Western University of Health Sciences
College of Osteopathic Medicine of the Pacific

COMP Seminar Series

Presents

How ACE affects blood pressure, heart disease and the immune response

Presented by

Kenneth E. Bernstein, MD
Director, Experimental Pathology
Research Scientist, Biomedical Sciences
Cedars-Sinai, Los Angeles CA

Friday, March 20, 2015
12:00pm-1:00pm
Compatriot’s Hall, Pomona

Lunch will be provided with RSVP to kking@westernu.edu by noon, Wednesday, March 18.
How ACE affects blood pressure, heart disease and the immune response

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Angiotensin converting enzyme (ACE) is a peptidase that converts angiotensin I into the vasoconstrictor angiotensin II. As such, it plays a critical role in the regulation of blood pressure by the renin-angiotensin system. However, while renin is very specific in substrate specificity, ACE hydrolyzes many different peptides besides angiotensin I. Because of its broad substrate specificity, and wide tissue distribution in the body, ACE plays an important role in many physiologic processes beyond simple blood pressure control. My lecture will review the many roles of ACE, including how this enzyme participates in renal development, reproduction and hematopoiesis. We will also discuss a very new finding: the role of ACE in the immune response. Mice that over express ACE in monocytic cells have a remarkable phenotype characterized by increased resistance to tumors, bacterial infection, atherosclerosis, and Alzheimer’s disease. Understanding how ACE affects the immune response offers the potential of a new means of enhancing immune resistance to a variety of common diseases.