

Curriculum Vitae

Name : Martin Knöfler
Nationality : Austria
Date of birth : 18. 12. 1963
Place of birth : Vienna
Private address : Pacassistr. 79, A-1130 Vienna
Professional address : Medical University of Vienna
Dept. of Obstetrics and Fetal-Maternal Medicine,
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Education and Career

1970-1974 Primary School, Vienna 13
1974-1982 Secondary school, AHS-Bundesgymnasium, Vienna 13
22/6/1982 AHS-Matura
10/1982 Start of the studies in Biochemistry, University of Vienna
12/1987-11/1988 Diploma thesis at the Institute of Molecular Biology, University of Vienna, title: Analysis of thymidine kinase-deficient mouse cell lines

1/7/1988-30/11/1988 Student assistant at the Institute of Molecular Biology, University of Vienna

11/1988 Diploma exam with distinction
20/12/1988 Sponion (Mag. rer. nat.), University of Vienna
1/3/1989-30/9/1992 Assistant at the Institute of Molecular Biology, University of Vienna, PhD thesis, title: Posttranscriptional regulation of thymidine kinase gene expression in mouse cells

20/5/1992 PhD Rigorosum with distinction
1/7/1992 Promotion (Dr. rer. nat.) University of Vienna
5/10/1992-31/7/1993 Civil service at the St. Lazarus Hilfswerk, Vienna
2/1993 Postdoctoral funding by the Hertzfelder' sche Familienstiftung, Vienna, title of grant: Molecular mechanisms governing exocrine pancreas differentiation

1/9/1993-30/9/1995 Postgraduate studies on the in vivo role of cell-specific transcription factors in exocrine pancreas development of rat and mice, at the Institute of Experimental Cancer Research (I.S.R.E.C.), Dept. of Cell Differentiation, Lausanne, CH

1/1/1996-29/2/1996 Postgraduate studies at the Department of Internal Medicine IV, AKH, University of Vienna, project: Regulation of the endothelial NO-synthase under hypoxia and inflammation

since 1/3/1996 University Assistant, Head of the research laboratory of the Department of Obstetrics and Gynecology, University of Vienna, AKH, Research focus: Molecular mechanisms of placental trophoblast differentiation

31/1/2001 Venia docendi in Medical Biochemistry, lecture title: Function and regulation of the human trophoblast

22/2/2001 Appointment to Univ Doz./ Ao. Univ. Prof.(Associate Prof.)
1/3/2001 permanent position at the department of ObsGyn, University of Vienna, Austria

2002-2010 Editorial Board member of the Journal *Placenta*
2005-2013 Member of the Award Committee of the des International Federation of Placental Associations (IFPA)

2007-2013 Administrative Head of the research laboratories of ObsGyn
2008-2015 Coordinator of the Reproductive Biology Groups
9/2011 IFPA award in placentology
2008-2013 Chairman of the IFPA Award Committee
1/2016-2022 European Editor of the Journal *Placenta*

Biography-Martin Knöfler

Martin Knöfler (MK) studied Biochemistry in Vienna and did his Masters (1989) and PhD (1992) theses at the Institute of Molecular Biology, Vienna, on the molecular regulation of human thymidine kinase. From 1993 to 1995 he was a postdoctoral fellow at the Swiss Cancer Research Institute, Lausanne, investigating murine exocrine pancreas development in the group of P. Wellauer. After a 3 months stay at the Department of Internal Medicine, Vienna, MK obtained a university position at the Department of Obstetrics and Gynecology, University of Vienna, in 1996. After obtaining his Venia docendi in Medical Biochemistry MK was appointed to Associate Professor at University of Vienna in 2001. From 2002 to 2010 MK was a member of the Editorial Board of *Placenta* and from 2008 to 2013 chairman of IFPA Award Committee. From 2007 to 2013 MK was the Administrative Head of the research laboratories of the Department of Obstetrics and Gynecology, Medical University Vienna, and responsible for approx. 50 scientists, students and technicians working in the particular area. Currently, MK is PI of the Reproductive Biology Unit, and scientific coordinator of the Reproductive Biology Groups at the Department of Obstetrics and Fetal-Maternal Medicine, Vienna. He will also be current European Editor of the scientific journal *Placenta*. His main research interests include: molecular mechanisms and signalling pathways regulating human placental development; trophoblast formation, differentiation and invasion; decidualization as well as the trophoblast-decidual cross-talk, placental pathologies with abnormal trophoblast invasion and differentiation;

