

CURRICULUM VITAE

MAGDALENA ZERNICKA-GOETZ

Professor of Mammalian Development and Stem Cell Biology
University of Cambridge
Department of Physiology, Development and Neuroscience
Downing Street, Cambridge, CB2 3DY, UK
Phone: 44 1223 763291
Email: mz205@cam.ac.uk
Group website: <http://www.pdn.cam.ac.uk/zernickagoetzlab/>

PERSONAL INFORMATION

Nationality: Polish and British
Children: Natalia Katarzyna (born 2001) and Szymon David (born 2007)

EDUCATION

- 1982-1988 University of Warsaw, Faculty of Biology, Warsaw, Poland
Graduated First Class (summa cum laude)
Master of Science, Developmental Biology
- 1989-1993 University of Warsaw, Warsaw, Poland
Department of Embryology, *Supervisor* Prof. Andrzej Tarkowski
PhD, Developmental Biology of Mammals
- 1990-1991 University of Oxford, Oxford, UK
Department of Zoology, *Supervisor* Prof. Chris Graham
PhD SOROS Foundation Fellowship

PROFESSIONAL HISTORY

- 2010 - present Professor of Mammalian Development and Stem Cell Biology
Department of Physiology, Development & Neuroscience
University of Cambridge, Cambridge, UK
- 2002 - present Wellcome Trust Senior Research Fellow
University of Cambridge
- 2007-2010 Reader in Developmental Biology, tenure awarded at the University of Cambridge
Department of Physiology, Development & Neuroscience
University of Cambridge
- 1997-2003 Senior Research Fellow
Sidney Sussex College, Cambridge
- 1997-2002 Lister Institute Senior Research Fellow
The Gurdon Institute and Department of Genetics
University of Cambridge
- 1995-1997 EMBO Fellow
University of Cambridge, *Supervisor* Prof. Martin Evans

SCHOLARSHIP

The current main aim of my group is to understand the partnership between developmental potency and tissue architecture in early mouse and human development and to use this knowledge to direct self-organisation of stem cells.

The main achievements of my group are as follows:

- To discover functions of key genes in mammalian oocytes and embryos, we were the first group to establish RNA interference as a tool to determine gene function in mammalian cells (Nature Cell Biology, 2000). This tool is now commonly used to eliminate gene function by many groups.
- To understand how cells start to differentiate to specify the first distinct cell types, we established the use in mammalian embryos of *in vivo* markers to trace cells in a non-invasive way, including GFP (papers in Development, Nature 1996-2001), “cell painting” (Development, Nature Cell Biology, 2002-2005) and long-term time-lapse studies (Development 2008). These techniques allowed us to reveal that cells begin to differ earlier than was expected. These differences bias but do not restrict cell fate, by directing cell polarization and position.
- We found this developmental bias reflects differential epigenetic regulation in individual blastomeres of the 4-cell stage mouse embryo mediated by CARM1 (Nature, 2007). To date this is the earliest known epigenetic regulation of pluripotency in mammalian development.
- We generate a dynamic atlas of pre-implantation mouse development by carrying out long-term time lapse studies and analyses to relate cell division orientation, order and movement to cell fate in the first two cell fate decisions (Development, PNAS, Current Biology, 2008-2010). To relate cell behavior to gene function, we used single cell RNAseq to identify genes specifying cell fate and showed that they start to function differentially already at the 4-cell stage (Cell, 2016). Together, these findings opened new ways of thinking about embryogenesis.
- We found that sperm entry induces actomyosin-driven cytoplasmic movements that are predictive of subsequent cell division pattern and successful development to birth (Nature, 2001 and Nature Communications, 2011), providing an opportunity to identify the healthiest embryos to transfer to would-be-mothers in IVF clinics, which we currently explore.
- To study development beyond implantation, we pioneered development of the first system to *culture in vitro* mouse embryos until gastrulation (Nature Communications and Nature Protocols, 2012-2014). This revealed the first steps of embryo re-organization at implantation (Cell 2014), changing the text-book model about physical forces that shape embryo development at the time of implantation.
- We adapted this system to culture the first human embryos until day 13/14, current limit of in vitro culture (Nature and Nature Cell Biology, 2016). This offers outstanding potential to advance our understanding of human embryo development at this critical and yet mysterious stage and to provide insight on the pathological causes of embryo lethality and congenital disorders.
- We demonstrated that aneuploid cells arising during embryogenesis are eliminated from the epiblast but incorporated into placenta in the mouse (Nature Communications, 2016). This might explain why mosaic aneuploidy identified by chorionic villus sampling in human embryos might be tolerated.
- To uncover the crosstalk between embryonic and extra-embryonic tissues, we established 3D models of mouse and human distinct stem cell types (Cell 2014 and unpublished). This works has clinical potential as these stem cell models recapitulate key aspects of embryogenesis until gastrulation.

RESEARCH SUPPORT

- 2016-2021 European Research Council Advanced Grant (PI). Self-Organising Capacity of Stem Cells during Implantation and Early Post-implantation Development (2.3M Euros)
- 2013-2018 Wellcome Trust Senior Research Fellowship (PI): Regulation and dynamics of progressive cell fate transitions and morphogenesis during development of the early mouse embryo (£3.3M)
- 2013-current EMBO fellowships for 3 post-doctoral fellows
- 2016-current Marie Curie Fellowship for 1 post-doctoral fellow
- 2007-2014 Wellcome Trust Senior Research Fellowship (PI): Early cell fate decisions and cell positioning in the mouse embryo
- 2008-2011 Medical Research Council (co-PI): Investigating the role of cyclin B1 in early cell divisions
- 2008-2011 Wellcome Trust (co-PI): Zygote viability judged by image analysis
- 2002-2007 Wellcome Trust Senior Research Fellowship (PI): Development of early asymmetry and embryonic polarity in the mouse
- 2004-2007 Biotechnology and Biological Science Research Council (PI): Morphogenetic cell movements in the mouse embryo immediately after implantation
- 2002-2005 Biotechnology and Biological Science Research Council (PI): Role of Par genes in early mouse development
- 2002-2004 CRT Grant/GSK/Cyclacel Collaboration: RNA interference in embryonic and tissue culture cells in mammals
- 2000-2003 Human Frontier Science Program Grant (co-PI). Mechanism of axis formation in mammals
- 1997-2000 Wellcome Trust Project Grant (PI): Spatial patterning and cell fate determination in the early mouse embryo.
- 1997-2001 Cancer Research UK (co-PI): Mammalian polo-like kinase: dissecting its function in mouse meiosis and early embryonic cell cycles.
- 1997-2002 Lister Senior Research Fellowship (PI): Spatial patterning and cell fate in the mouse embryo.

