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CURRENT POSITION

Full Professor in Cell Biology (PR1, section 65) Department of Biology, University of Montpellier
Principal Investigator, Cell adhesion and migration Team, CRBM, Montpellier

EDUCATION

1985: Licence (BSc) in Biology, University of Neuchâtel, Switzerland
1990: PhD in Zoology, University of Neuchâtel, Switzerland
Topic: Yolk degradation, a model of developmentally-regulated lysosomal protease activation
1991-1993: Postdoc, FR Maxfield lab, Columbia University, New York, USA.
Topic: Study on pH regulation in yolk platelets using live imaging
1993-1997: Postdoc, BM Gumbiner lab, Sloan Kettering Institute, New York, USA.
Topics: Wnt signalling in development, β -catenin nuclear transport, discovery of Axin scaffold protein

PREVIOUS ACADEMIC POSITIONS

1997-2002: Group Leader, Max-Planck Institute for Developmental Biology, Tübingen, Germany
Topics: β -catenin signalling, β -catenin and Axin nuclear transport
2002-2015: Associate Professor, Department of Biology, McGill University, Montreal, QC, Canada
Topic: Morphogenesis, principles and mechanisms of cell sorting at embryonic boundaries

AWARDS and FELLOWSHIPS

1991-1992: Postdoctoral fellowship from the Swiss National Fund
1992-1994: Fellowship for advanced postdoctoral researcher, Swiss National Fund
2003-2008, 2008-2013: **Canada Research Chair** in Cell Biology
2015-2022: EpiGenMed Labex **Chair of Excellence**

PUBLICATIONS

58 publications, including 38 as corresponding author, total citations: 7600

Selected publications (supervised students underlined)

Rozema D, Fagotto-Kaufmann C, Ruppel A, Lasko P, **Fagotto F** (2025) Dynamic remodelling of cadherin contacts in embryonic mesenchymal cells during differential cell migration. **DEVELOPMENTAL CELL** *in press*

Aslemarz A, Fagotto-Kaufmann M, Ruppel A, Fagotto-Kaufmann C, Balland M, Lasko P, **Fagotto F** (2024) An EpCAM/Trop2 mechanostat differentially regulates individual and collective migration of human carcinoma cells. **EMBO J** 44, 75

Kashkooli L, Rozema D, Espejo-Ramirez L, Lasko P, **Fagotto F** (2021) Ectoderm to mesoderm transition by downregulation of actomyosin contractility. **PLOS BIOLOGY** 19: e300106.

Fagotto F and Aslemarz A (2020) EpCAM cellular functions in adhesion and migration, and potential impact on invasion: A critical review. **BBA REV CANCER** 1874, 188436

Fagotto F (2020) Cell sorting and embryonic boundaries. **SEMIN CELL DEV BIOL** 107, 126 (Editorial/Essay). *Invited editor, special issue on embryonic boundaries.*

Canty L, Zarour E, Kashkooli L, François P, **Fagotto F** (2017) Sorting at embryonic boundaries requires high heterotypic interfacial tension. **NATURE COMM** 8, 157

Rohani N, Winklbauer R, **Fagotto F** (2014) Ectoderm-mesoderm separation is controlled through selective repulsion generated by specific pairs of ephrins and Eph receptors. **PLOS BIOLOGY** 12, e1001955.

Maghzal N, Kayali HA, Kajava AV, **Fagotto F** (2013) The tumor-associated protein EpCAM controls Erk signaling, actomyosin contractility and cell-cell adhesion by directly inhibiting PKC. **DEVELOPMENTAL CELL** 27, 263

Fagotto F, Rohani N, Touret AS, Li R (2013) A molecular base for cell sorting at embryonic boundaries: contact inhibition of cadherin adhesion by ephrin/ Eph-dependent contractility. **DEVELOPMENTAL CELL** 27, 72

Fagotto F (2013) Looking beyond the Wnt pathway for the deep nature of β -catenin. (Review) **EMBO R** 14, 422