Activities during the last 5 years

Grants awarded

Austrian Science Funds: Transcriptional co-activators at the intersection of signalling pathways controlling extravillous trophoblast differentiation (P28417-B13)

Austrian Science Funds: Regulatory factors controlling extravillous trophoblast differentiation (P17894-B14)

Austrian Science Funds: Critical signalling pathways regulating trophoblast invasion of the human placenta (P22687-B13)

Austrian National Bank: The role of AP-2 factors in normal and pathological trophoblast invasion of the human placenta (P12487)

Herzfelder Foundation: The role of AKT signalling in invasive trophoblast differentiation of the human placenta (APP00323OFF)

Herzfelder Foundation: Function of the Wnt5a ligand in placental differentiation and senescence (APP00574OFF)

Supervision of research students

Bachelor Theses

Schaschinger M: The role of Wnt5a ligand in trophoblast invasion (final exam: 29.6.2012)

Geetha Avarappatt: The role of Notch signalling in trophoblastic SGHPL-5 cells (final exam 29.6.2012)

Wieselberg M: Expression and function of Notch1 in physiological placenta and pathological hydatidiform mole (final exam: 28.6.2013)

Nadine Witzeneder: Function of the wnt5a ligand in placental trophoblasts (final exam: 27.6.2013)

Preindl K: Descriptive analyses of the Hippo signalling pathway in human placental trophoblasts (final exam: 28.6.2013)

Master's theses

Saleh L: Wnt5a signalling in human decidualization (Defensio: 22.9.2010)

Prutsch N: Analysis of ADAM expression during placental development (Defensio: 28.9.2010)

Plessl K: Expression of Notch receptors and ligands in trophoblast progenitor cells (Defensio: 27.9.2012)

Kaltenberger S: Analyses of HER2 during extravillous trophoblast differentiation (Defensio:19.9.2014)

Diploma Theses

Otten J: The role of protein kinase Akt in trophoblast migration (final exam: 11.1.2010)

Czakai T: Growth factor-induced regulation of the uPA/uPAR/PAI-system in human trophoblast cells (final exam: 31.5.2010)

B Studierach: Expression of critical regulators in placenta accreta, increta, percreta

(final exam: 25.5. 2010)

Iris Michels: The role of Notch signalling in trophoblast invasion

(final exam: 29.9.2011)

Meinhardt G: Wnt/TCF signaling in invasive trophoblasts (final exam: 3.6.2013)

Haider S: Notch signaling in the human placenta (final exam: 15.6.2010)

Bukowsky: In vitro decidualization of endometrial stromal cells: optimisation of protocols (final exam: 15.3.2011)

PhD Theses

Sondergger S: Wnt-signaling in early human trophoblast invasion (Defensio: 22.2.2010)

Biadasiewicz K: The role of AP-2 in trophoblast invasion (Defensio: 12.4.2013)

Otti G: Notch Signalling in Human Decidual Stromal Cells (Defensio: 25.2.2015)

Haider S: Notch1 receptor function in trophoblast differentiation (ongoing)

Plessl K: HER Receptors in trophoblast differentiation (ongoing)

Velicky P: The role of the transcription factor RBPJk in trophoblast differentiation (ongoing)

Meinhardt G: Impact of the Wingless (Wnt) Signaling cascade on placenta function (ongoing)

Invited Lectures

Molecular regulation of trophoblast invasion (8th European Congress of Reproductive Immunology, Munich, Germany, 12.11.2010)

