



Translational Research on Endometriosis

Results

Project Information

TREND0

Grant agreement ID: 101008193

[Project website](#)

DOI

[10.3030/101008193](https://doi.org/10.3030/101008193)

EC signature date

5 October 2020

Start date

1 August 2021

End date

31 July 2025

Funded under

EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions

Total cost

€ 308 200,00

EU contribution

€ 308 200,00

Coordinated by

UNIVERSITAET MUENSTER



Germany

CORDIS provides links to public deliverables and publications of HORIZON projects.

Links to deliverables and publications from FP7 projects, as well as links to some specific result types such as dataset and software, are dynamically retrieved from [OpenAIRE](#).

Deliverables

Documents, reports (4)



[Platform to measure in vitro the effect of novel drugs on nerve fibre growth and pain](#)

Report on establishment of a platform to measure in vitro the effect of novel drugs on nerve fibre growth and pain

[Identification of new endometriosis targeting peptide candidates](#)

Report on the identification of new endometriosis targeting peptide candidates

[Establishment of a series of innovative in vitro models for studying endometriosis and for drug screening](#)

Report on the establishment of a series of innovative in vitro models for studying endometriosis and for drug screening

[Comparison of in vitro targeting performance of newly identified endometriosis binding peptides with existing peptides found in the literature](#)

Report on the comparison of in vitro targeting performance of newly identified endometriosis binding peptides with existing peptides found in the literature

Websites, patent fillings, videos etc. (1)



[Website and Social media pages](#)

Deocumentation of the establishment of a project website and Social media pages

Publications

Peer reviewed articles (32)



[Homing Peptide-Based Targeting of Tenascin-C and Fibronectin in Endometriosis](#)

Author(s): Lorena Simón-Gracia, Kristina Kiisholts Vilma Petrikaitė, Allan Tobi, Merli Saare, Prakash Lingasamy , Maire Peters, Andres Salumets, Tambet Teesalu

Published in: Nanomaterials (Basel), Issue 11, 2021, Page(s) 3257, ISSN 2079-4991

Publisher: Multidisciplinary Digital Publishing Institute (MDPI)

DOI: 10.3390/nano11123257

[Circulating estradiol and its biologically active metabolites in endometriosis and in relation to pain symptoms](#)

Author(s): Emond, Jean-Philippe; Caron, Patrick; Pušić Novak, Maja; Turcotte, Véronique; Simonyan, David; Vogler, Andrej; Osredkar, Joško; Lanišnik-Rižner, Tea; Guillemette, Chantal

Published in: Frontiers in endocrinology, Issue 13, 2021, Page(s) 1034614, ISSN 1664-2392

Publisher: Frontiers Media S.A.

DOI: 10.3389/fendo.2022.1034614

[Combined targeting of TCF7L1/2, PTEN, CDK6, and BCCIP by microRNA miR-29c-3p is associated with reduced invasion and proliferation of endometriotic cells](#)

Author(s): Teresa Helene Wentges, Heba M. El-Shorafa, Janine Beckmann, Michael Gabriel, Matti Poutanen, Burkhard Greve, Ludwig Kiesel, Sebastian D. Schäfer, Martin Götte

Published in: Reproductive Medicine and Biology, Issue 24/1 January/December 2025, 2025, Page(s) e12645, ISSN 1445-5781

Publisher: Japanese Society of Fertility and Sterility

DOI: 10.1002/rmb2.12645

[miR-193b-5p and miR-374b-5p Are Aberrantly Expressed in Endometriosis and Suppress Endometrial Cell Migration In Vitro](#)

Author(s): Caroline Frisendahl, Yiqun Tang, Nageswara Rao Boggavarapu, Maire Peters, Parameswaran Grace Lalitkumar, Terhi T. Piltonen, Riikka K. Arffman, Andres Salumets, Martin Götte, Eberhard Korsching, Kristina Gemzell-Danielsson

Published in: Biomolecules, Issue 14, 2024, Page(s) 1400, ISSN 2218-273X

Publisher: MDPI

DOI: 10.3390/biom14111400

[TGFB1 as a candidate biomarker for non-invasive diagnosis of early-stage endometriosis](#)

Author(s): Vid Janša, Maja Pušić Novak, Helena Ban Frangež, Tea Lanišnik Rižner

Published in: Human Reproduction, Issue 38, 2023, Page(s) 1284-1296, ISSN 0268-1161

