Title: Life experiences and lifespan: is stress an important link?

Abstract: Accumulating evidence suggests that much of the variation in longevity is due to environmental effects. One factor that may be important in this context is exposure to stressors, however the underlying mechanisms remain poorly understood. One mechanism that may form an important link between stress exposure and longevity are telomeres. Telomeres are highly conserved, non-coding sections of DNA that form protective caps at chromosome ends that shorten during cell division and have been shown to be predictive of lifespan. In this seminar I will address three questions: 1) Does stress exposure influence longevity?, 2) Does exposure to stressors accelerate telomere loss?, and 3) Does telomere loss predict vulnerability to environmental stress exposure? Understanding the physiological mechanisms that lead to variation in lifespan and are influenced by exposure to stressors has important implications for evolutionary ecology and biomedicine, particularly in the face of environmental change and increasing human perturbation.