RECOGNITION IN THE FIELD

Fellowship of Academic Societies

- Foreign Member of Polish Academy of Arts and Sciences, elected 2016
- Fellow of British Academy of Medical Science, elected 2013
- Member of European Molecular Biology Organisation, elected 2007

Awards and Honors

- Winner of the People's Vote for Scientific Breakthrough of the year 2016 by Science magazine
- Feature profile in Science magazine, "Pushing the limit" by Gretchen Vogel. Science. Volume 354(6311):404-407. October 28, 2016. Published by AAAS.
- Anne McLaren Memorial Lecture Award, International Society of Differentiation, 2008
- Young Investigator Award, EMBO (2001-2004)
- Wellcome Trust Senior Research Fellowship (2002-2008, 2008-2013, 2013-2018)
- Lister Institute of Preventative Medicine Senior Research Fellowship (1997-2002)
- EMBO Long-term Fellowship for post-doctoral studies at the University of Cambridge (1995-1997)

- Best Ph.D. thesis Award, Polish Ministry of Education, 1994
- Promising Young Scientist Prize, Foundation for Polish Science, 1993

Career Evaluation Panels

- Max Planck Institute for Molecular Genetics International Advisory Board, Berlin
- Pasteur Institute, Paris
- Member of Peer Review College, Wellcome Trust.
- Sustain Programme, British Academy of Medical Sciences, to support the career development of women researchers on the cusp of independence.

Scientific Boards

- International Society of Differentiation, Board Member
- Member of Editorial Boards of: Differentiation, PeerJ, Developmental Dynamics, Faculty of 1000, Cells, Reproduction, BMC Dev Biol.
- Cambridge Philosophical Society, Board Member

Organisation of international conferences

Pluripotency and Reprogramming. Cambridge Philosophical Society, UK 2009. Scientific co-organiser with Prof. John Gurdon.

Cell Biology of Early Mouse Development. EMBO Workshop, Cambridge, UK 2012. Scientific organizer.

Frontiers in Reproductive Biology. SKLRB Symposium. Beijing, China, 2014. Scientific co-organiser.

Reviewer for the scientific journals: BioEssays; Cell; Cell Reports; Cell Research; Current Biology; Dev; Dev Biol; Dev Cell; Dev Dynamics; Differentiation; eLife; Genes and Dev; genesis; J Cell Sci, J Cell Biol; Mech of Dev; Mol Cell; Mol Cell Biol; Nature; Nature Genetics; Nature Cell Biology; Nature Comm; Nature Biotechnology; Open Biology; PLoS Biology; PLoS Genetics; PNAS USA; Reproduction; Science; Scientific Reports.

TEACHING AND MENTORSHIP

Overview

My teaching is focused on developmental biology to undergraduate and graduate students. I regard this as an opportunity to inspire students to have an interest in developmental biology with the hope that this will entice them to take their interests beyond this. One of the advanced courses I organise is focused upon understanding the development of pluripotent cells within the embryo and their first differentiation steps. I am also the instructor of a medical student lab class on human reproduction. In addition to formal lecture classes, I give supervisions on courses associated with graduate programmes in which we bring students coming from different backgrounds to a similar knowledge base.

Lectures

Undergraduate & Medical Student Lectures and Practical Classes:

Part II course “Module P4: Development: Patterning the Embryo” series of lectures and journal clubs.

Organizer of the Part II course “Pluripotency and Differentiation” series of lectures and journal clubs.

Instructor on Laboratory Class on “Human Reproduction”

Graduate student courses:

Developmental Biology Course, lectures
Imaging development in vivo Course, lectures

Career Mentoring

PhD students and post-docs join my lab not only because they are interested in our science topics but also because of the interactive, fun and caring atmosphere of the lab and the department. I have trained 17 graduate students for the PhD degree and 27 post-doctoral fellows and currently mentor 6 PhD students, 9 post-doctoral fellows and 1 GAP-year pre-University student. Many of my ex-lab-members continue to have excellent careers and remain in close contact. For example: Maria Elena Torres-Padilla (PI at Max Planck Institute, Munich), Qiang Wu (PI at National University of Singapore), Sigolene Meilac (PI, Institut Pasteur, Paris), Samantha Morris (PI, Washington University in St Louis), Alex Bruce (PI, University of South Bohemia, Czech Republic), Ivan Bedzhov (OI, Max Planck Institute, Muenster).

Current Group Members

Francesco Antonica, Postdoctoral fellow
Neophytos Christodoulou, Postdoctoral fellow
Andy Cox, Postdoctoral fellow and Lab Manager
Mubeen Goolam, PhD student
Sarah Harrison, PhD student
Rosie Larter, Gap-year pre-University student
Ania Hupalowska, Postdoctoral fellow
Agnieszka Jedrusik, Postdoctoral fellow
Christos Kyprianou, PhD student
Lorenzo Orietti, PhD student
Shruti Singla, PhD student
Marta Shahbazi, Postdoctoral fellow
Berna Sozen, PhD student
Meng Zhu, PhD student

ADMINISTRATIVE DUTIES

2002 - present: Graduate Student Advisor and young PIs Mentor, University of Cambridge
2010 - present: Senior Examiner, University of Cambridge, Department of Physiology Development & Neuroscience
2009-2014: Organizer of the External Seminar Series, University of Cambridge, The Gurdon Institute
2008-2014: Animal House Committee, University of Cambridge/The Gurdon Institute
2003-2013: Organizer of the Institute Retreats, The Gurdon Institute
2010-2014: Microscopy Committee, The Gurdon Institute
2016-2017: Recruitment Committee for the Anatomy Chair, University of Cambridge, Department of Physiology Development & Neuroscience

PATENTS

1. 2000 “**Inhibiting Gene Expression with dsRNA**”. European and USA Patents following first demonstration of RNAi in mammalian cells (Wianny, F & Zernicka-Goetz, M. 2000. Nature Cell Biology). Worldwide exclusive therapeutic rights licensed to Alnylam Pharmaceuticals, Inc.

2. 2011 “**Monitoring embryo vitality**”. Pattern of cytoplasmic movements in the mammalian egg at fertilisation are predictive of successful development to birth (Ajduk et al 2011 Nature Communications). Licensed to BlueGnome, now a division of Illumina.

