

MARKUS MONTAG BIOGRAPHY:



Markus Montag (Ph.D., Professor - iLabCoMM GmbH)

Markus Montag started his career at the German Cancer Research Centre in Heidelberg where he initially worked in developmental biology. He obtained his PhD in 1992 and then started to work at the National University Hospital in Singapore with Prof SC Ng, the father of the first SUZI baby.

He became a laboratory director in a private IVF unit before becoming Director of the Reproductive Biology Laboratory at the University Clinics of Bonn in 1995. He became a Professor for Experimental Reproductive Medicine in 2009 and in 2011 he became head of the IVF Laboratory at the University Clinics of Heidelberg.

Markus has published more than 100 peer reviewed articles and more than 20 book chapters. He is actively involved in counselling IVF centres and educating young people in the field worldwide and he is a frequent lecturer worldwide. In 2011 he founded his own IVF consultancy company named ilabcomm and at present most of his time is dedicated to consulting.

MARKUS MONTAG RESEARCH LIST:

1: Roesner S, Pflaumer U, Germeyer A, Montag M, Strowitzki T, Toth B. Natural cycle IVF: evaluation of 463 cycles and summary of the current literature. ArchGynecol Obstet. 2013 Dec 20. [Epub ahead of print] PubMed PMID: 24357069.

2: Montag M, Toth B, Strowitzki T. New approaches to embryo selection. Reprod Biomed Online. 2013 Nov;27(5):539-46. doi: 10.1016/j.rbmo.2013.05.013. Epub 2013 Jun 14. PubMed PMID: 23933036.

3: Montag M, Köster M, Strowitzki T, Toth B. Polar body biopsy. Fertil Steril. 2013 Sep;100(3):603-7. doi: 10.1016/j.fertnstert.2013.05.053. Epub 2013 Jun 21. Review. PubMed PMID: 23796365.

4: Liebenthron J, Köster M, Drengner C, Reinsberg J, van der Ven H, Montag M. The impact of culture conditions on early follicle recruitment and growth from human ovarian cortex biopsies in vitro. Fertil Steril. 2013 Aug;100(2):483-91.e5. doi: 10.1016/j.fertnstert.2013.03.046. Epub 2013 Apr 28. PubMed PMID: 23628106.

5: Montag M. Morphokinetics and embryo aneuploidy: has time come or not yet? Reprod Biomed Online. 2013 Jun;26(6):528-30. doi: 10.1016/j.rbmo.2013.03.011. Epub 2013 Mar 26. PubMed PMID: 23602679.

6: Isachenko V, Isachenko E, Keck G, Dittrich R, Montag M, van der Ven H, Mallmann P, Müller A, Distler W, Beckmann MW, Rahimi G. First live birth in Germany after re-transplantation of cryopreserved ovarian tissue: original device for initiation of ice formation. *Clin Lab*. 2012;58(9-10):933-8. PubMed PMID: 23163109.

7: Ebner T, Köster M, Shebl O, Moser M, Van der Ven H, Tews G, Montag M. Application of a ready-to-use calcium ionophore increases rates of fertilization and pregnancy in severe male factor infertility. *Fertil Steril*. 2012 Dec;98(6):1432-7. doi: 10.1016/j.fertnstert.2012.07.1134. Epub 2012 Aug 24. PubMed PMID: 22921909.

8: Papale L, Fiorentino A, Montag M, Tomasi G. The zygote. *Hum Reprod*. 2012 Aug;27 Suppl 1:i22-49. doi: 10.1093/humrep/des205. Epub 2012 Jul 18. PubMed PMID: 22811310.

9: Xu K, Montag M. New perspectives on embryo biopsy: not how, but when and why? *Semin Reprod Med*. 2012 Aug;30(4):259-66. doi: 10.1055/s-0032-1313905. Epub 2012 Jun 21. Review. PubMed PMID: 22723007.

10: Montag M, Köster M, van der Ven K, Bohlen U, van der Ven H. The benefit of artificial oocyte activation is dependent on the fertilization rate in a previous treatment cycle. *Reprod Biomed Online*. 2012 May;24(5):521-6. doi: 10.1016/j.rbmo.2012.02.002. Epub 2012 Feb 10. PubMed PMID: 22417664.

