



July 23-26, 2009
San Francisco, CA

Symposium 03

Stress, well being and cellular aging

Chairs:
Blackburn E, Epel E, UCSF, San Francisco, USA

Telomeres are the caps that protect the ends of chromosomes. The enzyme telomerase, discovered in the 1980's by Drs. Blackburn and Greider, forestalls telomere shortening. Immune cell aging, as measured by telomere length and telomerase activity, is related to healthy cell functioning and replicative potential. Leukocyte telomere length is emerging as a new predictor of mortality in human studies. Dr. Blackburn will discuss the basic science of telomeres and telomerase, and associations with morbidity and mortality. She will also review relationships to stress and lifestyle factors. Dr. Parks will show data from the NIEH Sister Study linking telomere length to urinary hormones and lifestyle factors including employment characteristics, in women. Dr. Jacobs will present data on telomerase activity and relations to well being, in controls and meditators. These studies provide a fuller picture of telomeres and telomerase in vivo, and how they are shaped by contextual and environmental factors.