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## Employment

### Department of Cellular Biology, Physiology and Immunology

Bellaterra (Cerdanyola del Vallès), Spain

1 Sept 2023 → 31 Aug 2024

## Education

2019 PhD in Cell Biology. Universitat Autònoma de Barcelona (UAB)  
2013 Official Master's Degree in Cytogenetics and Reproductive Biology. Universitat Autònoma de Barcelona  
2012 Bachelor's Degree in Biology. Universitat Autònoma de Barcelona (UAB)

## Awards

### Research project funded

2016-19 Title: Análisis integral de factores genéticos predisponentes a trastornos genómicos. El Síndrome de Digeorge/Velocardiofacial como modelo de estudio. Financing: Ministerio de Economía y Competitividad, España. (SAF2016-77165-P) Principal investigator: Dra. Francesca Vidal Domínguez  
2014-16 Title: Grup de Recerca Consolidat "Unitat de Biologia Cel·lular" Financing: Departament d'Universitats, Recerca i Societat de la Informació de la Generalitat de Catalunya (Expte. 2014 SGR-524) Principal investigador: Dra. Francesca Vidal Domínguez

## Publications

### Scientific papers

Altered bivalent positioning in metaphase I human spermatocytes from Robertsonian translocation carriers. Solé M, Blanco J, Valero O, Vergés L, Vidal F, Sarrate Z. Journal of assisted reproduction and genetics, 2017. Jan;34(1):131-138. doi: 10.1007/s10815-016-0809-y

Chromosome positioning and male infertility: it comes with the territory. Sarrate Z, Solé M, Vidal F, Anton E, Blanco J. Journal of assisted reproduction and genetics, 2018. Nov;35(11):1929-1938. doi: 10.1007/s10815-018-1313-3

## Conference contributions

### Oral communications (13)

2019 The 12th European Cytogenetics Conference - European Cytogenetics Association - Salzburg Congress, Austria Chromosome radial positioning in spermatogenic germ cells from *Mus musculus*. Mireia Solé, Joan Blanco, Debora Gil, Oliver Valero, Gothami Fonseka, Richard Frodsham, Francesca Vidal, Zaida Sarrate  
2019 4th Meeting of the Spanish Meiosis Network – Red Española de Meiosis – El Escorial, Madrid Homologous chromosomes approach starts before the onset of prophase I in mouse spermatogenesis. Mireia Solé, Joan Blanco, Debora Gil, Oliver Valero, Ester Anton, Gothami Fonseka, Richard Frodsham, Francesca Vidal, Zaida Sarrate  
2019 XVIII Jornades de Biologia de la Reproducció, Barcelona – Institut Dexeus – Barcelona Distribució dels cromosomes en l'eix centre-perifèria del nucli de les cèl·lules espermatogèniques de *Mus musculus*. Mireia Solé, Joan Blanco, Debora Gil, Oliver Valero, Ester Anton, Gothami Fonseka, Richard Frodsham, Francesca Vidal, Zaida Sarrate  
2018 European Society of Human Reproduction and Embryology – ESHRE – Palau de Congressos Fòrum, Barcelona Analysis of the chromosome territories dynamic in male germ cells and its association to male infertility Mireia Solé, Joan Blanco, Débora Gil, Oliver Valero, Gothami Fonseka, Richard Frodsham, Francesca Vidal, Zaida Sarrate  
2018 3th Meeting of the Spanish Meiosis Network – Red Española de Meiosis – El Escorial, Madrid Analysis of the chromosome territories dynamic in male germ cells and its association to male infertility Mireia Solé, Joan Blanco, Débora Gil, Oliver Valero, Gothami Fonseka, Richard Frodsham, Francesca Vidal, Zaida Sarrate.  
2018 X Jornada del Departament de Biologia Cel·lular, Fisiologia i Immunologia, Barcelona Territorialitat cromosòmica en l'espermatogènesi: Casualtat o funcionalitat? Mireia Solé, Joan Blanco, Debora Gil, Gothami Fonseka, Richard Frodsham, Oliver Valero, Francesca Vidal, Zaida Sarrate