11: Handyside AH, Montag M, Magli MC, Repping S, Harper J, Schmutzler A, Vesela K, Gianaroli L, Geraedts J. Multiple meiotic errors caused by predivision of chromatids in women of advanced maternal age undergoing in vitro fertilisation. *Eur J Hum Genet*. 2012 Jul;20(7):742-7. doi: 10.1038/ejhg.2011.272. Epub 2012 Feb 8. PubMed PMID: 22317970; PubMed Central PMCID: PMC3376262.

12: Müller A, Keller K, Wacker J, Dittrich R, Keck G, Montag M, Van der Ven H, Wachter D, Beckmann MW, Distler W. Retransplantation of cryopreserved ovarian tissue: the first live birth in Germany. *Dtsch Arztebl Int*. 2012 Jan;109(1-2):8-13. doi: 10.3238/arztebl.2012.0008. Epub 2012 Jan 9. PubMed PMID: 22282711; PubMed Central PMCID: PMC3265981.

13: Dittrich R, Lotz L, Keck G, Hoffmann I, Mueller A, Beckmann MW, van der Ven H, Montag M. Live birth after ovarian tissue autotransplantation following overnight transportation before cryopreservation. *Fertil Steril*. 2012 Feb;97(2):387-90. doi: 10.1016/j.fertnstert.2011.11.047. Epub 2011 Dec 16. PubMed PMID: 22177311.

14: Magli MC, Montag M, Köster M, Muzi L, Geraedts J, Collins J, Goossens V, Handyside AH, Harper J, Repping S, Schmutzler A, Vesela K, Gianaroli L. Polar body array CGH for prediction of the status of the corresponding oocyte. Part II: technical aspects. *Hum Reprod*. 2011 Nov;26(11):3181-5. doi: 10.1093/humrep/der295. Epub 2011 Sep 9. PubMed PMID: 21908464; PubMed Central PMCID: PMC3196879.

15: Geraedts J, Montag M, Magli MC, Repping S, Handyside A, Staessen C, Harper J, Schmutzler A, Collins J, Goossens V, van der Ven H, Vesela K, Gianaroli L. Polar body array CGH for prediction of the status of the corresponding oocyte. Part I: clinical results. *Hum Reprod*. 2011 Nov;26(11):3173-80. doi: 10.1093/humrep/der294. Epub 2011 Sep 9. PubMed PMID: 21908463; PubMed Central PMCID: PMC3196878.

16: Montag M, Liebenthron J, Köster M. Which morphological scoring system is relevant in human embryo development? *Placenta*. 2011 Sep;32 Suppl 3:S252-6. doi: 10.1016/j.placenta.2011.07.009. Epub 2011 Jul 22. PubMed PMID: 21782239.

17: Lotz L, Montag M, van der Ven H, von Wolff M, Mueller A, Hoffmann I, Wachter D, Beckmann MW, Dittrich R. Xenotransplantation of cryopreserved ovarian tissue from patients with ovarian tumors into SCID mice--no evidence of malignant cell contamination. *Fertil Steril*. 2011 Jun 30;95(8):2612-4.e1. doi: 10.1016/j.fertnstert.2011.05.003. Epub 2011 May 31. PubMed PMID: 21621205.

18: Montag M, Köster M, van der Ven K, van der Ven H. Gamete competence assessment by polarizing optics in assisted reproduction. *Hum Reprod Update*. 2011 Sep-Oct;17(5):654-66. doi: 10.1093/humupd/dmr016. Epub 2011 Apr 29. Review. PubMed PMID: 21531752.

19: von Wolff M, Montag M, Dittrich R, Denschlag D, Nawroth F, Lawrenz B. Fertility preservation in women--a practical guide to preservation techniques and therapeutic strategies in breast cancer, Hodgkin's lymphoma and borderline ovarian tumours by the fertility preservation network FertiPROTEKT. *Arch Gynecol Obstet*. 2011 Aug;284(2):427-35. doi: 10.1007/s00404-011-1874-1. Epub 2011 Mar 24. Review. PubMed PMID: 21431846; PubMed Central PMCID: PMC3133651.