Wnt and Notch signaling in human trophoblast invasion (6th International Conference on the Female Reproductive Tract, Chiemsee, Germany, 21.5.2011)

Molecular regulation of human trophoblast invasion (17th IFPA Meeting-14th European Placenta Group Meeting, Geilo, Norway, 17.9.2011)

Primary cell models of human first trimester trophoblast: facts and myths (III International Workshop on "Cellular components coordinating the maternal fetal interface: basic and clinical relevant aspects for gestational interurrences", São Paulo, Brazil, 15.2.2013)

Integration of Notch and Wnt signalling in the control of human extravillous trophoblast differentiation V SLIMP – Latin American Society for Maternal Fetal Interaction & Placenta and IV LASRI – Latin American Society for Reproductive Immunology meeting (Foz do Iguaçu/Brazil, 19.2.2013)

Developmental pathways controlling proliferation and differentiation of human trophoblast progenitors. (CTR Annual Trophoblast Meeting, Cambridge, UK, 15.7.2014)

Formation of human extravillous trophoblast: mechanisms controlling proliferation, differentiation and migration (VI SLIMP – Latin American Society for Maternal Fetal Interaction & Placenta and V LASRI – Latin American Society for Reproductive Immunology meeting, Mar del Plata, Argentina, 14.4.2015)

Organisation

Chairman of the IFPA Award Committees selecting awardees of the Than award (2010, IFPA Meeting Santiago, Chile; 2012, IFPA meeting Hiroshima, Japan), of the IFPA award in Placentology (2009, IFPA meeting Adelaide, Australia) and of the IFPA Senior Award in Placentology (2012, IFPA meeting in Hiroshima, Japan)

Chairman of the New Investigator Elsevier Oral Committees selecting the awardees with the best oral presentation (2010, presented at IFPA Meeting in Santiago, Chile; 2011, presented at IFPA Meeting in Geilo, Norway; 2012, presented at IFPA meeting in Hiroshima, Japan; 2013, presented at the IFPA meeting in Whistler, Canada)

Prices

IFPA award 2011 in Placentology to MK received at 17th IFPA Meeting/ 14th European Placenta Group Meeting, Geilo, Norway 14.9.-17.9.2011

Y.W. Loke New Investigator Travel Award donated to students: Fock V (IFPA Meeting 2011, Geilo, Norway), Meinhardt G (IFPA Meeting 2011, Geilo, Norway), Velicky P (IFPA meeting 2012, Hiroshima, Japan), Fock V (IFPA Meeting 2013, Whistler, Canada), Otti G (IFPA Meeting 2014, Paris, France)

Best poster presentation to Haider S at the 8th YSA-PhD-Symposium 2012, Medical University Vienna

Teaching

Medical students at the Medical University Vienna: seminars in basic chemistry, and stoichiometrie, seminars in biochemistry and molecular biology, practical work in biochemistry, practical work in molecular biology, problem-oriented learning, seminars and practical work teaching scientific analysis (genetic components of breast cancer), paper writing and presentation, lectures in the basic seminar of PhD program "malignant diseases", journal club (mechanisms in cell invasion, tumor progression and metastasis), PhD thesis seminar (Molecular Signaling controlling cell motility: Pathways involved in physiological and cancer cell invasion), Senior-Mentoring program

Bachelor and Master's program at the University of Applied Sciences, Vienna: lectures in molecular biology, stoichiometrie, recombinant DNA and protein technology, molecular diagnostics, placental and endometrial function, practical laboratory work teaching recombinant DNA technology

Karl Landsteiner University of Health Sciences (Krems, lower Austria): lectures in molecular control of gene expression, genetics and epigenetics, genetic circuits of the human body, practical laboratory work teaching genotyping and gene expression analyses

