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Education:

2000, PhD in Biology, Institute of Bioorganic Chemistry, Russian Academy of Sciences, Novosibirsk, Russia

Professional experience

2014-present, Avenir group leader, tenured research scientist at Inserm (CR1)
2012-2014, professor at European University of Brittany (Chaire D'Excellence)
2008-2012, postdoc, Uniformed Services University, Department of Biochemistry Bethesda, USA
2006-2007, postdoc, Dartmouth Medical School, Department of Genetics, Hanover, USA
2002-2006, postdoc, Biology Institute - UMR 5121 CNRS, Montpellier, France

Honors, grants and awards

2015- Prime of excellence award from Inserm
2014-2018 Avenir from Inserm
2013-2014 grant for Chair of Excellence from UEB
2002, award for young scientist for visiting HGM2002 scientific meeting, Shanghai, HUGO

Teaching experience

2000-2002, Novosibirsk State University, Department of Natural Sciences; course " Practical Biochemistry" for the 4 th year students 90 hours

Supervised 2 PhD student, Chunxiang Hao, Louis Legoff

Publications (last 10 years):

1. Jamin SP, Petit FG, Kervarrec C, **Smagulova F**, Illner D, Scherthan H, Primig M. EXOSC10/Rrp6 is post-translationally regulated in male germ cells and controls the onset of spermatogenesis. *Sci Rep.* 2017 Nov 8;7(1):15065. doi: 10.1038/s41598-017-14643-y. PubMed PMID: 29118343.
2. Gely-Pernot A, Saci S, Kernanec PY, Hao C, Giton F, Kervarrec C, Tevosian S, Mazaud-Guittot S, **Smagulova F**. Embryonic exposure to the widely-used herbicide atrazine disrupts meiosis and normal follicle formation in female mice. *Sci Rep.* 2017 Jun 14;7(1):3526. doi: 10.1038/s41598-017-03738-1. PubMed PMID: 28615648, PubMed Central PMCID: PMC5471253.
3. Hao C*, Gely-Pernot A*, Kervarrec C, Boudjema M, Becker E, Khil P, Tevosian S, Jegou B, **Smagulova F**. Exposure to the widely used herbicide atrazine results in deregulation of global tissue-specific RNA transcription in the third generation and is associated with a global decrease of histone trimethylation in mice, *Nucleic Acids Res.* 2016, Sep 20, * equal contribution
4. **Smagulova F***, Brick K*, Yongmei Pu, Camerini-Otero RD, Petukhova GV. The evolutionary turnover of recombination hotspots contributes to speciation in mice, *Genes and Dev*, 2016, * equal contribution
5. Gely-Pernot A*, Hao C*, Becker E, Stuparevic I, Kervarrec K, Chalmel F, Primig M, Jégou B and **Smagulova F**. The epigenetic processes of meiosis in male mice are broadly affected by the widely used herbicide atrazine. *BMC Genomics*, 2015, 2015 Oct 30;16:885. * equal contribution
6. Petit FG, Kervarrec C, Jamin SP, **Smagulova F**, Hao C, Becker E, Jégou B, Chalmel F, Primig M. Combining RNA and Protein Profiling Data with Network Interactions

- Identifies Genes associated with Spermatogenesis in Mouse and Human. *Biol Reprod.* 2015 Jan 21. pii: biolreprod.114.126250.
7. Pratto F*, Brick K*, Khil P*, **Smagulova F**, Petukhova GV, Camerini-Otero RD, DNA recombination. Recombination initiation maps of individual human genomes. *Science*, 2014 Nov 14;346(6211):1256442., * equal contribution
 8. Lardenois A, Stuparevic I, Liu Y, Law MJ, Becker E, **Smagulova F**, Waern K, Guilleux MH, Horecka J, Chu A, Kervarrec C, Strich R, Snyder M, Davis RW, Steinmetz LM, Primig M. The conserved histone deacetylase Rpd3 and its DNA binding subunit Ume6 control dynamic transcript architecture during mitotic growth and meiotic development. *Nucleic Acids Res*, 2014.
 9. **Smagulova F***, Brick K*, Pu Y, Sengupta U, Camerini-Otero RD, Petukhova GV. Suppression of genetic recombination in the pseudoautosomal region and at subtelomeres in mice with a hypomorphic Spo11 allele. *BMC Genomics*, 2013 Jul 22;14:493. doi: 10.1186/1471-2164-14-493.
 10. Brick K*, **Smagulova F***, Khil P, Camerini-Otero RD, and Petukhova GV. PRDM9 directs genetic recombination away from functional genomic elements. *Nature*, 2012;485(7400):642-5.*Equal contribution
 11. Khil PP*, **Smagulova F***, Brick KM, Camerini-Otero RD, and Petukhova GV. Sensitive mapping of recombination hotspots using sequencing-based detection of ssDNA, *Genome Research*, 2012 (5):957-65*Equal contribution
 12. **Smagulova F***, Gregoretti*I, Brick K, Khil PP, Camerini-Otero RD and Petukhova G. Genome-wide analysis reveals novel molecular features of mouse recombination hotspots, *Nature*, 2011 v472 (7343): 375-8
 13. Manuylov NL, **Smagulova FO**, Leach LL, and Tevosian SG. Ovarian Development in Mice Requires the GATA4/FOG2 Transcriptional Complex, *Development*, 2008, 135(22):3731-43
 14. **Smagulova FO**, Manuylov NL, Leach LL, Tevosian SG. GATA4/FOG2 transcriptional complex regulates Lhx9 gene expression in murine heart development, *BMC Developmental Biology*, 2008 8:67, 2008
 15. Grigorov B, Décimo D, **Smagulova F.**, Péchoux,C., Mougél, M., Muriaux, D. and Darlix, JL. Intracellular HIV-1 Gag localization is impaired by mutations in the nucleocapsid zinc fingers. *Retrovirology*, 2007;4:54 (This paper was featured paper in Retrovirology)
 16. Chaloin L, **Smagulova F**, Hariton-Gazal E, Bardy M, Briant L, Loyter L and Devaux C. Potent inhibition of HIV-1 replication by backbone cyclic peptides bearing the Rev Arginine Rich Motif, *Journal of Biomedical Science*, 2007 (5):565-84
 17. Houzet L, Paillart J* **Smagulova F,*** Maurel S, Morichaud Z, Marquet R, Mougél M. HIV controls the selective packaging of genomic, spliced viral and cellular RNAs into virions through different mechanisms. *Nucleic Acids Research*, 2007;35(8):2695-704*Equal contribution
 18. Manuylov NL*, **Smagulova FO*** and Tevosian SG. Fog2 Excision in Mice Leads to Premature Mammary Gland Involution and Reduced Esr1 Gene Expression. *Oncogene*, 2007 9;26(36):5204-13 (This paper was featured paper in Oncogene), * Equal contribution

Book Chapter

Smagulova F. “ Meiotic Recombination in the Human Germ Line” in book « Epigenetics in Human Reproduction and Development » Edited by Anna K. Naumova and Teruko Taketo (McGill University)