3. 2013 “**Embryo in vitro culture system**”. Method for culturing mammalian embryos beyond the blastocyst stage outside the mother (Bedzhov and Zernicka-Goetz, Cell 2014).

OTHER PASSIONS

Creative Art and Human Behaviour

Sports: Tennis

SEMINARS AND INVITED PRESENTATIONS (since 2007)

2007

March: Institute of Science and Technology conference, Okinawa, Japan

April: Stanford University, USA

April: PhD course lecturers, Milan, Italy

May: Chromatin and Epigenetic EMBL/ EMBO conference, Heidelberg, Germany

May: PRBB-CRG meeting, Barcelona, Spain

June, MRC, Oxford, UK

August: Developmental Biology conference, Lisbon, Portugal

September: Chromatin symposium FB/590 German Research Council, Düsseldorf, Germany

September: Universidad Internacional De Andalucia, conference of early development, Baeza, Spain

November: SGI Summit Meeting on Reproductive Medicine, Valencia, Spain

December, MRC, Mill Hill, London, UK

2008

January: Symposium "Pluripotency & differentiation in embryos and stem cells", Pavia Italy

May: Albert Einstein College of Medicine of Yeshiva University, New York

May: Center for Integrative Genomics, University of Lausanne, Switzerland

May: Society for the Study of Reproduction conference, Kona Hawaii

June: Centro Nacional de Biotecnologica, Madrid

July: American Society of Developmental Biology, Philadelphia, USA

August: Banbury Center, Cold Spring Harbor, USA

August: ELSO meeting, Nice, France

September: "Germ cells and pluripotency" Symposium, Rome, Italy

September: Keystone Symposium, Singapore

September: New EMBO Members conference, Tempera, Finland

October: JFRC, conference, Washington, USA

November: IMP, Vienna, Austria

December: Cambridge Philosophical Society, Cambridge, UK

2009

February: Keystone Symposia, Santa Fe, USA

May: Yale University, USA

June: Gordon conference, USA

September: Lister Institute symposium, Cambridge, UK

September: 800 Cambridge University anniversary lecture, Cambridge, UK

November: Architecture of Life Conference, Barcelona, Spain

November: conference Stockholm, Sweden

November: Max Planck, Munster, Germany

2010

March Biochemistry Department, Oxford UK
May: SKLRB Symposia, Beijing China
June: ESHRE symposium, Rome Italy
July: SCDB conference, Santa Cruz USA
July: Center of Trophoblast Conference, Cambridge
October: EMBO Imaging Workshop, Lisbon Portugal
November: Stem Cells Conference, Bangalore India
December: IVF conference, Amsterdam Holland

2011

January: Stanford Stem Cell Institute, Stanford, USA
April: Stem Cell Institute, CalTech, USA
May: Stem Cell and Regenerative Biology Department, Harvard, USA
July: ESHRE meeting, Stockholm, Sweden
August: Intracellular RNA localization & localized translation meeting, Barga, Italy
September: Mouse Molecular Genetics Meeting, Hinxton, UK
November: Cell Polarity Meeting, Oxford, UK
December: ESI seminar Rotterdam, Holland

2012

April: Institute of Zoology and Tsinghua University, Beijing, China
April: University of Hawaii, Honolulu, USA
May: Vertebrate Organogenesis in Health and Disease, Cold Spring Harbor, USA
May: Alpha Reproductive Medicine Meeting, London UK
May: PDGS conference, Bergenz, Austria
July: IRB meeting, Barcelona, Spain
November: International Society for Differentiation meeting, Amsterdam, Holland

2013

April: Wellcome Trust Research Meeting, London, UK
May: Cell and Developmental Biology Conference, Zakopane, Poland
June: ISD meeting, Cancun, Mexico
July: IBD meeting, Vienna, Austria
September, University of Gdansk, Poland
September: Roslin Institute, Edinburgh, Scotland
October: Mammalian Embryology Conference, University of Warsaw, Poland
December: Institute for Reproductive Sciences, University of Oxford, UK
December: Wellcome Trust Research meeting, Ashridge, Berkhamsted, UK

2014

January: Imaging in Development conference, France
April: Developmental Biology Training Grant Retreat, University of Utah, USA
May: Weizmann Institute, Israel
May: Annual Conference of The Israel Fertility Association, Tel Aviv, Israel
June: Institute Curie, Paris, France
June: Gordon Conference: Signaling by Adhesion Receptors, Bates Collage, USA
June: Department of Developmental and Regenerative Biology, Mount Sinai, USA
October: Swebodo conference, Umeå, Sweden
October: SKLRB Symposium on Reproductive Biology, Beijing, China
December: Institute for Reproductive Sciences, University of Oxford, UK

2015

March: Max-Planck Institute for Molecular Genetics, Berlin
March: Keystone meeting Transcriptional and Epigenetic Influences on Stem Cell States, Colorado, USA

April: Cellular Heterogeneity Symposium, Heidelberg, Germany
May: **Keynote address** at Young Embryologists Network meeting, King's College London
May: University College London, Institute of Child Health, London
May: **Frontiers Seminar**, Stanford University, USA
June: Meeting Society for the Study of Reproduction "Evolution of Sex", San Paulo, Puerto Rico
July: invited lecture, Biopolis, Singapore
September: EMBO meeting, Birmingham, UK
October: Congress on Stem cells and cellular therapies, Antalya, Turkey
October: International Titisee Conference "Organoids: modelling, development and disease in 3D culture", Titisee, Germany
November: Max Planck Institute for Developmental Biology, Tübingen, Germany
December: Institute for Reproductive Sciences, University of Oxford, UK

2016

January: Stem Cells and Organoids as Models of Tissue Differentiation and Disease Conference, Royal College of Physicians, London
April: EMBO **Keynote Lecture**, The Hunter Cell Meeting, Australia
April: Childx Conference TedTalk format presentation, , Stanford
May: European Society of Human Genetics meeting, Barcelona
June: invited seminar UPenn, Philadelphia, USA
June: Cell biology, Nencki Institute conference, Warsaw, Poland
June: Imaging Mouse Development, Janelia Mammalian Embryo imaging workshop, USA
July: Center of Trophoblast Research, Cambridge, UK
August: SDB/ISD Meeting plenary lecture, Boston, USA
September: Aging and Cell Fate, Croatia
October: **Keynote lecture**, Epigenetic in Development, EMBO Workshop, Mainz
October: invited seminar, Biopolis, Singapore
October: World Science Conference, Beijing
November: COGI Congress, Amsterdam
November: **Opening Breaking News lecture** at Translational Reproductive Biology and Clinical Reproductive Endocrinology congress, New York, USA
December: Institute for Reproductive Sciences, University of Oxford, UK
December: **Keynote presentation** Nuffield Council workshop – statutory time limit for maintaining human embryos in culture
December: Progress Educational Trust, the 14-day rule for Human Embryos, UCL, Institute of Child Health

2017

January: Peter Thorogood memorial lecture, Head Group Meeting, UCL

PUBLICATIONS

I've published 112 papers: of these, 101 are peer-reviewed (69 as the last senior and 21 as the first author). Current h-index = 39.