Reviewing and examination

Journals

Placenta, FASEB Journal, Cell Death and Differentiation, Biology of Reproduction, Molecular Human Reproduction, Human Reproduction, Reproductive Sciences, Developmental Biology, Reproduction, Fertility and Development, Endocrinology, Molecular Endocrinology, Molecular Reproduction and Development, American Journal of Reproductive Immunology, Journal of Cellular and Molecular Medicine, Molecular and Cellular Endocrinology, Amino Acids, Journal of Reproductive Immunology, European Journal of Clinical Investigation, Nature communications, American Journal of Pathology, Proceedings of the National Academy of Sciences

Funding bodies, theses and career promotion

Medical Research Council (MRC) Research Grant Application, Jubiläumsfonds of the Austrian National Bank, Deutsche Forschungsgemeinschaft, Agence d'Evaluation de la Recherche et des établissements d'Enseignement Supérieur (AERES, Paris), Projects of Cariplo Foundation, PhD theses of University of Western Australia, Biotechnology and Biological Sciences Research Council, Funds for interdisciplinary cancer research Vienna, Evaluation of researchers for career promotion (different scientists from Cambridge, Manchester and Jena)

Publications (full list)

(20, 40 and 45 manuscripts as first, last and co-author, respectively)

Seiser, C., **Knöfler, M.**, Rudelstorfer, I., Haas, R. and Wintersberger, E. Mouse thymidine kinase: the promoter sequence and the gene and pseudogene structures in normal cells and in thymidine kinase deficient mutants. Nucl. Acids Res. Jan 11;. 17: 185-195

Knöfler, M. "Posttranskriptionelle Regulation der Thymidinkinase Genexpression in Mauszellen" 1992 PhD thesis

Knöfler, M., Waltner, C., Wintersberger, E., and Müllner, E. W. Translational repression of endogenous thymidine kinase mRNA in differentiating and arresting mouse cells" J. Biol. Chem. 1993 May 25; 268: 11409-11416

Hengstschläger, M., **Knöfler, M.**, Müllner, E. W., Ogris, E., Wintersberger, E. and Wawra, E. Different regulation of thymidine kinase during the cell cycle of normal versus DNA tumor virus transformed cells. J. Biol. Chem. 1994 May 13;269: 13836-42

Krapp, A., **Knöfler, M.**, Frutiger, S., Hughes, G. J., Hagenbüchle, O., and Wellauer, P. K. The p48 DNA-binding subunit of transcriptionfactor PTF1 is a new exocrine pancreas specific bHLH protein. *EMBO J.* 1996 Aug 15;15: 4317-4329

Knöfler, M., Krapp, A., Hagenbüchle, O., and Wellauer P. K. Constitutive expression of the gene for the cell-specific p48 DNA-binding subunit of pancreas transcriptionfactor 1 in cultured cells is under control of binding sites for transcription factors SP1 and α CBF. *J. Biol Chem.* 1996 Sep 6;271: 21993-22002

Ziesche, R., Petkov, V., Williams, J., Zakeri, S., M., Mosgöller, W., **Knöfler, M.**, and Block, L., H. Lipopolysaccharide and interleukin-1 augment the effects of hypoxia and inflammation in pulmonary arterial tissue. *Proc. Natl. Acad. Sci., U. S. A.* 1996 Oct 29;93:12478-12483

Mikulits, W., **Knöfler, M.**, Stiegler, P., Dolznig, H., Wintersberger, E., and Müllner, E., W. Mouse thymidine kinase stability in vivo and after in vitro translation. *Biochem. Biophys. Acta* 1997 Apr 4;1338: 267-274

Strohmer, H., Kiss, H., Mösl, B., Egarter, Ch., Husslein, P., and **Knöfler, M.** Hypoxia downregulates continuous and Interleukin-1-induced expression of human chorionic gonadotropin in choriocarcinoma cells. *Placenta* 1997 Sep;18: 597-604

Knöfler, M., Kiss, H., Mösl, B., Egarter, Ch. and Husslein, P. Interleukin-1 stimulates tumor necrosis factor- α (TNF- α) release from cytotrophoblastic BeWo cells independently of induction of the TNF- α mRNA. *FEBS-Lett.* 1997 Mar 24;405: 213-218

