

LIFE SCIENCES

seminar series

Maria Jasin

Memorial Sloan Kettering Cancer
Center, USA

Protecting the Genome by Homologous Recombination

Mendel Lecture

May 28, 2015

Thursday, 17:00 – 18:00

Mendel Museum, Mendel Square

Telecast

Seminar room 114, pavilion A11
University campus Bohunice

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Current research in the Jasin's laboratory focuses on understanding how genomic integrity is maintained in mammalian cells, in particular how cells repair DNA double strand breaks. Human chromosomes are constantly assaulted by challenges to their integrity as a result of either environmental agents that damage DNA or from normal DNA metabolism. The failure to repair damaged DNA faithfully is ultimately responsible for many human diseases, especially cancer. This laboratory focuses on the repair of 1 particular lesion in DNA, the double-strand break (DSB). DSBs arise from agents, such as ionizing radiation, and can also occur spontaneously during DNA replication. Our emphasis is on repair of DSBs by homologous recombination, with a particular interest in the role of homologous recombination in maintaining genetic stability. Understanding the repair of DSBs is not only important for basic science and health concerns, but also impacts on molecular genetic manipulations of mammalian genomes.



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