- 2017 IX Congreso de la Asociación para el Estudio de la Biología de la Reproducción – Centro De Convenciones Hotel Meliá Castilla, Madrid Análisis 3d de la territorialidad cromosómica en células espermatogénicas: explorando la infertilidad desde un nuevo prisma. Mireia Solé, Joan Blanco, Debora Gil, Gothami Fonseka, Richard Frodsham, Oliver Valero, Francesca Vidal, Zaida Sarrate
- 2017 The 11th European Cytogenetics Conference - European Cytogenetics Association - Palazzo dei Congressi, Florence Chromosome territories in mice spermatogenesis: a new three-dimensional methodology. Mireia Solé, Joan Blanco, Debora Gil, Gothami Fonseka, Richard Frodsham, Oliver Valero, Francesca Vidal, Zaida Sarrate
- 2017 XV Jornada de biologia de la reproducció – Societat Catalana de Biologia – Institut d'Estudis Catalans, Barcelona Noves perspectives en l'estudi de la territorialitat cromosòmica de cèl·lules germinals masculines: estudis tridimensionals. Mireia Solé, Joan Blanco, Debora Gil, Gothami Fonseka, Richard Frodsham, Oliver Valero, Francesca Vidal, Zaida Sarrate
- 2017 3rd Meeting of the Spanish Meiosis Network – Red Española de Meiosis – Meionet – Miraflores de la Sierra, Madrid Is there a pattern of Chromosome territoriality along mice spermatogenesis? Mireia Solé, Joan Blanco, Debora Gil, Gothami Fonseka, Richard Frodsham, Oliver Valero, Francesca Vidal, Zaida Sarrate
- 2016 2nd Meeting of the Spanish Meiosis Network – Red Española de Meiosis – Meionet – Monestir de Poblet, Catalonia A new tridimensional approach to study the dynamics of chromosome positioning during spermatogenesis. Mireia Solé, Joan Blanco, Francesca Vidal, Beatriz Martínez, Zaida Sarrate
- 2015 XIV Jornades de Biologia de la Reproducció, Barcelona Efecte de la presència de reorganitzacions cromosòmiques en el posicionament de bivalents a metafase I en espermatoïcits humans. Mireia Solé, Laia Vergés, Oliver Valero, Joan Blanco, Francesca Vidal, Zaida Sarrate
- 2015 The biology of meiosis: implications for fertility and genetic disorders. Ramón Areces Foundation. International Symposium – Salamanca Altered bivalent positioning in metaphase I human spermatocytes from Robertsonian translocation carriers. Mireia Solé, Laia Vergés, Oliver Valero, Joan Blanco, Francesca Vidal, Zaida Sarrate

#### Posters (5)

- 2017 VIX Jornada del Departament de Biologia Cel·lular, Fisiologia i Immunologia, Barcelona Unraveling the enigmas of chromosome territoriality during spermatogenesis. Mireia Solé, Joan Blanco, Debora Gil, Gothami Fonseka, Richard Frodsham, Oliver Valero, Francesca Vidal, Zaida Sarrate
- 2016 VIII Jornada del Departament de Biologia Cel·lular, Fisiologia i Immunologia, Barcelona 3D analysis of chromosome position in mice spermatogenesis. Mireia Solé, Joan Blanco, Bea Martínez, Francesca Vidal, Zaida Sarrate
- 2015 VII Jornada del Departament de Biologia Cel·lular, Fisiologia i Immunologia, Barcelona Altered bivalent positioning in metaphase I human spermatocytes from Robertsonian translocation carriers. Mireia Solé, Laia Vergés, Oliver Valero, Joan Blanco, Francesca Vidal, Zaida Sarrate
- 2014 VI Jornada del Departament de Biologia Cel·lular, Fisiologia i Immunologia Estudi tridimensional del posicionament cromosòmic en cèl·lules germinals masculines. Mireia Solé, Laia Vergés, Oliver Valero, Joan Blanco, Francesca Vidal, Zaida Sarrate
- 2013 VII congreso de la Asociación para el Estudio de la Biología de la Reproducción, Sevilla Estudio tridimensional del posicionamiento cromosómico en células germinales masculinas. Zaida Sarrate, Mireia Solé, Joan Blanco, Bea Martínez, Francesca Vidal

### Other scientific activities

- 2013 Methodology optimization for the study of 3D chromosomal positioning during human spermatogenesis Scientific Group: GMF, Genetics of Male Fertility Group leader: Dr. Francesca Vidal Supervisor: Dra. Zaida Sarrate. Master's degree intership. Universitat Autònoma de Barcelona (UAB)
- 2012 Hepatitis C, molecular biology and therapy. Scientific Group: Liver Diseases. Group leader: Dr. Joan Genescà. Supervisor: Dr. Josep Quer. Bachelor's Degree internship. Vall d'Hebron institute research (VHIR), Barcelona.

### Scientific skills

Confocal and epifluorescence microscopy  
 Fluorescence in situ hybridization (FISH)  
 Immunofluorescence  
 3D cell fixation  
 Flow cytometry  
 BACs culture  
 Cell culture  
 Macros development in IJ1 language  
 ImageJ  
 Matlab  
 Imaris  
 Las Af