Reisenberger, K., Egarter, Ch., **Knöfler, M.**, Schiebel, I., Gregor, H., Hirschl, A. M., Heinze, G. and Husslein, P. Cytokine and prostaglandin production by amnion cells in response to the addition of different bacteria. *Am. J. Obstetr. Gynecol* 1998 Jan;178: 50-53

Knöfler, M., Stenzel, M., Mösl, B., Strohmer, H., and Husslein, P. Hypoxia-mediated downregulation of human chorionic gonadotropin subunit mRNA expression in cytotrophoblastic JAr cells. *Trophoblast Res.* 1998;12: 387-402

Knöfler, M., Stenzel, M. and Husslein, P. Shedding of TNF receptors from purified villous term trophoblasts and cytotrophoblastic BeWo cells. *Human Reprod.* 1998 Aug;13: 2308-2316

Kiss, H., Schneeberger, C., Tschugguel, W., Lass, H., Huber, J. C., Husslein, P. and **Knöfler M.** Expression of endothelial (Type III) nitric oxide synthase in cytotrophoblastic cell lines: regulation by hypoxia and inflammatory cytokines. *Placenta* 1998 Nov;19: 603-611

Helmer, H., Hackl, T., Schneeberger, Ch., **Knöfler, M.**, Behrens, O., Kaider, A. and Husslein, P. Oxytocin and vasopressin 1a receptor gene expression in the cycling or pregnant human uterus. *Am J. Obstet. Gynecol.* 1998 Dec;179: 1572-1578

Krapp¹, A, **Knöfler¹, M.**, Ledermann, B., Bürki, K., Berney, C., Zoerkler, N., Hagenbüchle, O., and Wellauer, P. K. The bHLH protein PTF1-p48 is essential for the formation of the exocrine and the correct spatial organization of the endocrine pancreas. *Genes. Dev.* 1998 Dec;12: 3752-3763
¹equal contribution

Knöfler M., Meinhardt, G., Vasicek, R., Husslein, P. and Egarter, C. (1998) Molecular cloning of the human Hand1 gene / cDNA and its tissue-restricted expression in cytotrophoblastic cells and heart. *Gene* 1998 Dec;224: 77-86

Knöfler, M., Saleh, L., Strohmer, H., Husslein, P. and Wolschek, M. F. Cyclic AMP- and differentiation-dependent regulation of the proximal α hCG gene promoter in term villous trophoblasts. *Molecular Human Reproduction* 1999 Jun;5: 573-580,

Knöfler, M. Geburtshilfliche Forschung am Wiener AKH, 5Q. *Gyn-Aktiv* 1999;1:32-33

Knöfler, M. What factors regulate HCG production in Down's syndrome pregnancies? Regulation of human chorionic gonadotrophin during normal gestation and in pregnancies affected by Down's syndrome. *Molecular Human Reproduction* 1999 Oct;5:893-895

Knöfler, M., Kalionis, B., Huelseweh, B., Bilban, M., and D.W. Morrish. Novel Genes and Transcription Factors in Placental Development, a workshop report. *Placenta* 2000 Mar-Apr;21, Supplement A, *Trophoblast Research* 14:71-73

Knöfler, M., Mösl, B., Bauer, S., Griesinger, G. and Husslein, P. TNF- α /TNFRI in primary and immortalized first trimester cytotrophoblasts. *Placenta* 2000 Jul-Aug; 21:525-535

Zakeri, S.M., Meyer, H., Meinhardt, G., Reinisch, W., Schratlbauer, K., **Knöfler, M.** and Block, L. H. Effects of trovafloxacin on the IL-1-dependent activation of E-selectin in human endothelial cells in vitro. *Immunopharmacology* 2000 Jun;48:27-34

