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Short presentation

My laboratory studies heterochromatin formation and genome dynamics in the fission yeast *Schizosaccharomyces pombe*. Specific aspects on which we have focused in recent years are sumoylation, chromatin boundary formation, and theoretical modeling of heterochromatin formation. Locally, we collaborate with Physicists at NBI (Kim Sneppen, Ala Trusina, Lene Oddershede) and with the group of Karen Skriver in the Department of Biology. Our current international collaborators include Thomas Schalch (University of Geneva), Ron Hay (University of Dundee), and Hisao Masai (Tokyo Metropolitan Institute of Medical Science).

Qualifications

Postdoc, National Cancer Institute
1990 → 1994
PhD student, Fred Hutchinson Cancer Research Center
1986 → 1990
Master Student, Institut Pasteur
1985 → 1986
Undergraduate, École Normale Supérieure
1982 → 1986
PhD Life and Health Sciences, Sorbonne Université
1990 → ...

Publications

Fission yeast Swi2 designates cell-type specific donor and stimulates Rad51-driven strand exchange for mating-type switching

Maki, T., Thon, Genevieve & Iwasaki, H., 2023, In: Nucleic acids symposium series. 51, 8, 19 p.

Euchromatin factors HULC and Set1C affect heterochromatin organization and mating-type switching in fission yeast *Schizosaccharomyces pombe*

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The transcription factor Atf1 lowers the transition barrier for nucleosome-mediated establishment of heterochromatin

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Establishment of heterochromatin in domain-size-dependent bursts

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Integrity of a heterochromatic domain ensured by its boundary elements

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Mating-type switching by homology-directed recombinational repair: a matter of choice

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New insights into donor directionality of mating-type switching in *Schizosaccharomyces pombe*

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Structure of the replication regulator Sap1 reveals functionally important interfaces

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Ethyl methanesulfonate mutagenesis in *Schizosaccharomyces pombe*

Ekwall, K. & Thon, Genevieve, Aug 2017, In: Cold Spring Harbor Protocols. 2017, 8, p. 643-646 4 p.

Genetic analysis of *Schizosaccharomyces pombe*

Ekwall, K. & Thon, Genevieve, Aug 2017, In: Cold Spring Harbor Protocols. 2017, 8, p. 593-605 13 p.

Mating-type determination in *Schizosaccharomyces pombe*

Ekwall, K. & Thon, Genevieve, Aug 2017, In: Cold Spring Harbor Protocols. 2017, 8, p. 641-642 2 p.

Selecting *Schizosaccharomyces pombe* diploids

Ekwall, K. & Thon, Genevieve, Jul 2017, In: Cold Spring Harbor Protocols. 2017, 7, p. 537-540 4 p.

Setting up *Schizosaccharomyces pombe* crosses/matings

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Spore analysis and tetrad dissection of *Schizosaccharomyces pombe*

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Establishment of expression-state boundaries by Rif1 and Taz1 in fission yeast

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Subnuclear relocalization and silencing of a chromosomal region by an ectopic ribosomal DNA repeat

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New romance between RNA degradation pathways: Mmi1 and RNAi meet on heterochromatic islands

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RNAi and heterochromatin repress centromeric meiotic recombination

Ellermeier, C., Higuchi, E. C., Phadnis, N., Holm, L., Geelhood, J. L., Thon, Genevieve & Smith, G. R., 11 May 2010, In: Proceedings of the National Academy of Sciences USA (PNAS). 107, 19, p. 8701-5 5 p.

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Histone modifications: Cycling with chromosomal replication

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Theoretical analysis of epigenetic cell memory by nucleosome modification

Dodd, I. B., Micheelsen, M. A., Sneppen, Kim & Thon, Genevieve, 2007, In: Cell. 129, 4, p. 813-22 10 p.

Evolutionary-conserved telomere-linked helicase genes of fission yeast are repressed by silencing factors, RNAi components and the telomere-binding protein Taz1

Hansen, K. R., Ibarra, P. T. & Thon, Genevieve, 2006, In: Nucleic Acids Research. 34, 1, p. 78-88

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Four chromo-domain proteins of *Schizosaccharomyces pombe* differentially repress transcription at various chromosomal locations

Thon, Genevieve & Hansen, J. V., 2000, In: Genetics. 155, p. 551-568

Localization and properties of a silencing element near the *mat3-M* mating-type cassette of *Schizosaccharomyces pombe*

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Epigenetic inheritance of transcriptional silencing and switching competence in fission yeast

Thon, Genevieve & Friis, T., 1997, In: Genetics. 145, p. 685-696

Three additional linkage groups that repress transcription and meiotic recombination in the mating-type region of *Schizosaccharomyces pombe*

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Directionality of fission yeast mating-type interconversion is controlled by the location of the donor loci

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The *clr1* locus regulates the expression of the cryptic mating-type loci of fission yeast

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Trypanosome variable surface glycoproteins: composite genes and order of expression

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