

Publications de l'équipe *Oocyte Mechanics and Morphogenesis*

Selected Publications:

(* : corresponding authors)

- Al Jord A*, Letort G, Eichmuller A, Chanet S, Huynh J-R, Gov N S, Voituriez R, Terret ME, Verlhac M-H. Cytoplasmic forces functionally reorganize nuclear condensates in oocytes. *BioRxiv* 2021.03.15.434387
- Letort G *, Eichmuller A, Da Silva C, Nikalayevich E, Crozet F, Salle J, Minc N, Labrune E, Wolf JP, Terret ME, Verlhac MH. (2022). An interpretable and versatile machine learning approach for oocyte phenotyping. *J Cell Sci*. jcs.260281
- CrozetF, Da SilvaC, VerlhacM-H*, TerretME*. (2021). Myosin-X is dispensable for spindle morphogenesis and positioning in mouse oocyte. *Development* 148: dev199364
- Bennabi I, Crozet F°, Nikalayevich E°, Chaigne A, Letort G, Manil-Segalen M, Campillo C, Cadart C, Othmani A, Attia R, Sykes C, Genovesio A, Verlhac M-H*, Terret ME*. (2020). Artificially decreasing cortical tension generates aneuploidy in mouse oocytes. *Nat Commun*11: 1649-1663
- ColinA, Letort G,Razin N, AlmonacidM, AhmedW, BetzT, TerretME, Gov NS, VoituriezR, GuerouiZ*, VerlhacM-H*. (2020). Active diffusion in oocytes non-specifically centers large objects during Prophase I and Meiosis I. *J Cell Biol*219: e201908195
- AlmonacidM, Al Jord A, El-HayekS, OthmaniA, CouplierF, LemoineS, MiyamotoK, GrosseR, Pilot T, KleinC, MaillyP, VoituriezR, Genovesio A* and Verlhac M-H.* (2019). Active fluctuations of the nuclear envelope shape the transcriptional dynamics in oocytes. *Dev Cell*51: 145-157
- Letort G*, Bennabi I, Dmitrieff S, Nedelec F, Verlhac MH, Terret ME*. (2019). A computational model of the early stages of acentriolar meiotic spindle assembly. *Mol Biol Cell*30:863-875

- Manil-Ségalen M, Łuksza M, Kanaan J, Marthiens V, Lane SIR, Jones KT, Terret ME, Basto R, Verlhac M-H. (2018). Chromosome structural anomalies due to aberrant spindle forces exerted at gene editing sites in meiosis. *J Cell Biol* 217: 3416-3430
- Bennabi I, Quéguiner I, Kolano A, Boudier T, Mailly P, Verlhac M-H* and Terret ME*. (2018). Shifting meiotic to mitotic spindle assembly in oocytes disrupts chromosome alignment. *Embo Rep* 19: 368-381
- Chaigne A, Campillo C, Voituriez R, Gov NS, Sykes C, Verlhac M-H*, Terret ME*. (2016). F-actin mechanics control spindle centering in the mouse zygote. *Nat Commun* 7:10253-10267.
- Almonacid M, Ahmed WW, Bussonnier M, Mailly P, Betz T, Voituriez R, Gov NS and Verlhac M-H. (2015). Active diffusion positions the nucleus in mouse oocytes. *Nat Cell Biol* 17: 470-479
- Chaigne A, Campillo C, Gov NS, Voituriez R, Sykes C, Verlhac M-H*, Terret ME*. (2015). A narrow window of cortical tension guides asymmetric spindle positioning in the mouse oocyte. *Nat Commun* 6: 6027-6037.
- Chaigne A, Campillo C, Gov NS, Voituriez R, Azoury J, Umana-Diaz C, Almonacid M, Queguiner I, Nassoy P, Sykes C, Verlhac M-H* & Terret M-E*. (2013). A soft cortex is essential for asymmetric spindle positioning in mouse oocytes. *Nat Cell Biol* 15,958-66.
- Łuksza M, Queguiner I, Verlhac M-H* & Brunet S*. (2013). Rebuilding MTOCs upon centriole loss during mouse oogenesis. *Dev Biol* 382, 48-56.
- Kolano A, Brunet S, Silk AD, Cleveland DW & Verlhac M-H. (2012). Error prone mammalian female meiosis from silencing the SAC without normal interkinetochore tension. *PNAS* 109, E1858-E1867.

Invited reviews and book chapters:

- Verlhac M-H. (2021). The groom shall wait until the bride is ready. *J Cell Biol*, 220(10):e202108030
- Nikalayevich E* & Verlhac M-H. (2021). Selfish centromeres, selfless heterochromatin. *Cell*, 184:4843-4844
- Almonacid M* & Verlhac M-H. (2020). A new mode of mechano-transduction shakes the oocyte nucleus, thereby fine tunes gene expression modulating the developmental potential. *Comptes Rendus de Biologie* from the French Academy of Sciences 343: 223-234
- Bennabi I*, Verlhac MH, Terret ME*. (2020). Cortical tension of the oocyte and euploidy: the right

balance. *Med Sci* 36:965-968

- Almonacid M*, Terret ME, Verlhac M-H. (2019.) Nuclear positioning as an integrator of cell fate. *Current Opin Cell Biol* 56:122-129
- Al Jord A* & Verlhac M-H. (2018). Spindle Assembly: Two Spindles for Two Genomes in a Mammalian Zygote. *Curr Biol* 28:R948-R951
- Verlhac M-H. (2018). An actin shell delays oocyte chromosome capture by microtubules. *J Cell Biol* 217:2601-2603
- Book edition in *Methods in Molecular Biology* at Springer Protocols by M-H Verlhac & ME Terret. (2018). Doi.org/10.1007/978-1-4939-8603-3
- Almonacid M*, Terret ME, Verlhac M-H. (2018). Control of nucleus positioning in mouse oocytes. *Semin Cell Dev Biol* 9521 : 30358
- Chaigne A, Terret ME, Verlhac M-H. (2017). Asymmetries and symmetries in the mouse oocyte and zygote. Book Chapter in *Results Probl Cell Differ* 61:285-299
- Bennabi I*, Terret ME, Verlhac M-H*. (2016). Meiotic spindle assembly and chromosome segregation in oocytes. *J Cell Biol* 215: 611-619
- Verlhac M-H. (2016). Mother centrioles are kicked out so that starfish zygote can grow. *J Cell Biol* 212: 759-61
- Verlhac M-H & Terret ME. (2016). Oocyte Maturation and Development. *F1000Research* 5 : 309-317