Publisher: Oxford University Press

DOI: 10.1093/humrep/dead091

[Antibody Arrays Identified Cycle-Dependent Plasma Biomarker Candidates of Peritoneal Endometriosis](#)

Author(s): Maja Pušić, Teja Klančič, Tamara Knific, Andrej Vogler, Ronny Schmidt, Christoph Schröder, Tea Lanišnik Rižner

Published in: Journal of personalized medicine, Issue 12, 2022, Page(s) 852, ISSN 2075-4426

Publisher: MDPI

DOI: 10.3390/jpm12060852

[Diagnostic delay of endometriosis in adults and adolescence-current stage of knowledge](#) 

Author(s): Monika Wróbel Mirosław Wielgoś, Piotr Laudański

Published in: Advances in Medical Sciences, Issue 67, 2022, Page(s) 148-153, ISSN 1896-1126

Publisher: Medical University of Białystok

DOI: 10.1016/j.advms.2022.02.003

[Autoantibody screening of plasma and peritoneal fluid of patients with endometriosis](#) 

Author(s): Piotr Laudański, Gabriela Rogalska, Damian Warzecha, Michał Lipa, Grzegorz Mańka, Mariusz Kiecka, Robert Spaczyński, Piotr Piekarski, Beata Banaszewska, Artur Jakimiuk, Tadeusz Issat, Wojciech Rokita, Jakub Młodawski, Maria Szubert, Piotr Sieroszewski, Grzegorz Raba, Kamil Szczupak, Tomasz Kluz, Marek Kluza, Toomas Neuman, Priit Adler, Hedi Peterson, Andres Salumets, Mirosław Wielgoś

Published in: Human Reproduction, Issue 38, 2023, Page(s) 629-643, ISSN 0268-1161

Publisher: Oxford University Press

DOI: 10.1093/humrep/dead011

[Users' Concerns About Endometriosis on Social Media: Sentiment Analysis and Topic Modeling Study](#) 

Author(s): Rahul Goel; Vijayachitra Modhukur; Katrin Täär; Andres Salumets; Rajesh Sharma; Maire Peters

Published in: Journal of Medical Internet Research, Issue 25, 2023, Page(s) e45381, ISSN 1438-8871

Publisher: Journal of medical Internet Research

DOI: 10.2196/45381

[Aging promotes accumulation of senescent and multiciliated cells in human endometrial epithelium](#) 

Author(s): Marina Loid, Darina Obukhova, Keiu Kask, Apostol Apostolov, Alvin Meltsov, Demis Tserpelis, Arthur van den Wijngaard, Signe Altmäe, Galina Yahubyan, Vesselin Baev, Merli Saare, Maire Peters, Ave Minajeva, Priit Adler, Ganesh Acharya, Kaarel Krjutškov, Maria Nikolova, Felipe Vilella, Carlos Simon, Masoud Zamani Esteki, Andres Salumets

Published in: Human Reproduction Open, Issue 2024, 2024, ISSN 2399-3529

Publisher: Oxford University Press

DOI: 10.1093/hropen/hoae048

[Investigation of the Changes in Concentrations of Vitamin D-Binding Protein and Lactoferrin in Plasma and Peritoneal Fluid of Patients with Endometriosis](#) 

Author(s): Barbara Lisowska-Myjak; Ewa Skarżyńska; Monika Wróbel; Grzegorz Mańka; Mariusz Kiecka; Michał Lipa; Damian Warzecha; Robert Spaczyński; Piotr Piekarski; Beata Banaszewska; Artur Jakimiuk; Tadeusz Issat; Wojciech Rokita; Jakub Młodawski; Maria Szubert; Piotr Sieroszewski; Grzegorz Raba;

Kamil Szczupak; Tomasz Kluz; Marek Kluza; Mirosław Wielgoś; Piotr Laudański
Published in: International Journal of Molecular Sciences, Issue 24, 2023,
Page(s) 7828, ISSN 1422-0067
Publisher: Multidisciplinary Digital Publishing Institute (MDPI)
DOI: 10.3390/ijms24097828

[N-glycans from serum IgG and total serum glycoproteins specific for endometriosis](#)

Author(s): Zsuzsanna Kovács, Fiona Reidy, Louise Glover, Fionnuala M. McAuliffe, Henning Stockmann, Mark T. Kilbane, Patrick J. Twomey, Maire Peters, Merli Saare, Pauline M. Rudd, Meeme Utt, Mary Wingfield, Andres Salumets, Radka Saldova