Peer-reviewed Publications

1. Shahbazi MN, Jedrusik A, Vuoristo S, Recher G, Hupalowska A, Bolton V, Fogarty N, Campbell A, Gasparini LD, Ilic D, Khalaf Y, Niakan KK, Fishel S and **Zernicka-Goetz M**. (2016). Human embryo implantation morphogenesis and self-organization in the absence of maternal tissues. **Nature Cell Biology**, 18(6):700-8. doi: 10.1038/ncb3347
2. Deglincerti A, Croft GF, Pietila LN, **Zernicka-Goetz M**, Siggia ED, and Brivanlou A. (2016). Self-organization of the *in vitro* attached human embryo. **Nature**, 4;533(7602):251-4. doi: 10.1038/nature17948.
3. Leung CY, Zhu M, **Zernicka-Goetz M** (2016). Polarity in Cell-Fate Acquisition in the Early Mouse Embryo. *Curr Top Dev Biol*. 120:203-34. doi: 10.1016/bs.ctdb.2016.04.008.
4. Goolam M, Scialdone A, Graham SJ, Macaulay IC, Jedrusik A, Hupalowska A, Voet T, Marioni JC and **Zernicka-Goetz M** (2016). Heterogeneity in Oct4 and Sox2 Targets Biases Cell Fate in Four-Cell Mouse Embryos. **Cell**, 165(1):61-74. doi: 10.1016/j.cell.2016.01.047. PMID: 27015307.
5. Bolton H, Graham SJ, Van der Aa N, Kumar P, Theunis K, Fernandez Gallardo E, Voet T, and **Zernicka-Goetz M** (2016). Mouse model of chromosome mosaicism reveals lineage-specific depletion of aneuploid cells and normal developmental potential. **Nature Comm**. 7:11165. doi: 10.1038/ncomms11165. PMID: 27021558
6. Panamarova M, Cox A, Wicher K, Butler R, Bulgakova N, Jeon S, Rosen B, Seong RH, Skarnes W, Crabtree G and **Zernicka-Goetz M** (2016). BAF chromatin remodelling complex is an epigenetic regulator of lineage specification in the early mouse embryo. **Development**. 143(8):1271-83. doi: 10.1242/dev.131961. PMID: 26952987
7. Graham SJ, **Zernicka-Goetz M**. (2016) The Acquisition of Cell Fate in Mouse Development: How Do Cells First Become Heterogeneous? **Curr Top Dev Biol**. 117:671-95. doi: 10.1016/bs.ctdb.2015.11.021. PMID: 26970007
8. Leung CY, **Zernicka-Goetz M**. (2015). Mapping the journey from totipotency to lineage specification in the mouse embryo. **Curr Opin Genet Dev**. 34:71-6. doi: 10.1016/j.gde.2015.08.002. PMID: 2634301
9. Coelho PA, Bury L, Shahbazi MN, Liakath-Ali K, Tate PH, Wormald S, Hindley CJ, Huch M, Archer J, Skarnes WC, **Zernicka-Goetz M** and Glover DM (2015). Over-expression of Plk4 induces centrosome amplification, loss of primary cilia and associated tissue hyperplasia in the mouse. **Open Biol**. 5(12):150209. doi: 10.1098/rsob.150209. PMID: 26701933.
10. Ajduk A, **Zernicka-Goetz M** (2015). Polarity and cell division orientation in the cleavage embryo: from worm to human. **Mol Hum Reprod**. pii: gav068. PMID: 2666032
11. Bedzhov I, Bialecka M, Zielinska A, Kosalka J, Antonica F, Thompson AJ, Franze K, **Zernicka-Goetz M** (2015). Development of the anterior-posterior axis is a self-organizing process in the absence of maternal cues in the mouse embryo. **Cell Res**. 25(12):1368-71. doi: 10.1038/cr.2015.104. PMID: 26337800
12. Graham SJ, Wicher KB, Jedrusik A, Guo G, Herath W, Robson P and **Zernicka-Goetz M**. (2015). BMP signaling regulates the pre-implantation development of extra-embryonic cell lineages in the mouse embryo. **Nature Comm**. 5:5667. doi: 10.1038/ncomms6667. PMID: 25514175
13. Macaulay IC, Haerty W, Kumar P, Li YI, Hu TX, Teng MJ, Goolam M, Saurat N, Coupland P, Shirley LM, Smith M, Van der Aa N, Banerjee R, Ellis PD, Quail MA, Swerdlow HP, **Zernicka-**

