



CDB SEMINAR

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Monday, April 11, 2011

16:00~17:00 A7F Seminar Room

Analysis of Germ Cell Immortality

Summary

Germ cells possess the remarkable quality of being able to proliferate from one generation to the next, indefinitely, free of replicative damage. To study pathways that ensure germ cell immortality, *mortal germline* mutants were identified in *C. elegans*. These mutants initially display normal levels of fertility, but become sterile when grown for multiple generations. Some *mortal germline* mutants suffer from telomerase dysfunction, where shortened telomeres represent the form of heritable damage that ultimately triggers sterility. Other *mortal germline* mutants appear normal for telomerase, and transmit different forms of heritable damage. We seek to understand pathways that normally repress these additional forms damage, and ultimately to define its macromolecular nature. Dysfunction of such pathways may lead to transmission of epigenetic damage via germ cells or to somatic stem cell defects, either of which may affect development or disease in mammals.

Host:

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