20: Assidi M, Montag M, Van der Ven K, Sirard MA. Biomarkers of human oocyte developmental competence expressed in cumulus cells before ICSI: a preliminary study. *J Assist Reprod Genet*. 2011 Feb;28(2):173-88. doi: 10.1007/s10815-010-9491-7. Epub 2010 Oct 16. PubMed PMID: 20953827; PubMed Central PMCID: PMC3059525.

21: Xing W, Zhou C, Bian J, Montag M, Xu Y, Li Y, Li T. Solid-surface vitrification is an appropriate and convenient method for cryopreservation of isolated rat follicles. *Reprod Biol Endocrinol*. 2010 May 11;8:42. doi:

10.1186/1477-7827-8-42. PubMed PMID: 20459796; PubMed Central PMCID: PMC2887875.

22: Geraedts J, Collins J, Gianaroli L, Goossens V, Handyside A, Harper J, Montag M, Repping S, Schmutzler A. What next for preimplantation genetic screening? A polar body approach! *Hum Reprod*. 2010 Mar;25(3):575-7. doi: 10.1093/humrep/dep446. Epub 2009 Dec 23. PubMed PMID: 20031957; PubMed Central PMCID: PMC2817568.

23: von Wolff M, Donnez J, Hovatta O, Keros V, Maltaris T, Montag M, Salle B, Sonmezer M, Andersen CY. Cryopreservation and autotransplantation of human ovarian tissue prior to cytotoxic therapy--a technique in its infancy but already successful in fertility preservation. *Eur J Cancer*. 2009 Jun;45(9):1547-53. doi: 10.1016/j.ejca.2009.01.029. Epub 2009 Mar 4. Review. PubMed PMID: 19264478.

24: Isachenko V, Isachenko E, Reinsberg J, Montag M, Braun F, van der Ven H. Cryopreservation of human ovarian tissue: effect of spontaneous and initiated ice formation. *Reprod Biomed Online*. 2008 Mar;16(3):336-45. PubMed PMID: 18339253.

25: van der Ven K, Montag M, van der Ven H. Polar body diagnosis - a step in the right direction? *Dtsch Arztebl Int*. 2008 Mar;105(11):190-6. doi: 10.3238/arztebl.2008.0190. Epub 2008 Mar 14. PubMed PMID: 19629197; PubMed Central PMCID: PMC2696746.

26: Landwehr C, Montag M, van der Ven K, Weber RG. Rapid comparative genomic hybridization protocol for prenatal diagnosis and its application to aneuploidy screening of human polar bodies. *Fertil Steril*. 2008 Sep;90(3):488-96. Epub 2007 Nov 26. PubMed PMID: 18023437.

27: Isachenko V, Isachenko E, Reinsberg J, Montag M, van der Ven K, Dorn C, Roesing B, van der Ven H. Cryopreservation of human ovarian tissue: comparison of rapid and conventional freezing. *Cryobiology*. 2007 Dec;55(3):261-8. Epub 2007 Sep 7. PubMed PMID: 17931616.

28: von Wolff M, Strowitzki T, van der Ven H, Montag M. In vitro maturation is an efficient technique to generate oocytes and should be considered in combination with cryopreservation of ovarian tissue for preservation of fertility in women. *J Clin Oncol*. 2006 Nov 20;24(33):5336-7; author reply 5337-8. PubMed PMID: 17114673.

29: Isachenko V, Montag M, Isachenko E, van der Ven K, Dorn C, Roesing B, Braun F, Sadek F, van der Ven H. Effective method for in-vitro culture of cryopreserved human ovarian tissue. *Reprod Biomed Online*. 2006 Aug;13(2):228-34. PubMed PMID: 16895638.

30: Montag M, Schimming T, van der Ven H. Spindle imaging in human oocytes: the impact of the meiotic cell cycle. *Reprod Biomed Online*. 2006 Apr;12(4):442-6. PubMed PMID: 16740216.

31: Montag M, van der Ven K, Dorn C, Isachenko V, Isachenko E, van der Ven H. Birth after double cryopreservation of human oocytes at metaphase II and pronuclear stages. *Fertil Steril*. 2006 Mar;85(3):751.e5-751.e7. PubMed PMID: 16500354.