- Goetz M**, Livesey FJ, Ponting CP, Voet T (2015). G&T-seq: parallel sequencing of single-cell genomes and transcriptomes. **Nature Methods**. doi: 10.1038/nmeth.3370. PMID: 25915121
14. Bedzhov I and **Zernicka-Goetz M**. (2015). Cell death and morphogenesis during early mouse development: Are they interconnected? **Bioessays**. 37(4):372-8. doi:10.1002/bies.201400147. PMID: 25640415
 15. Jedrusik A, Cox A, Wicher K, Glover D and **Zernicka-Goetz M**. (2014). Maternal zygotic knockout reveals a critical role of Cdx2 in the morula to blastocyst transition. **Dev Biol**. 398(2):147-52. doi: 10.1016/j.ydbio.2014.12.004. PMID: 25512302
 16. Bedzhov I, Leung CY, Bialecka M, **Zernicka-Goetz M**. (2014). In vitro culture of mouse blastocysts beyond the implantation stages. **Nature Protocols** 9(12):2732-9. doi: 10.1038/nprot.2014.186. PMID: 25356584
 17. Bedzhov I, Graham SJ, Leung CY and **Zernicka-Goetz M** (2014). Developmental plasticity, cell fate specification and morphogenesis in the early mouse embryo. **Philos Trans R Soc Lond B Biol Sci**. 369(1657). pii: 20130538 doi: 10.1038/nprot.2014.186 PMID: 25349447
 18. Bedzhov I and **Zernicka-Goetz M**. (2014). Self-organizing properties of mouse pluripotent cells initiate morphogenesis upon implantation. **Cell**. 156(5):1032-44. doi: 10.1016/j.cell.2014.01.023. PMID: 24529478
 19. Christophorou MA, Castelo-Branco G, Halley-Stott RP, Oliveira CS, Loos R, Radzishchanskaya A, Mowen KA, Bertone P, Silva JC, **Zernicka-Goetz M**, Nielsen ML, Gurdon JB, Kouzarides T. (2014). Citrullination regulates pluripotency and histone H1 binding to chromatin. **Nature**. 507(7490):104-8. doi: 10.1038/nature12942. PMID: 24463520
 20. Ajduk A, Biswas Shivhare S and **Zernicka-Goetz M**. (2014). The basal position of nuclei is one pre-requisite for asymmetric cell divisions in the early mouse embryo. **Dev Biol**. 392(2):133-40. doi: 10.1016/j.ydbio.2014.05.009. PMID: 24855000
 21. Coelho PA, Bury L, Sharif B, Riparbelli MG, Callaini G, Glover DM and **Zernicka-Goetz M**. (2013). Spindle formation in the mouse embryo requires plk4 in the absence of centriole. **Dev Cell**. 27(5):586-97. doi: 10.1016/j.devcel.2013.09.029. PMID: 24268700
 22. Morris SA, Graham SJ, Jedrusik A and **Zernicka-Goetz M**. (2013). The differential response to Fgf signaling in cells internalized at different times influences lineage segregation in preimplantation mouse embryos. **Open Biol**. 3(11):130104. doi: 10.1098/rsob.130104. PMID: 24258274
 23. Leung CY and **Zernicka-Goetz M**. (2013). Angiotensin prevents pluripotent lineage differentiation in mouse embryos via Hippo pathway-dependent and -independent mechanisms. **Nature Commun**. 4:2251. doi: 10.1038/ncomms3251. PMID: 23903990
 24. Skamagki M, Wicher KB, Jedrusik A, Ganguly S and **Zernicka-Goetz M**. (2013). Asymmetric Localization of Cdx2 mRNA during the First Cell-Fate Decision in Early Mouse Development. **Cell Reports**. 3(2):442-57. doi: 10.1016/j.celrep.2013.01.006. PMID: 23375373
 25. Ajduk A and **Zernicka-Goetz M** (2013). Quality control of embryo development. **Mol Aspects Med**. 34(5):903-18. doi: 10.1016/j.mam.2013.03.001. Epub 2013 Apr 4. Review. PMID: 23563243
 26. **Zernicka-Goetz M**. (2013). Development: do mouse embryos play dice? **Curr Biol**. 23(1):R15-7. doi: 10.1016/j.cub.2012.10.032. PMID: 23305662
 27. Morris S, Guo A and **Zernicka-Goetz M** (2012). Developmental plasticity is bound by pluripotency and the fgf and wnt signaling pathways. **Cell Reports**. 2(4):756-65. doi: 10.1016/j.celrep.2012.08.029. PMID: 23041313
 28. Pasque V, Radzishchanskaya A, Gillich A, Halley-Stott RP, Panamarova M, **Zernicka-Goetz M**, Surani MA, Silva JC. (2012). Histone variant macroH2A marks embryonic differentiation in vivo and acts as an epigenetic barrier to induced pluripotency. **J Cell Sci**. 125(Pt 24):6094-104. doi: 10.1242/jcs.113019. PMID: 2307718

29. Morris SA, Grewal S, Barrios F, Patankar SN, Strauss B, Buttery L, Alexander M, Shakesheff KM and **Zernicka-Goetz M.** (2012). Dynamics of anterior-posterior axis formation in the developing mouse embryo. **Nature Comm.** 3:673. doi: 10.1038/ncomms1671. PMID: 2233407
30. Morris SA and **Zernicka-Goetz M** (2012). Formation of distinct cell types in the mouse blastocyst. **Results Probl Cell Differ.** 55:203-17. doi: 10.1007/978-3-642-30406-4_11. PMID: 22918808
31. Ajduk A and **Zernicka-Goetz M.** (2012). Advances in embryo selection methods. **F1000 Biol Rep.** 4:11. doi: 10.3410/B4-11. PMID: 22685489
32. Lee YH, Ma H, Tan TZ, Ng SS, Soong R, Mori S, Fu XY, **Zernicka-Goetz M,** Wu Q. (2012). Protein arginine methyltransferase 6 regulates embryonic stem cell identity. **Stem Cells Dev.** 21(14):2613-22. doi: 10.1089/scd.2011.0330. PMID: 22455726
33. Swann K, Windsor S, Campbell K, Elgmati K, Nomikos M, **Zernicka-Goetz M,** Amso N, Lai FA, Thomas A, Graham C. (2012). Phospholipase C- ζ -induced Ca²⁺ oscillations cause coincident cytoplasmic movements in human oocytes that failed to fertilize after intracytoplasmic sperm injection. **Fertil Steril.** 97(3):742-7. doi: 10.1016/j.fertnstert.2011.12.013. PMID: 22217962
34. Ajduk A, Ilozue T, Windsor S, Yu Y, Seres KB, Bompfrey RJ, Tom BD, Swann K, Thomas A, Graham C and **Zernicka-Goetz M** (2011). Rhythmic actomyosin-driven contractions induced by sperm entry predict mammalian embryo viability. **Nature Commun.** 2:417. doi: 10.1038/ncomms1424. PMID: 21829179
35. **Zernicka-Goetz M.** (2011) Proclaiming fate in the early mouse embryo. **Nat Cell Biol.**13(2):112-4. doi: 10.1038/ncb0211-112. PMID: 21283119
36. **Zernicka-Goetz M** and Huang S (2010). Stochasticity vs. determinism in development: a false dichotomy? **Nat Rev Genet.** 11(11):743-4. doi: 10.1038/nrg2886. PMID: 20877326
37. Sharif B, Na J, Lykke-Hartmann K, McLaughlin SM, Laue E, Glover DM, and **Zernicka-Goetz M.** (2010). The Chromosome Passenger Complex is required for Fidelity of Chromosome Transmission and Cytokinesis in Meiosis of mouse Oocytes. **J Cell Sci.** 123(Pt 24):4292-300. doi: 10.1242/jcs.067447. PMID: 21123620
38. Parfitt DE and **Zernicka-Goetz M** (2010). Epigenetic Modification Affecting Expression of Cell Polarity and Cell Fate Genes to Regulate Lineage Specification in the Early Mouse Embryo. **Mol Biol Cell.** 21(15):2649-60. doi: 10.1091/mbc.E10-01-0053. PMID: 20554762
39. Bruce AW and **Zernicka-Goetz M** (2010). Developmental control of the early mammalian embryo: competition among heterogeneous cells that biases cell fate. **Curr Opin Genet Dev.** 20(5):485-91. doi: 10.1016/j.gde.2010.05.006. PMID: 20554442
40. Jedrusik A, Bruce, AW Hahn-Windgassen A, Leong, Skamagki M, Yao M, and **Zernicka-Goetz M.** (2010). Maternally and zygotically provided Cdx2 have novel and critical roles for early development of the mouse embryo. **Dev Biol.** 344(1):66-78. doi: 10.1016/j.ydbio.2010.04.017. PMID: 20430022
41. Morris SA, Teo RT, Li H, Robson P, Glover DM, and **Zernicka-Goetz M** (2010). Origin and formation of the first two distinct cell types of the inner cell mass in the mouse embryo. **Proc Natl Acad Sci U.S.A.** 107(14):6364-9. doi: 10.1073/pnas.0915063107. PMID: 20308546
42. **Zernicka-Goetz M,** Morris S, Bruce A. (2009): Making a firm decision: layers of regulation in early mouse embryo. **Nat Rev Genet.** 10(7):467-77. doi: 10.1038/nrg2564. PMID: 19536196
43. Wu Q, Bruce AW, Jedrusik A, Ellis PD, Andrews RM, Langford, CF, Glover DM, and **Zernicka-Goetz M.** (2009). CARM1 is required in ES cells to maintain pluripotency and resist differentiation. **Stem Cells.** 27(11):2637-45. doi: 10.1002/stem.131. PMID: 1954442
44. Meilhac SM, Adams RJ, Morris SA, Danckaert A, Le Garrec JF, and **Zernicka-Goetz M.** (2009). Active cell movements coupled to positional induction are involved in lineage segregation in the mouse blastocyst. **Dev Biol.** 331(2):210-21. doi: 10.1016/j.ydbio.2009.04.036. PMID: 19422818
45. Jedrusik A, Parfitt DE, Guo G, Skamagki M, Grabarek JB, Johnson MH, Robson P and