Knöfler, M., Saleh, L., Bauer, S., Vasicek, R., Griesinger, G., Strohmer, H., Helmer, H. and Husslein, P. Promoter-Elements and Transcription Factors involved in Differentiation-dependent Human Chorionic Gonadotrophin- α mRNA Expression of Term Villous Trophoblasts. *Endocrinology* 2000, 141: 3737-48

Knöfler M, Vasicek R, Schreiber M. Key Regulatory Transcription Factors Involved in Placental Trophoblast Development-A Review. *Placenta* 2001 Apr;22:83-92

Zeisler, H., Livingston, J.C., Schatten, C., Tempfer, C., **Knöfler, M.,** Husslein, P. Serum levels of adhesion molecules in women with pregnancy-induced hypertension. 2001 Aug;Wien Klin. Wochenschr. 113:588-92

Griesinger, G., Saleh, L., Bauer, S., Husslein, P., **Knöfler, M.** Production of pro- and anti-inflammatory cytokines of human placental trophoblasts in response to pathogenic bacteria. *J Soc Gynecol Investig.* 2001 Nov-Dec, 8:334-40

Knöfler, M., Meinhardt, G., Bauer, S., Loregger, T., Vasicek, R., Bloor, D.J., Kimber, S.J. and Husslein, P. The human Hand1 bHLH protein: extraembryonic expression pattern, interaction partners and identification of its transcriptional repressor domains. *Biochemical J.* 2002 Feb;361:641-51

Helmer, H., Brunbauer, M., Fuchs, A.R., Husslein, P. and **Knöfler, M.** Oxytocin-Rezeptoren und Gap Junctions bei vorzeitigen und termingerechten Wehen. *Geburtsh. Frauenheilk.* 2002, 62:1-5

Helmer, H., Tretzmüller, U., Brunbauer, M., Kaider, A., Husslein, P. and **Knöfler, M.** Production of oxytocin receptor and cytokines in primary uterine smooth muscle cells cultivated under inflammatory conditions. *J. Soc. Gynecol. Investig.* 2002 Jan-Feb;91:15-21

Zeisler, H., Jirecek, S., Hohlagschwandtner, M., **Knöfler, M.,** Tempfer, C., Livingston, J.C. Concentrations of estrogens in patients with preeclampsia. *Wien Klin Wochenschr.* 2002 Jun; 114:458-461

Hohlagschwandtner M, **Knöfler M,** Ploner M, Zeisler H, Joura EA, Husslein P. Basic fibroblast growth factor and hypertensive disorders in pregnancy. *Hypertens Pregnancy* 2002; 21:235-241

Vasicek, R., Meinhardt, G., Haidweger, E., Rotheneder, Husslein, P. and **Knöfler, M.** Expression of the human Hand1 gene in trophoblastic cells is transcriptionally regulated by activating and repressing Sp-elements. *Gene* 2003 Jan; 302:115-127

Jirecek S, Hohlagschwandtner M, Tempfer C, **Knöfler M,** Husslein P, Zeisler H. Serum levels of heat shock protein 70 in patients with preeclampsia: a pilot-study. *Wien. Klin. Wochenschr.* 2003 Aug;114:730-732

Jirecek S, Tringler B, **Knöfler M,** Bauer S, Topcuoglu A, Egarter C. Redistribution of corticotropin-releasing hormone receptor R2 using fluorescence immunohistochemistry in fetal membranes of women delivering preterm or at term. *Wien. Klin. Wochenschr.* 2002 Dec; 114:1008-1012

Loregger, T., Pollheimer, J., and **Knöfler, M.** Regulatory transcription factors controlling function and differentiation of human trophoblast-A review. *Placenta* 2003 Apr; 24: Supplement A, Trophoblast Research 17: 104-110

Jirecek S, Joura EA, Tempfer C, **Knöfler M**, Husslein P, Zeisler H. Elevated serum concentrations of androgens in women with pregnancy-induced hypertension *Wien Klin Wochenschr.* 2003 Mar; 115:162-6