Published in: Scientific Reports, Issue 13, 2023, Page(s) 10480, ISSN 2045-2322

Publisher: Nature Publishing Group

DOI: 10.1038/s41598-023-37421-5

[The cervical transcriptome changes during the menstrual cycle but does not predict the window of implantation](#)

Author(s): Amruta D S Pathare, Merli Saare, Alvin Meltsov, Ankita Lawarde, Vijayachitra Modhukur, Aive Kalinina, Aire Sekavin, Viktorija Kukushkina, Helle Karro, Andres Salumets, Maire Peters

Published in: Frontiers in Reproductive Health, Issue 5, 2023, Page(s) 1224919, ISSN 2673-3153

Publisher: Frontiers Media SA

DOI: 10.3389/frph.2023.1224919

[The genetic basis of endometriosis and comorbidity with other pain and inflammatory conditions](#)

Author(s): Nilufer Rahmioglu, Sally Mortlock, Marzieh Ghiasi, Peter L. Møller, Lilja Stefansdottir, Geneviève Galarneau, Constance Turman, Rebecca Danning, Matthew H. Law, Yadav Sapkota, Paraskevi Christofidou, Sini Skarp, Ayush Giri, Karina Banasik, Michal Krassowski, Maarja Lepamets, Błażej Marciniak, Margit Nõukas, Danielle Perro, Eeva Sliz, Marta Sobalska-Kwapis, Gudmar Thorleifsson, Nura F. Topbas-

Published in: Nature Genetics, Issue 55, 2023, Page(s) 423–436, ISSN 1061-4036

Publisher: Nature Publishing Group

DOI: 10.1038/s41588-023-01323-z

[The Use of the Neoglycolipid-Based Oligosaccharide Microarray System in the Diagnosis of Endometriosis – Preliminary Study](#)

Author(s): Cezary Wojtyła, Ignacy Tołwiński, Piotr Laudański

Published in: Journal of Inflammation Research, Issue Volume 17, 2024, Page(s) 899-908, ISSN 1178-7031

Publisher: Dove Medical Press Ltd

DOI: 10.2147/jir.s439709

[Evaluation of Proteasome and Immunoproteasome Levels in Plasma and Peritoneal Fluid in Patients with Endometriosis](#) 

Author(s): Monika Wróbel, Zielińska Zuzanna, Łukasz Ołdak, Aleksandra Kalicka, Grzegorz Mańka, Mariusz Kiecka, Robert Z. Spaczyński, Piotr Piekarski, Beata Banaszewska, Artur Jakimiuk, Tadeusz Issat, Wojciech Rokita, Jakub Młodawski, Maria Szubert, Piotr Sieroszewski, Grzegorz Raba, Kamil Szczupak, Tomasz Kluz, Marek Kluza, Piotr Pierzyński, Cezary Wojtyła, Michał Lipa, Damian Warzecha, Mirosław W

Published in: International Journal of Molecular Sciences, Issue 24, 2023, Page(s) 14363, ISSN 1422-0067

Publisher: Multidisciplinary Digital Publishing Institute (MDPI)

DOI: 10.3390/ijms241814363

[Plasma and Peritoneal Poly_ \(ADP-Ribose\) Polymerase Levels in Patients with Endometriosis](#) 

Author(s): Joanna Kacperczyk-Bartnik, Paweł Bartnik, Ksawery Goławski, Janusz Sierdziński, Grzegorz Mańka, Mariusz Kiecka, Michał Lipa, Damian Warzecha, Robert Spaczyński, Piotr Piekarski, Beata Banaszewska, Artur Jakimiuk, Tadeusz Issat, Wojciech Rokita, Jakub Młodawski, Maria Szubert, Piotr Sieroszewski, Grzegorz Raba, Kamil Szczupak, Tomasz Kluz, Marek Kluza, Krzysztof Czajkowski, Mirosław Wielgo

Published in: Biomedicines, Issue 10, 2024, Page(s) 2451, ISSN 2227-9059

Publisher: MDPI

DOI: 10.3390/biomedicines10102451

[Plasma and Peritoneal Fluid ZEB Levels in Patients with Endometriosis and Infertility](#) 

Author(s): Paweł Bartnik; Joanna Kacperczyk-Bartnik; Ksawery Goławski; Janusz Sierdziński; Grzegorz Mańka; Mariusz Kiecka; Michał Lipa; Damian Warzecha; Robert Spaczyński; Piotr Piekarski; Beata Banaszewska; Artur J. Jakimiuk; Tadeusz Issat; Wojciech Rokita; Jakub Młodawski; Maria Szubert; Piotr Sieroszewski; Grzegorz Raba; Kamil Szczupak; Tomasz Kluz; Marek Kluza; Krzysztof Czajkowski; Mirosław Wiel