- Zernicka-Goetz M.** (2008). Role of Cdx2 and cell polarity in cell allocation and specification of trophoctoderm and inner cell mass in the mouse embryo. **Genes Dev.** 22(19):2692-706. doi: 10.1101/gad.486108. PMID: 18832072
46. Lykke-Andersen K, Gilchrist MJ, Grabarek JB, Das P, Miska E and **Zernicka-Goetz M.** (2008). Maternal Argonaute 2 is essential for early mouse development at the maternal-zygotic transition. **Mol Biol Cell.** 19(10):4383-92. doi: 10.1091/mbc.E08-02-0219. PMID: 18701707
 47. Soares ML, Torres-Padilla ME and **Zernicka-Goetz M.** (2008). Bone morphogenetic protein 4 signalling regulates development of the anterior visceral endoderm in the mouse embryo. **Dev Growth Differ.** 50(7):615-21. doi: 10.1111/j.1440-169X.2008.01059.x. PMID: 18657169
 48. Bischoff M, Parfitt DE and **Zernicka-Goetz M** (2008). Formation of the embryonic-abembryonic axis of the mouse blastocyst: relationships between orientation of early cleavage divisions and pattern of symmetric/asymmetric divisions. **Development.** 135(5):953-62. doi: 10.1242/dev.014316. PMID: 18234722
 49. Torres-Padilla ME, Parfitt DE, Kouzarides T and **Zernicka-Goetz M** (2007). Histone arginine methylation regulates pluripotency in the early mouse embryo. **Nature.** 445(7124):214-8. PMID: 17215844
 50. Frankenberg S, Smith L, Greenfield A and **Zernicka-Goetz M** (2007). Novel gene expression patterns along the proximo-distal axis of the mouse embryo before gastrulation. **BMC Dev Biol.** 7:8. PMID: 17302988
 51. Perea-Gomez A, Meilhac SM, Piotrowska-Nitsche K, Gray D, Collignon J and **Zernicka-Goetz M** (2007.) Regionalisation of the mouse visceral endoderm as the blastocyst transforms into the egg cylinder. **BMC Dev Biol.** 7:96. PMID: 17705827
 52. Torres-Padilla ME, Richardson L, Kolasinska P, Meilhac SM, Luetke-Eversloh MV and **Zernicka-Goetz M** (2007). The anterior visceral endoderm of the mouse embryo is established from both preimplantation precursor cells and by *de novo* gene expression after implantation. **Dev Biol.** 309(1):97-112. PMID: 17662710
 53. **Zernicka-Goetz M** (2006). The first cell-fate decisions in the mouse embryo: destiny is a matter of both chance and choice. **Curr Opin Genet Dev.** 16(4):406-12. PMID: 16806896
 54. Torres-Padilla ME and **Zernicka-Goetz M** (2006). Role of TIF1 as a modulator of embryonic transcription in the mouse zygote. **J Cell Biol.** 174(3):329-38. PMID: 16880268
 55. Na J, Lykke-Andersen K, Torres-Padilla ME and **Zernicka-Goetz M** (2006). Dishevelled proteins regulate cell adhesion in mouse blastocyst and serve to monitor changes in Wnt signalling. **Dev Biol.** 302(1):40-9. PMID: 17005174
 56. Torres-Padilla ME, Bannister AJ, Hurd PJ, Kouzarides T and **Zernicka-Goetz M** (2006). Dynamic distribution of the replacement histone variant H3.3 in the mouse oocyte and preimplantation embryos. **Int J Dev Biol.** 50(5):455-61. PMID: 1658634
 57. Na J and **Zernicka-Goetz M** (2006). Asymmetric positioning and organization of the meiotic spindle of mouse oocytes requires CDC42 function. **Curr Biol.** 16(12):1249-54. PMID: 16782018
 58. Richardson L, Torres-Padilla ME and **Zernicka-Goetz M** (2006). Regionalised signalling within the extraembryonic ectoderm regulates anterior visceral endoderm positioning in the mouse embryo. **Mech Dev.** 123(4):288-96. PMID: 16517131
 59. Piotrowska-Nitsche K, Perea-Gomez A, Haraguchi S and **Zernicka-Goetz M** (2005). Four-cell stage mouse blastomeres have different developmental properties. **Development.** 132(3):479-90. PMID: 1563469
 60. Plusa B, Frankenberg S, Chalmers A, Hadjantonakis A-K, Moore C A, Papalopulu N, Papaloannou VE, Glover DM and **Zernicka-Goetz M** (2005). Downregulation of Par3 and aPKC function directs cells towards the ICM in the preimplantation mouse embryo. **J Cell Sci.** 118(Pt 3):505-15. PMID: 15657073
 61. Plusa B, Hajantonakis A-K, Gray D, Piotrowska-Nitsche K, Jedrusik A, Papaloannou VE, Glover DM and **Zernicka-Goetz M** (2005). The first cleavage of the mouse zygote predicts the