32: Isachenko V, Montag M, Isachenko E, Dessolet S, Nawroth F, van der Ven H. Aseptic vitrification of human germinal vesicle oocytes using dimethyl sulfoxide as a cryoprotectant. *Fertil Steril*. 2006 Mar;85(3):741-7. PubMed PMID: 16500347.

33: Isachenko V, Montag M, Isachenko E, van der Ven H. Vitrification of mouse pronuclear embryos after polar body biopsy without direct contact with liquid nitrogen. *Fertil Steril*. 2005 Oct;84(4):1011-6. PubMed PMID: 16213857.

34: Montag M, Limbach N, Sabarstinski M, van der Ven K, Dorn C, van der Ven H. Polar body biopsy and aneuploidy testing by simultaneous detection of six chromosomes. *Prenat Diagn*. 2005 Oct;25(10):867-71. PubMed PMID: 16193457.

35: Montag M, van der Ven K, Dorn C, van der Ven H. Extended embryo culture reduces the implantation rate on day 4 and day 5 when only a maximum of three embryos are cultured beyond the pronuclear stage. *Eur J Obstet Gynecol Reprod Biol*. 2006 Jan 1;124(1):65-9. Epub 2005 Sep 26. PubMed PMID: 16188376.

36: Isachenko V, Isachenko E, Montag M, Zaeva V, Krivokharchenko I, Nawroth F, Dessolet S, Katkov II, van der Ven H. Clean technique for cryoprotectant-free vitrification of human spermatozoa. *Reprod Biomed Online*. 2005 Mar;10(3):350-4. PubMed PMID: 15820041.

37: Montag M, van der Ven K, Dorn C, van der Ven H. Outcome of laser-assisted polar body biopsy and aneuploidy testing. *Reprod Biomed Online*. 2004 Oct;9(4):425-9. PubMed PMID: 15511343.

38: Isachenko V, Isachenko E, Katkov II, Montag M, Dessolet S, Nawroth F, Van Der Ven H. Cryoprotectant-free cryopreservation of human spermatozoa by vitrification and freezing in vapor: effect on motility, DNA integrity, and fertilization ability. *Biol Reprod*. 2004 Oct;71(4):1167-73. Epub 2004 Jun 2. PubMed PMID: 15175233.

39: Isachenko V, Selman H, Isachenko E, Montag M, El-Danasouri I, Nawroth F.

Effect of cryoprotectants on the ultrastructure of cooled human pronuclear oocytes. *Fertil Steril*. 2004 Mar;81(3):720-2. PubMed PMID: 15037433.

40: Isachenko V, Montag M, Isachenko E, Nawroth F, Dessole S, van der Ven H. Developmental rate and ultrastructure of vitrified human pronuclear oocytes after step-wise versus direct rehydration. *Hum Reprod*. 2004 Mar;19(3):660-5. Epub 2004 Jan 29. PubMed PMID: 14998967.

41: Isachenko V, Selman H, Isachenko E, Montag M, El-Danasouri I, Nawroth F. Modified vitrification of human pronuclear oocytes: efficacy and effect on ultrastructure. *Reprod Biomed Online*. 2003 Sep;7(2):211-6. PubMed PMID: 14567894.

42: Schmoll F, Schneider H, Montag M, Wimmers K, Rink K, Schellander K. Effects of different laser-drilled openings in the zona pellucida on hatching of in vitro-produced cattle blastocysts. *Fertil Steril*. 2003 Sep;80 Suppl 2:714-9. PubMed PMID: 14505744.

43: van der Ven H, Montag M, van der Ven K. [Performance of in vitro fertilization in Germany]. *Z Arztl Fortbild Qualitatssich*. 2002 Jul;96(6-7):369-74. German. PubMed PMID: 12219487.

44: Montag M, Kupka M, van der Ven K, van der Ven H. Embryo transfer on day 3 using low versus high fluid volume. *Eur J Obstet Gynecol Reprod Biol*. 2002 Apr 10;102(1):57-60. PubMed PMID: 12039091.