an Emeritus Professor in the Department of Microbiology and Pathology at Washington State University. His 32-year career in Immunology was split between University of Nebraska-Lincoln as a Professor of Immunology (20 years) and Washington State University as the Dr. Rocky Crate-Wild Sheep Foundation Endowed Chair in Immunology (12 years).



Dr. Srikumaran is known nationally and internationally for his research on bovine respiratory disease pathogenesis.

His research has been funded throughout his career. His many contributions include the discovery of the molecular mechanism by which bovine herpesvirus-1 down-regulates expression of host MHC Class I molecules, thus evading protective T cell-mediated cytotoxic responses. He developed some of the first monoclonal antibodies against bovine immunoglobulin isotypes which he shared with other researchers. He also developed monoclonal antibodies that neutralize the leukotoxin of *Mannheimia haemolytica*, which helped him to identify the α 2-integrins (CD18) as the receptor for this leukotoxin. He showed that mutation of amino acid number 18 of ruminant CD18 signal peptide from glutamine to glycine prevents lysis of ruminant leukocytes by the leukotoxin, thus opening the way to engineer cattle whose leukocytes are resistant to the leukotoxin.

Overall, Dr. Srikumaran's scientific contributions encompass elegant investigations of pathogenic mechanisms in ruminants and application of knowledge gained to prevent infection and decrease mortality. His research has resulted in three patents and over 100 refereed articles. He served as the mentor for 27 graduate students. Along with his colleagues, he developed and taught a course in Vaccinology which was transmitted to seven Universities. He served on NIH-NIAID and USDA Grant Review Panels. He was honored by several prestigious awards which include Senior Fogarty International Fellowship (1991), Outstanding Scientific Achievement Award from the Wild Sheep Foundation (2010) and Distinguished Veterinary Immunologist award from the American Association of Veterinary Immunologists (2016).