- blastocyst axis. **Nature**. 434(7031):391-5. PMID: 15772664
62. Piotrowska-Nitsche K and **Zernicka-Goetz M** (2005). Spatial arrangement of individual 4-cell stage blastomeres and the order in which they are generated correlate with blastocyst pattern in the mouse embryo. **Mech Dev**. 122(4):487-500. PMID: 15804563
 63. Moore CA, **Zernicka-Goetz M** (2005). PAR1 and the microtubule-associated proteins CLASP2 and dynactin-p50 have specific localisation on mouse meiotic and first mitotic spindles. **Reproduction**. 130(3):311-20. PMID: 16123238
 64. **Zernicka-Goetz M** (2005). Cleavage pattern and emerging asymmetry of the mouse embryo. **Nat Rev Mol Cell Biol**. 6(12):919-28. PMID: 16341078
 65. Soares ML, Haraguchi S, Torres-Padilla ME, Kalmar T, Carpenter L, Bell G, Morrison A, Ring CJ, Clarke NJ, Glover DM and **Zernicka-Goetz M** (2005). Functional studies of signaling pathways in peri-implantation development of the mouse embryo by RNAi. **BMC Dev Biol**. 5:28. PMID: 16381610
 66. Gray D, Plusa B, Piotrowska K, Na J, Tom B, Glover DM and **Zernicka-Goetz M**. (2004). First cleavage of the mouse embryo responds to change in egg shape at fertilization. **Curr Biol**. 14(5):397-405. PMID: 1502821
 67. Mesnard D, Filipe M, Belo JA and **Zernicka-Goetz M**. (2004). The anterior-posterior axis emerges respecting the morphology of the mouse embryo that changes and aligns with the uterus before gastrulation. **Curr Biol**. 14(3):184-96. PMID: 14761650
 68. Wang QT, Piotrowska K, Ciemerych MA, Milenkovic L, Scott MP, Davis RW and **Zernicka-Goetz M**. (2004). A genome-wide study of gene activity reveals developmental signaling pathways in the preimplantation mouse embryo. **Dev Cell**. 6(1):133-44. PMID: 14723853
 69. Grabarek JB and **Zernicka-Goetz M**. (2003). RNA interference in mammalian systems—a practical approach. **Adv Exp Med Biol**. 544:205-16. PMID: 14713230
 70. **Zernicka-Goetz M** (2004). First cell fate decisions and spatial patterning in the early mouse embryo. **Semin Cell Dev Biol**. 15(5):563-72. PMID: 15271302
 71. Frankenberg S and **Zernicka-Goetz M** (2004). Breaking radial symmetry: amniote type. Gastrulation: from cells to embryo. Ed C Stern, Cold Spring Harbor Laboratory Press
 72. Carpenter L and **Zernicka-Goetz M** (2004). Directing pluripotent cell differentiation using “diced RNA” in transient transfection. **Genesis**. 40(3):157-63. PMID: 15515021
 73. Grabarek JB and **Zernicka-Goetz M**. (2003). RNA interference in mammalian systems—a practical approach. **Adv Exp Med Biol**. 544:205-16. PMID: 14713230
 74. Grabarek, JB, Wianny, F, Plusa, B, **Zernicka-Goetz, M** & Glover, DM. (2003). RNA interference by production of short hairpin dsRNA in ES cells, their differentiated derivatives, and in somatic cell lines. **Biotechniques**. 34(4):734-6, 739-44. PMID: 12703298
 75. **Zernicka-Goetz M** (2003). Determining the first cleavage of the mouse zygote. **Reprod Biomed Online**. 6(2):160-3. PMID: 12675992
 76. Durcova-Hills G, Wianny F, Merriman J, **Zernicka-Goetz, M** and McLaren A. (2003). Developmental fate of embryonic germ cells (EGCs), *in vivo* and *in vitro*. **Differentiation**. 71(2):135-41. PMID: 12641567
 77. Plusa B, Grabarek JB, Piotrowska K, Glover DM and **Zernicka-Goetz M**. (2002). Site of the previous meiotic division defines cleavage orientation in the mouse embryo. **Nat Cell Biol**. 4(10):811-5. PMID: 12360292
 78. Piotrowska K and **Zernicka-Goetz M**. (2002). Early patterning of the mouse embryo - contributions of sperm and egg. **Development**. 129(24):5803-13. PMID: 12421718
 79. **Zernicka-Goetz, M**. (2002). Patterning of the embryo: the first spatial decisions in the life of a mouse. **Development**. 129(4):815-29. PMID: 11861466
 80. Grabarek JB. Plusa B., Glover D. and **Zernicka-Goetz M**. (2002). Efficient delivery of dsRNA into zona-enclosed mouse oocytes and pre-implantation embryos by electroporation. **Genesis**. 32(4):269-76. PMID: 11948914