Published in: Biomedicines; Volume 10; Issue 10; Pages: 2460, Issue 2, 2022, Page(s) 2460, ISSN 2227-9059

Publisher: MDPI

DOI: 10.3390/biomedicines10102460

[Carboxypeptidase Inhibitor LXN Expression in Endometrial Tissue Is Menstrual Cycle Phase-Dependent and Is Upregulated in Endometriotic Lesions](#) 

Author(s): Meruert Sarsenova, Artjom Stepanjuk, Merli Saare, Sergo Kasvandik, Pille Soplepmann, Iveta Mikeltadze, Martin Götte, Andres Salumets, Maire Peters

Published in: Genes, Issue 15, 2024, Page(s) 1086, ISSN 2073-4425

Publisher: Multidisciplinary Digital Publishing Institute (MDPI)

DOI: 10.3390/genes15081086

[Decreased expression of Syndecan- 1 \(CD138\) in the endometrium of adenomyosis patients suggests a potential pathogenetic role](#)

Author(s): Walid Shaalan, Mohamed Gamal Ibrahim, Ariana Plasger, Nourhan Hassan, Ludwig Kiesel, Andreas N. Schüring, Martin Götte

Published in: Acta Obstetrica et Gynecologica Scandinavica, Issue Acta Obstet Gynecol Scand. 2024; 00: 1-9, 2024, Page(s) 1 - 9, ISSN 0001-6349

Publisher: Wiley-Blackwell

DOI: 10.1111/aogs.15012

[An Array SPRi Biosensor for the Determination on PARP-1 in Blood Plasma](#)

Author(s): Zuzanna Zielinska, Lukasz Oldak, Joanna Kacperczyk-Bartnik, Ewa Koc-Żórawska, Marcin Żórawski, Piotr Laudanski, Ewa Gorodkiewicz

Published in: Biomedicines, Issue 11, 2023, Page(s) 602, ISSN 2227-9059

Publisher: MDPI

DOI: 10.3390/biomedicines11020602

[Plasma and Peritoneal Fluid Annexin A2 Levels in Patients with Endometriosis](#)

Author(s): Michal Zygarowicz, Joanna Kacperczyk-Bartnik, Janusz Sierdzinski, Cezary Wojtyla, Piotr Pierzynski, Grzegorz Manka, Mariusz Kiecka, Robert Z Spaczynski, Piotr Piekarski, Beata Banaszewska, Artur Jakimiuk, Tadeusz Issat, Wojciech Rokita, Jakub Mlodawski, Maria Szubert, Piotr Sieroszewski, Grzegorz Raba, Kamil Szczupak, Tomasz Kluz, Marek Kluza, Michal Lipa, Damian Warzecha, Miroslaw Wielgos, Ewa Ko

Published in: Journal of Inflammation Research, Issue Volume 16, 2023, Page(s) 5959-5969, ISSN 1178-7031

Publisher: Dove Medical Press Ltd

DOI: 10.2147/jir.s421389

[Endometriosis and irritable bowel syndrome: similarities and differences in the spectrum of comorbidities](#)

Author(s): M Peters, I Mikeltadze, H Karro, M Saare, Estonian Biobank Research Team , A Salumets, R Mägi, T Laisk

Published in: Human Reproduction, Issue 37, 2022, Page(s) 2186-2196, ISSN 0268-1161

Publisher: Oxford University Press

DOI: 10.1093/humrep/deac140

[Endocrine disrupting chemicals interfere with decidualization of human primary endometrial stromal cells in vitro](#)

Author(s): Darja Lavogina, Nadja Visser, Külli Samuel, Eva Davey, Richelle D. Björvang, Jasmin Hassan, Jani Koponen, Panu Rantakokko, Hannu Kiviranta, Ago Rinken, Matts Olovsson, Andres Salumets, Pauliina Damdimopoulou
Published in: Frontiers in Endocrinology, Issue 13, 2022, ISSN 1664-2392
Publisher: Frontiers Media
DOI: 10.3389/fendo.2022.903505

[Is the leptin/BMI ratio a reliable biomarker for endometriosis? !\[\]\(529949c2c3dadbaa4e538e8c643454bc_img.jpg\)](#)

