

Martin Kupiec - Israel

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Prof. Martin Kupiec is a Molecular Geneticist with training in classic and molecular genetics, epigenetics and microbiology (BSc and PhD from the Hebrew University, Post-doctorate from the University of Chicago). A hallmark of Prof. Kupiec's work is his multi-disciplinary approach, which combines genetics, molecular biology, computational and systems biology, as well as cell biology and biochemistry. Prof. Kupiec's lab uses micro-organisms, including the fission and budding yeasts, to investigate the basic functional architecture of the eukaryotic genome, and the mechanisms that maintain its stability. His lab has used the power of yeast genetics to identify and study all the genes involved in telomere length maintenance, to follow the fate of chromosomal breaks, and to investigate the mechanisms that generate mutations and control recombination. They also study the relationship between DNA replication and other central processes such as the epigenetic control of gene expression and the maintenance of sister chromatid cohesion. Additional projects include the analysis of genome organization and function at the systems-level, the regulation of the AMPK yeast kinase (SNF1) and the role of the Tor kinase in the regulation of cell cycle, growth and response to DNA damage. Their work explores basic mechanistic issues conserved throughout evolution, and thus the research has significant medical implications, especially in the fields of cancer and aging.