81. Plusa B., Piotrowska K. and **Zernicka-Goetz M** (2002). Sperm entry position provides a surface marker for the first cleavage plane of the mouse zygote. **Genesis**. 32(3):193-8. PMID: 11892007
82. Piotrowska K, Wianny F, Pedersen RA, and **Zernicka-Goetz M** (2001). Blastomeres arising from the first cleavage division have distinguishable fates in normal mouse development. **Development**. 128(19):3739-48. PMID: 11585800
83. Piotrowska K. and **Zernicka-Goetz M**. (2001). Role for sperm in spatial patterning of the early mouse embryo. **Nature**. 409(6819):517-21. PMID: 11206548
84. **Zernicka-Goetz M**. and Pines J. (2001). Use of Green Fluorescent Protein in Mouse Embryos. **Methods**. (1):55-60. PMID: 11327803
85. Ciemerych, M.A, Mesnard, D. and **Zernicka-Goetz, M**. (2000). Animal and vegetal poles of the mouse egg predict the polarity of the embryonic axis, yet are nonessential for development. **Development**. 127(16):3467-74. PMID: 10903172
86. Wianny, F and **Zernicka-Goetz, M**. (2000). Specific interference with gene function by double stranded RNA in mouse. **Nat Cell Biol**. 2(2):70-5. PMID: 10655585
87. Grabarek, J and **Zernicka-Goetz, M**. (2000). Progression of mouse oocytes from metaphase I to metaphase II is inhibited by fusion with G2 cells. **Zygote**. 8(2):145-51. PMID: 10857585
88. Weber, R., Wianny, F., Evans, M.J., Pedersen, R., and **Zernicka-Goetz, M**. (1999). Polarity of the mouse embryo is anticipated before implantation. **Development**. 126(24):5591-8. PMID: 10572036
89. **Zernicka-Goetz, M** & Pines, J. (1999). Cell lineage analysis: applications of green fluorescent protein. **Methods Mol Biol**. 135:279-87. PMID: 10791324
90. **Zernicka-Goetz, M**. (1999). Green Fluorescent Protein: a new approach to understanding spatial patterning and cell fate in early mammalian development. In *Cell Lineage and Fate Determination*, pp. 521-527 (ed. Moody, SA), Academic Press, San Diego.
91. **Zernicka-Goetz, M**. (1998). Fertile offspring derived from mammalian eggs lacking either animal or vegetal poles. **Development**. 125(23):4803-8. PMID: 9806928
92. Wianny, F., Tavares, A., Evans, M., Glover, D.M. and **Zernicka-Goetz, M**. (1998). Mouse polo-like kinase 1 associates with the acentriolar spindle poles, meiotic chromosomes and spindle midzone during oocyte maturation. **Chromosoma**. 107(6-7):430-9. PMID: 9914375
93. **Zernicka-Goetz, M**., Pines J., McLean-Hunter S., Dixon JPC, Siemering K., Haseloff J. & Evans M.J. (1997) Following cell fate in the living mouse embryo. **Development**. 124(6):1133-7. PMID: 9102300
94. **Zernicka-Goetz M**., Verlhac M-H, Geraud G & Kubiak J.Z. (1997). Protein phosphatases control MAP kinase activation and microtubule organization during rat oocyte maturation. **Eur J Cell Biol**. 2(1):30-8. PMID: 9013723
95. **Zernicka-Goetz, M**., Pines J., Ryan K., Siemering K., Haseloff J., Evans M.J. & Gurdon J. (1996) An indelible lineage marker for *Xenopus* using a mutated green fluorescent protein. **Development**. 122(12):3719-24. PMID: 9012493
96. **Zernicka-Goetz M**., Ciemerych A.M., Kubiak J.Z., Tarkowski A.K. & Maro B. (1995). Cytostatic factor inactivation is induced by a calcium-dependent mechanism present until the second cell cycle in fertilized but not in parthenogenetically activated mouse eggs. **J Cell Sci**. 108 (Pt 2):469-74. PMID: 7768994
97. **Zernicka-Goetz M**. (1994). Activation of embryonic genes during preimplantation rat development. **Mol Reprod Dev**. 38(1):30-5. PMID: 8049062
98. **Zernicka-Goetz M**., Weber M. & Maro B. (1993). Full activation of the rat oocyte by protein synthesis inhibition requires protein phosphatase activity. **Int J Dev Biol**. 37(2):273-7. PMID: 8398674.
99. **Zernicka-Goetz M**. & Maro B. (1993). Okadaic acid affects spindle organization in metaphase II arrested rat oocytes. **Exp Cell Res**. 207(1):189-93. PMID: 8391463

100. **Zernicka-Goetz M.**, Kubiak J.Z., Antony C. & Maro B. (1993). Cytoskeletal organization of rat oocytes during metaphase II arrest and following abortive activation: a study by confocal laser scanning microscopy. **Mol Reprod Dev.** 35(2):165-75. PMID: 8100426
101. **Zernicka-Goetz M.** (1991). Spontaneous and induced activation of rat oocytes. **Mol Reprod Dev.** 28(2):169-76. PMID: 2007030

Other publications

1. **Zernicka-Goetz M.** (2016). Andrzej K. Tarkowski 1933-2016. **Nat Cell Biol.** Nov 29;18(12):1261. doi: 10.1038/ncb3446. PMID: 27897160
2. Rosenthal N and **Zernicka-Goetz M.** (2014). A tribute to Sir John Gurdon. **Differentiation.**
3. **Zernicka-Goetz M** and Hadjantonakis AK. (2014). From pluripotency to differentiation: laying foundations for the body pattern in the mouse embryo. **Philos Trans R Soc Lond B Biol Sci.** 369(1657). pii: 20130535. doi: 10.1098/rstb.2013.0535.
4. Duan EK, Wang H and **Zernicka-Goetz M.** (2013). Introduction to the special issue "Molecular Players in Early Pregnancy". **Mol Aspects Med.** 34(5).
5. Adjaye JA, Byskov AG, Cibelli JB, De Maria R, Minger S, Sampaolesi M, Testa G, Verfaillie C and **Zernicka-Goetz M**, Schöler H, Boiani M, Crosetto N, Redi CA (2008). Pluripotency and differentiation in embryos and stem cells. **Int J Dev Biol.** 52(7):801-9.
6. Firtel R and **Zernicka-Goetz M** (2006). Pattern formation and developmental mechanisms. Editorial overview. **Curr Opin Gene and Dev** 16, 331-332.
7. **Zernicka-Goetz M** (2004). Introduction. **Seminars in Cell & Dev Biol** 15(5), 541.
8. **Zernicka-Goetz, M.** (2000). Transplantation that should not be rejected. **The Parliamentary Monitor**, London, 8: 22.
9. **Zernicka-Goetz, M.** (2000). Life is in the bag, or is it? Book review "The Spark of Life: Darwin and the Primeval Soup" **Nature Cell Biology** 10, 189.
10. **Zernicka-Goetz, M.** (2000). Jumping the gun on mouse gene expression. Correspondence to **Nature** 405, 733.
11. Wianny, F and **Zernicka-Goetz, M.** (2000). RNA interference: application to eliminate gene expression in mammals. **Medecine/Sciences** 16: 993-995.