Brad T. Cookson, MD/PhD ’91, professor of laboratory medicine and microbiology and director of clinical microbiology at the University of Washington School of Medicine, has made groundbreaking discoveries in the immunopathogenesis of infectious diseases and revolutionized the diagnosis of infection by developing methods for rapidly analyzing clinical samples.

In graduate school, Cookson identified a unique bacterial toxin as the virulence factor causing the respiratory tract pathology of whooping cough. After purifying the toxin, he collaborated to determine its structure, laying the groundwork for current understanding of pertussis disease.

In 2001, Cookson discovered and named pyroptosis, a form of programmed cell death that initiates inflammation. Landmark studies from his lab showed that infected macrophages initiate a suicide program that simultaneously denies microbes a safe harbor and sends distress signals to nearby cells. Pyroptosis is involved in many disorders, including HIV, cardiovascular disease, stroke, and cancer.

Cookson also recognized that microbiology’s future lay in developing methods for rapidly identifying pathogens that traditionally had to be cultured for days to weeks. His Molecular and Next Gen Microbiology Laboratory, which he founded in 1998 and still directs, uses innovative DNA sequence-based identification of pathogens directly from clinical specimens. Physicians from all over the United States and beyond send samples to his lab, which has solved many challenging diagnostic mysteries.

Rave reviews for Cookson’s teaching have resulted in nominations for Distinguished Graduate Mentor Awards and listings in Profs Not to Miss and Favorite Professor of Their Undergraduate Career. His students and colleagues describe him as easygoing and always willing to teach and help with patient care. Former trainees from his lab are now attending physicians and faculty at universities across the U.S.

Other honors include the Alexander Berg Award in Microbiology and Immunology and election to the American Association of University Pathologists. He is also a fellow of the American Academy of Microbiology.

Cookson received his bachelor’s degree from the University of Utah in 1983 and his MD/PhD from Washington University in 1991. He completed residency training in laboratory medicine at the University of Washington and joined its faculty in 1993.

The Washington University Medical Center Alumni Association is pleased to present its Alumni Achievement Award to Dr. Cookson.