

Marta Shahbazi CV

MRC Laboratory of Molecular Biology (LMB), Francis Crick Avenue, CB2 0QH Cambridge UK
Contact details: mshahbazi@mrc-lmb.cam.ac.uk, +44 (0) 7754508398, +44 (0) 1223 267026

EDUCATION AND RESEARCH EXPERIENCE

2020 - present **Junior group leader.** Laboratory of Molecular Biology (LMB), Cambridge, UK.
2014 – 2020 Postdoctoral fellow, University of Cambridge, UK.
2009 – 2014 PhD in Molecular Biology, Spanish National Cancer Research Centre, Spain.
2013 – 2014 Course in Applied Statistics, National Distance Education University, Spain
2008 – 2009 MS Degree in Molecular Biomedicine, Autonoma University of Madrid, Spain
2003 – 2008 Bachelor's Degree in Biology (Class I), Autonoma University of Madrid, Spain

MOST RECENT RESEARCH FUNDING AND PRIZES

2022 **Starting ERC grant**
2020 **International 3Rs prize**
2019 Best article prize from the American Society of Reproductive Medicine.
2018 Best poster prize – The Stem Cell Niche meeting, Copenhagen, Denmark.
2017 – 2018 Leverhulme Trust Early Career Fellowship
2017 Travel award – Charles Slater Foundation
2017 Travel award – Workshop organized by the company of Biologists.
2017 Santa Cruz Investigator Award (Article: Shahbazi et al, Nat Cell Biol, 2016)
2016 Science popular vote award for the **top breakthrough discovery of 2016**
2016 Best oral presentation (PDN Symposium)
2015 – 2017 Postdoctoral EMBO Fellowship
2014 – 2015 Postdoctoral Fellowship, Spanish Foundation Ramon Areces

MOST RELEVANT PUBLICATIONS

1. Moris N, **Shahbazi MN**. “Unravelling the mysteries of human embryogenesis”. Semin Cell Dev Biol. Nov, 2022; 131: 1-3.
2. **Shahbazi MN**. “Size matters”. Nat Rev Mol Cell Biol. Jul, 2022; doi: 10.1038/s41580-022-00521-7
3. Rosa VS., **Shahbazi MN**. “Blastoids 3.0”. Cell Stem Cell. Jan, 2022; 29 (1): 8-10.
4. Zhu M.*, **Shahbazi MN.***, Martin A.*, Zhang, C., Sozen B., Borsos M., Madelbaum RS., Paulson RJ., Mole MA., Esbert M., Titus S., Scott RT., Campbell A., Fishel S., Gradinaru V., Zhao H., Wu K., Chen ZJ., Seli E., de los Santos MJ., Zernicka-Goetz. M. “Human embryo polarization requires PLC signaling to mediate trophectoderm specification”. Elife. Sept 2021; 10:e65068.