Hirtenlehner, K, Pollheimer, J, Lichtenberger, C, Wolschek, MF, Zeisler, H, Husslein, P, **Knöfler, M.** Elevated serum concentrations of the angiogenesis inhibitor endostatin in preeclamptic women. *J Soc Gynecol Investig.* 2003 Oct;10:412-417

Jirecek S, Tringler B, **Knöfler M**, Bauer S, Topcuoglu A, Egarter C. Detection of corticotropin-releasing hormone receptors R1 and R2 (CRH-R1, CRH-R2) using fluorescence immunohistochemistry in the myometrium of women delivering preterm or at term *Wien Klin Wochenschr.* 2003 Oct;115:724-7.

Knöfler M, Saleh L, Bauer S, Galos B, Rotheneder H, Husslein P, Helmer H. Transcriptional Regulation of the Human Chorionic Gonadotrophin {beta} Gene during Villous Trophoblast Differentiation. *Endocrinology* 2004 Apr; 145:1685-1694.

Bauer S, Pollheimer J, Hartmann J, Husslein P, Aplin JD, **Knöfler M.** Tumor necrosis factor-alpha inhibits trophoblast migration through elevation of plasminogen activator inhibitor-1 in first-trimester villous explant cultures. *J Clin Endocrinol Metab* 2004 Feb; 89:812-822

Bilban M, Ghaffari-Tabrizi N, Hintermann E, Bauer S, Molzer S, Zoratti C, Malli R, Sharabi A, Hiden U, Graier W, **Knöfler M**, Andreae F, Wagner O, Quaranta V, Desoye G. Kisspeptin-10, a KiSS-1/metastin-derived decapeptide, is a physiological invasion inhibitor of primary human trophoblasts. *J Cell Sci.* 2004 Mar;117:1319-1328

Pijnenborg R, Aplin JD, Ain R, Bevilacqua E, Bulmer JN, Cartwright J, Huppertz B, **Knöfler M**, Maxwell C, Vercruyse L. Trophoblast and the endometrium-a workshop report. *Placenta* 2004 Apr., 25 Suppl:S42-4.

Leipold H, **Knöfler M**, Gruber C, Haslinger P, Bancher-Todesca D, Worda C. Calpain-10 haplotype combination and association with gestational diabetes mellitus. *Obstet Gynecol.* 2004 Jun;103:1235-40

Pollheimer J, Bauer S, Huber A, Husslein P, Aplin JD, **Knöfler M.** Expression pattern of collagen XVIII and its cleavage product, the angiogenesis inhibitor endostatin, at the fetal-maternal interface. *Placenta* 2004 Nov;25:770-9

Worda C, Leipold H, Gruber C, Kautzky-Willer A, **Knöfler M**, Bancher-Todesca D. Decreased plasma adiponectin concentrations in women with gestational diabetes mellitus. 2004 Dec; *Am J Obstet Gynecol.* 191:2120-2124.

Knöfler M, Sooranna SR, Daoud G, Whitley GS, Markert UR, Xia Y, Cantiello H, Hauguel-de Mouzon S. Trophoblast signalling: knowns and unknowns--a workshop report. *Placenta* 2005 Apr; 26: Suppl A:S49-51.

Pollheimer J, Husslein P, **Knöfler M.** Invasive trophoblasts generate regulatory collagen XVIII cleavage products. *Placenta* 2005 Apr; 26: Suppl A:S42-5.

Pollheimer J, **Knöfler M.** Signalling pathways regulating the invasive differentiation of human trophoblasts: a review. *Placenta.* 2005 Apr; 26: Suppl A:S21-30.

Meinhardt G, Husslein P, **Knöfler M.** Tissue-specific and ubiquitous basic helix-loop-helix transcription factors in human placental trophoblasts. *Placenta* 2005 Aug; 26: 527-39.

Huber AV, Saleh L, Bauer S, Husslein P, **Knöfler M.** TNF α -mediated Induction of PAI-1 Restricts Invasion of HTR-8/SVneo Trophoblast Cells. *Placenta* 2006 Feb-Mar;27:127-136.

