Selected Publications (* corresponding authors, + co-first authors):

- Bulteau R+, Barbier L+, Lamour G, Lemseffer Y, Verlhac MH, Tessandier N, Labrune E, Lenz M, Terret ME*, Campillo C*****. (2025). Atomic Force Microscopy reveals differences in mechanical properties linked to cortical structure in mouse and human oocytes. ***Small*** e2500221

- Barbier L+*****, Bulteau R+, Rezaei R, Panier T, Letort G, Labrune E, Verlhac MH, Vernerey F, Campillo C*****, Terret ME*. (2025). Noninvasive characterization of oocyte deformability in microconstrictions. ***Sci Adv*** 11(8):eadr9869

- Nikalayevich E, Letort G, De Labbey G, Todisco E, Shihabi A, Turlier H, Voituriez R, Yahiatene M, Pollet-Villard X, Innocenti M, Schuh M, Terret ME*, Verlhac MH*. (2024). Aberrant cortex contractions impact mammalian oocyte quality. ***Dev Cell*** 59:841-852

- Crozet F, Letort G, Da Silva C, Eichmuller A, Tortorelli AF, Belle M, Dumont J, Piolot T, Dauphin A, Coulpier F, Chédotal A, Maître JL, Verlhac MH, Clarke HJ, Terret ME*. (2023). The filipodia-like protrusions of adjacent somatic cells shape the developmental potential of mouse oocytes. ***Life Sci All*** 6:e202301963.

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- 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

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- Colin A, Letort G, Razin N, Almonacid M, Ahmed W, Betz T, Terret ME, Gov NS, Voituriez R, Gueroui Z*, Verlhac MH*. (2020). Active diffusion in oocytes non-specifically centers large objects during Prophase I and Meiosis I. ***J Cell Biol*** 219: e201908195

- Almonacid M, Al Jord A, El-Hayek S, Othmani A, Coulpier F, Lemoine S, Miyamoto K, Grosse R, Piolot T, Klein C, Mailly P, Voituriez R, Genovesio A*, Verlhac MH.* (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 MH*. (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 MH*, Terret ME*. (2018). Shifting meiotic to mitotic spindle assembly in oocytes disrupts chromosome alignment. ***Embo Rep*** 19: 368-381

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- Kolano A, Brunet S, Silk AD, Cleveland DW*, Verlhac MH*. (2012). Error prone mammalian female meiosis from silencing the SAC without normal interkinetochore tension. ***PNAS*** 109, E1858-E1867.

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- Nikalayevich E*, Zollo N, Verlhac MH*. (2025). Impact of organelle architecture on oocyte developmental potential. ***Curr Opin Cell Biol*** 95:102556

- Letort G*, Nikalayevich E*. (2025). Protocol to image, segment, and quantify cortical contractions in maturing mouse oocytes. ***STAR Protoc*** 6(1):103604

- Verlhac MH. (2024). Exploring the maternal inheritance transmitted by the oocyte to its progeny. ***Comptes Rendus de Biologie*** from the French Academy of Sciences 347:45-52

- Letort G, Mailly P, Al Jord A, Almonacid M*. (2024). Capturing Cytoskeleton-Based Agitation of The Mouse Oocyte Nucleus Across Spatial Scales. ***J Vis Exp*** 12: 203

- Bulteau R, Barbier L, Lamour G, Piolot T, Labrune E, Campillo C*, Terret ME*. (2024). Mechanical characterization of murine oocytes by Atomic Force Microscopy. ***Meth Mol Biol*** 2740:117-124

- Al Jord A*, Verlhac MH*. (2023). Dyes illuminate live human embryogenesis. ***Cell*** 186:3143-3145

- Nikalayevich E*, Terret ME. 2023. Meiosis: Actin and microtubule networks drive chromosome clustering in oocytes. ***Curr Biol*** 33:R272-R274

- Almonacid M*, Verlhac MH. 2022. A mitochondrial niche protects oocyte RNPs. ***Dev Cell*** 57:2599–2600

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- Nikalayevich E*, Verlhac MH. (2021). Selfish centromeres, selfless heterochromatin. ***Cell*** 184:4843-4844

- Almonacid M*, Verlhac MH. (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 MH. (2019.) Nuclear positioning as an integrator of cell fate. ***Curr Op Cell Biol*** 56:122-129

- Al Jord A*, Verlhac MH. (2018). Spindle Assembly: Two Spindles for Two Genomes in a Mammalian Zygote. ***Curr Biol*** 28:R948-R951

- Verlhac MH. (2018). An actin shell delays oocyte chromosome capture by microtubules. ***J Cell Biol*** 217:2601-2603

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- Almonacid M*, Terret ME, Verlhac MH. (2018). Control of nucleus positioning in mouse oocytes. ***Semin Cell Dev Biol*** 9521 : 30358

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- Bennabi I*, Terret ME, Verlhac MH*. (2016). Meiotic spindle assembly and chromosome segregation in oocytes. ***J Cell Biol*** 215: 611-619

- Verlhac MH. (2016). Mother centrioles are kicked out so that starfish zygote can grow. ***J Cell Biol*** 212: 759-61

- Verlhac MH*, Terret ME. (2016). Oocyte Maturation and Development. ***F1000Research*** *5 :* 309-317

Patent (alphabetical order):

- Barbier L, Bulteau R, Campillo C, Terret ME, Verlhac MH. Microfluidic device for use in a system for measuring at least one biomarker of at least one oocyte. European patent filed in 2023, PCT extension in 2024 (EP2024/059100).