5. Mackinlay KM., Weatherbee BA., Souza Rosa V., Handford CE., Hudson G., Coorens T., Pereira LV., Behjati S., Vallier L., **Shahbazi MN.***, Zernicka-Goetz M*. "An in vitro stem cell model of human epiblast and yolk sac interaction". *Elife*. Aug, 2021; 10: e63930. *corresponding authors.
6. Makhlof A., **Shahbazi MN.** "The long and winding road of development: a coordinated song of transcription factors". *Nat Methods*. Aug, 2021; 18 (8): 866-867.
7. Mole MA.*, Coorens THH.*, **Shahbazi MN.***, Weberling A.*, Weatherbee BAT.*, Gantner CW., Sancho-Serra C., Richardson L., Drinkwater A., Syed N., Engley S., Snell P., Christie L., Elder K., Campbell A., Fishel S., Behjati S., Vento-Tormo R., Zernicka-Goetz M. "A single cell characterisation of human embryogenesis identifies pluripotency transitions and putative anterior hypoblast centre". *Nat Commun*. Jun, 2021; 12 (1): 3679. *equal contribution.
8. Orietti LC., Rosa VS., Antonica F., Kyprianou C., Mansfield W., Marques-Souza H., **Shahbazi MN.***, Zernicka-Goetz M*. "Embryo size regulates the timing and mechanism of pluripotent tissue morphogenesis". *Stem Cell Reports*. Sept, 2020; S2213-6711 (20) 30379-9. *corresponding authors.
9. **Shahbazi MN.***, Wang T*, Tao X*, Weatherbee BAT.*, Sun L., Zhan Y., Pellicer., Scott Jr RT., Seli E., Zernicka-Goetz M. "Developmental potential of aneuploidy human embryos cultured beyond implantation". *Nature Commun*. Aug 2020; 11 (1): 3987. *equal contribution.
10. **Shahbazi MN.***. "Mechanisms of human embryo development: from cell fate to tissue shape and back". **Development**. Jul, 2020; 147 (14): dev190629. *corresponding author.
11. **Shahbazi MN.***, Siggia ED*, Zernicka-Goetz M*. "Self-organization of stem cells into embryos: a window on early mammalian development". *Science*. Jun, 2019; 364 (6444): 948-951. *equal contribution and corresponding authors.
12. **Shahbazi MN.***, & Zernicka-Goetz M*. "Deconstructing and reconstructing the mouse and human early embryo". *Nat Cell Biol*. Aug, 2018; 20 (8): 878-887. *corresponding authors.
13. **Shahbazi MN.**, Scialdone A., Skorupska N., Weberling A., Recher G., Zhu M., Jedrusik A., Devito LG., Noli L., Macaulay IC., Buecker C., Khalaf Y., Ilic D., Voet T., Maironi JC., Zernicka-Goetz M. "Pluripotent state transitions coordinate morphogenesis in mouse and human embryos". *Nature*. Dec, 2017; 552 (7684): 239-243.
14. **Shahbazi MN.**, Peña-Jimenez D., Antonucci F., Drosten M., Perez-Moreno M. "Clasp2 ensures mitotic fidelity and prevents differentiation of epidermal keratinocytes". **J Cell Science**. Feb, 2017; 130 (4): 683-688.
15. **Shahbazi MN.***, Jedrusik A*, Vuoristo S*, Recher G., Hupalowska A., Bolton V., Fogarty NM., Campbell A., Devito LG., Ilic D., Khalaf Y., Niakan KK., Fishel S., Zernicka-Goetz M. "Self-organization of the human embryo in the absence of maternal tissues". *Nat Cell Biol*. Jun, 2016; 18 (6): 700-8. *equal contribution.
16. **Shahbazi MN.**, Megias D., Epifano C., Akhmanova A., Gundersen GG., Fuchs E., Perez-Moreno M. "CLASP2 interacts with p120-catenin and governs microtubule dynamics at Adherens Junctions". *J Cell Biol*. Dec, 2013; 203 (6): 1043-61.

MOST RELEVANT TEACHING EXPERIENCE AND PUBLIC OUTREACH

2016 - Present	Lectures on development and stem cells, University of Cambridge.
2021 - 2022	12 th International Course on Developmental Biology. Paris, France.
2018	Seminars at the Pint of Science and Science Festival (Cambridge), and Royal Institution (London).
2017	Seminar at the Manchester Science Festival.

MOST RECENT PARTICIPATION IN INTERNATIONAL MEETINGS AS AN INVITED SPEAKER

Emerging concepts in Cell and Developmental Biology. Keynote lecture. September 2022. Aarhus, Denmark.

Gutenberg Stem Cells System Workshop. September 2022. Mainz, Germany.

38th Annual Meeting of ESHRE. July 2022. Milan, Italy.

EMBL-IBEC Conference on Engineering Multicellular Systems. June 2022. Barcelona, Spain.

EMBO Molecular Mechanisms of Developmental and Regenerative Biology. April 2022. Online.

Ethical Symposium on Synthetic Embryology. March 2022, Stockholm, Sweden.

SY-STEM. March 2022. Vienna, Austria.

XI ASEBIR congress. November 2022. Toledo, Spain.

68th Annual scientific meeting of the Society for Reproductive Investigation. July 2021. Online.

Canadian Fertility and Andrology Society virtual summit. February 2021. Online.

EMBO Organoids: modelling organ development and disease in 3D culture. October 2020. Online.

CamBioScience Intestinal and Cerebral Organoid Symposium. June 2020. Online.

International Conference on Stem Cell Engineering. December 2019. Barcelona, Spain.

The Francis Crick Stem Cell Forum. March 2019. London, UK.

Belgium Society for Reproductive Medicine meeting. November 2018. Brussels, Belgium.

World Congress on Controversies in preconception, preimplantation and prenatal genetic diagnosis. November 2018. Paris, France.

CARE Embryology Conference. September 2018. Nottingham, UK.

European Society of Human Reproduction and Embryology annual meeting. July 2018. Barcelona, Spain.

Alpha 12th Biennial Conference. May 2018. Reykjavik, Iceland.

Lunch&Learn Seminar at STEMCELL Technologies. May 2018. Cambridge, UK.

Reproduction and Development: revealing the origin of life. March 2018. Cambridge, UK.

OTHER SCIENTIFIC ACTIVITIES

2022 – Present Member of the EMBO Journal Catalyst Programme.

2021 – Present Member of TreeFrog Therapeutics Scientific Advisory Board.

2020 – Present Affiliate member of the Cambridge Stem Cell Institute.

2020 – 2022 Member of the EMBO Scientific Exchange Grants Advisory Board.

LANGUAGES

Spanish: Mother tongue; English and Italian: proficient level.