**Hormesis and Longevity**

**Tall people more likely to get cancer.** The same mechanisms that promote growth also promote cancer.

**Inhibition of respiration extends C. elegans life span via reactive oxygen species that increase HIF-1 activity.**

Inhibiting respiration appears to activate HIF-1 by elevating the level of reactive oxygen species (ROS). We found that ROS are increased in respiration mutants and that mild increases in ROS can stimulate HIF-1 to activate gene expression and promote longevity. In this way, HIF-1 appears to link respiratory stress in the mitochondria to a nuclear transcriptional response that promotes longevity.

More evidence for **Ristow’s thesis that increasing oxidative stress promotes longevity.**

**Longevity. The allostatic load of dietary restriction.**

Restriction of essential nutrients as well as calories may affect life expectancy, perhaps in a species specific fashion. **Hormesis, i.e. an evolutionary conserved stress response routine providing protection against a wide variety of (other) hazards in response to low levels of stress, is very likely to contribute to the beneficial health effects of dietary restriction.**

**Pesticide promotes longevity in C. elegans**

Our findings reveal the potential for low doses of naturally occurring naphthoquinones to extend lifespan by engaging a specific adaptive cellular stress response pathway.

Hormesis extends lifespan.