Pollheimer J, Loregger T, Sonderegger S, Saleh L, Bauer S, Bilban M, Czerwenka K, Husslein P, **Knöfler M**. Activation of the Canonical Wntless (Wnt) / T-cell factor (TCF) Signalling Pathway promotes Invasive Differentiation of Human Trophoblast. *Am. J. Pathol.* 2006 Apr; 168:1134-47.

Heinz Leipold MD^a, Martin **Knöfler** PhD^a, Christian Gruber MD^b, Ambros Huber MD^a, Peter Haslinger^a and Christof Worda MD^a. Peroxisome Proliferator-Activated Receptor γ Coactivator-1 α Gene Variations Are Not Associated With Gestational Diabetes Mellitus. *J. Soc. Gynecol. Invest.* 2006 Feb; 13:104-107

Leipold H, **Knöfler M**, Gruber C, Klein K, Haslinger P, Worda C Plasminogen activator inhibitor 1 gene polymorphism and gestational diabetes mellitus. *Obstet Gynecol* 2006 Mar; 107:651-656.

Leisser C, Saleh L, Haider S, Husslein H, Sonderegger S, **Knöfler M**. Tumour necrosis factor-alpha impairs chorionic gonadotrophin beta-subunit expression and cell fusion of human villous cytotrophoblast. *Mol Hum Reprod.* 2006 Oct; 12:601-9.

Aplin JD, Straszewski-Chavez SL, Kalionis B, Dunk C, Morrish D, Forbes K, Baczyk D, Rote N, Malassine A, **Knöfler M**. Trophoblast Differentiation: Progenitor Cells, Fusion and Migration - A Workshop Report. *Placenta* 2006 Apr; 27 Suppl A:S141-3

Saleh L, Prast J, Haslinger P, Husslein P, Helmer H, **Knöfler M**. Effects of Different Human Chorionic Gonadotrophin Preparations on Trophoblast Differentiation. *Placenta* 2007 Feb-Mar; 28:199-203

Sonderegger S, Husslein H, Leisser C, **Knöfler M**. Complex Expression Pattern of Wnt Ligands and Frizzled Receptors in Human Placenta and its Trophoblast Subtypes. *Placenta* 2007 Apr; 28 Suppl A:S97-S102.

Hiden U, Bilban M, **Knöfler M**, Desoye G. Kisspeptins and the placenta: Regulation of trophoblast invasion. *Rev Endocr Metab Disord.* 2007 Mar; 8:31-9.

Huber AV, Saleh L, Prast J, Haslinger P, **Knöfler M**. Human chorionic gonadotrophin attenuates NF- κ B activation and cytokine expression of endometriotic stromal cells. *Mol Hum Reprod.* 2007 Aug; 13:595-604.

Huber A, Hudelist G, **Knöfler M**, Saleh L, Huber JC, Singer CF. Effect of highly purified human chorionic gonadotropin preparations on the gene expression signature of stromal cells derived from endometriotic lesions: potential mechanisms for the therapeutic effect of human chorionic gonadotropin in vivo. *Fertil Steril.* 2007 Oct; 88:1232-9.

Hiden U, Wadsack C, Prutsch N, Gauster M, Weiss U, Frank HG, Schmitz U, Fast-Hirsch C, Hengstschlager M, Potgens A, Ruben A, **Knöfler M**, Haslinger P, Huppertz B, Bilban M, Kaufmann P, Desoye G. The first trimester human trophoblast cell line ACH-3P: A novel tool to study autocrine/paracrine regulatory loops of human trophoblast subpopulations - TNF- α stimulates MMP15 expression. *BMC Dev Biol* 2007 Dec; 7:137

Knöfler M, Simmons DG, Lash GE, Harris LK, Armant DR Regulation of Trophoblast Invasion-A Workshop Report. *Placenta* 2008 Mar; 29 Suppl A:S26-8

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