Rohani N, Canty L, Luu O, **Fagotto F*** and Winklbauer R* (2011) EphrinB/EphB-signaling controls embryonic germ layer separation by contact-induced cell detachment. **PLOS BIOLOGY** 9, e1000597 * *Corresp authors.*

Reintsch WE, Habring-Müller A, Wang R, Schohl A, **Fagotto F** (2005). β -catenin controls cell sorting at the notochord-somite boundary independently of cadherin-mediated adhesion. **J CELL BIOLOGY** 170, 675

Schohl A and **Fagotto F** (2002). β -catenin, MAPK, and Smad signaling during early *Xenopus* development. **DEVELOPMENT** 129, 37

Fagotto F, Eek-Hoon J, Zeng L, Kurth T, Joos T, Kaufmann C, Costantini F (1999). Domains of Axin involved in protein-protein interactions, Wnt pathway inhibition and intracellular localization. **J CELL BIOLOGY** 145, 741

Fagotto F, Glück U, Gumbiner BM (1998). Nuclear localization signal-independent and importin/karyopherin-independent nuclear import of β -catenin. **CURRENT BIOLOGY** 8, 181

Zeng L*, **Fagotto F***, et al (1997). The mouse locus *Fused* encodes Axin, an inhibitor of the Wnt signaling pathway that regulates embryonic axis formation. **CELL** 90, 181 (*: *First equal authors*)

Fagotto F, Funayama N, Gluck U, Gumbiner BM (1996). Binding to cadherins antagonizes the signaling activity of β -catenin during axis formation in *Xenopus*. **J CELL BIOLOGY** 132, 1105

Fagotto F (1995). Regulation of yolk degradation, or how to make sleepy lysosomes. **J CELL SCIENCE** 108, 3645 (Review)

Fagotto F and Maxfield FR (1994). Yolk platelets in *Xenopus* oocytes maintain an acidic internal pH which may be essential for sodium accumulation. **J CELL BIOLOGY** 125, 1047

CURRENT COLLABORATORS

Martial Balland (biophysics), Liphy, Grenoble, France (since 2021)

Lisa Manning (biophysics), University of Syracuse, USA (since 2022)

Rudolf Winklbauer (developmental biology), University of Toronto, Canada (since 2008)

François Graner (biophysics), Université Sorbonne, Paris, France (since 2025)

Daniel Garcia-Gonzalez (bioengineering), University of Madrid (since 2025)

REVIEWER and INTERNATIONAL EVALUATION PANELS

Reviewer for international scientific journals:

Regular reviewer: EMBO Journal since 1999, EMBO Reports since 2004, Dev Cell since 2014

Ad hoc reviewer for > 30 journals, including Nature Cell Biology, Nature Comm, Current Biology, JCB, PNAS, elife, Development, Cell Rep, JCS

Since 2020: Member, Faculty Opinions (previously F1000), "Biological Physics"

2021-2025: Committee member, **Human Frontiers Science Program** (HFSP) Postdoctoral fellowships

EXTERNAL FUNDING

(main applicant, not included co-applicant for departmental grants for infrastructure and equipment)

2003-2016, McGill University: ~ 4Mi CAD from Canada Found. Innovation, Can. Inst. Health Research, Nat. Sci. Eng. Res. Council, Canada Cancer Society Res. Inst., Cancer Research Society

2015-2026, CRBM Montpellier: ~ 1.6Mi € (ANR and ARC)

AFFILIATIONS

SFBD French Society of Developmental Biology

SBCF French Society for Cell Biology

TEACHING

Full teaching load at University of Montpellier

Responsibilities include coordinator of Master Program in Genetics, Epigenetics Cell Biology (2016-2025), coordination of Cell Biology teaching at undergraduate and master level.

Main courses:

Developmental Biology (creation, coordination, teaching full course, 3rd year)

Cell Biology (Teaching and co-coordination, 2nd year core course, 3rd year advanced course, Master 1 core course for all Life Science Master Programs, Master 2 advanced course in Cell Dev Biology)

Scientific Communication in English (3rd year core course)

Interdisciplinary courses:

Physics Department, strong involvement in teaching Master 1 + 2 courses in "Biological Physics" and "Biomimetics".