Author(s): Aleksandra Zyguła, Anna Sankiewicz, Agata Sakowicz, Ewa Dobrzyńska, Agnieszka Dakowicz, Grzegorz Mańka, Mariusz Kiecka, Robert Spaczynski, Piotr Piekarski, Beata Banaszewska, Artur Jakimiuk, Tadeusz Issat, Wojciech Rokita, Jakub Młodawski, Maria Szubert, Piotr Sieroszewski, Grzegorz Raba, Kamil Szczupak, Tomasz Kluza, Marek Kluza, Piotr Pierzyński, Cezary Wojtyła, Michał Lipa, Damian Warzecha
Published in: Frontiers in Endocrinology, Issue 15, 2024, ISSN 1664-2392
Publisher: Frontiers Media S.A.
DOI: 10.3389/fendo.2024.1359182

[Plasma and Peritoneal Fluid Fibronectin and Collagen IV Levels as Potential Biomarkers of Endometriosis !\[\]\(99f58673407353e96a019fbca558fd72_img.jpg\)](#)

Author(s): Damian Warzecha, Julia Załęcka, Grzegorz Mańka, Mariusz Kiecka, Michał Lipa, Robert Spaczyński, Piotr Piekarski, Beata Banaszewska, Artur Jakimiuk, Tadeusz Issat, Wojciech Rokita, Jakub Młodawski, Maria Szubert, Piotr Sieroszewski, Grzegorz Raba, Kamil Szczupak, Tomasz Kluz, Marek Kluza, Mirosław Wielgoś, Łukasz Ołdak, Anna Leśniewska, Ewa Gorodkiewicz, Piotr Laudański
Published in: International Journal of Molecular Sciences, Issue 23, 2024, Page(s) 15669, ISSN 1422-0067
Publisher: Multidisciplinary Digital Publishing Institute (MDPI)
DOI: 10.3390/ijms232415669

[AI-algorithm training and validation for identification of endometrial CD138+ cells in infertility-associated conditions; polycystic ovary syndrome \(PCOS\) and recurrent implantation failure \(RIF\) !\[\]\(339a16584d5da0f0a3ca4e9ec17bf6a1_img.jpg\)](#)

Author(s): Seungbaek Lee, Riikka K. Arffman, Elina K. Komsa, Outi Lindgren, Janette A. Kemppainen, Hanna Metsola, Henna-Riikka Rossi, Anne Ahtikoski, Keiu Kask, Merli Saare, Andres Salumets, Terhi T. Piltonen
Published in: Journal of Pathology Informatics, Issue 15, 2024, Page(s) 100380, ISSN 2153-3539
Publisher: Elsevier
DOI: 10.1016/j.jpi.2024.100380

[Assessment of the Ferroptosis Regulators: Glutathione Peroxidase 4, Acyl-Coenzyme A Synthetase Long-Chain Family Member 4, and Transferrin Receptor 1 in Patient-Derived Endometriosis Tissue !\[\]\(de95854c7ee024cfadc48187bbb781b2_img.jpg\)](#)

Author(s): Lidia A. Mielke Cabello, Gabriela Meresman, Dogus Darici, Noelia Carnovale, Birthe Heitkötter, Miriam Schulte, Nancy A. Espinoza-Sánchez, Quang-Khoi Le, Ludwig Kiesel, Sebastian D. Schäfer, Martin Götte
Published in: Biomolecules, Issue 14, 2024, Page(s) 876, ISSN 2218-273X
Publisher: MDPI
DOI: 10.3390/biom14070876

[The Role of Cadherin 12 \(CDH12\) in the Peritoneal Fluid among Patients with Endometriosis and Endometriosis-Related Infertility](#) 

Author(s): Ksawery Goławski, Robert Soczewica, Joanna Kacperczyk-Bartnik, Grzegorz Mańka, Mariusz Kiecka, Michał Lipa, Damian Warzecha, Robert Spaczyński, Piotr Piekarski, Beata Banaszewska, Artur Jakimiuk, Tadeusz Issat, Wojciech Rokita, Jakub Młodawski, Maria Szubert, Piotr Sieroszewski, Grzegorz Raba, Kamil Szczupak, Tomasz Kluz, Marek Kluza, Mirosław Wielgoś, Ewa Koc-Żórawska, Marcin Żórawski,
Published in: International Journal of Environmental Research and Public Health, Issue 19, 2024, Page(s) 11586, ISSN 1660-4601
Publisher: MDPI
DOI: 10.3390/ijerph191811586

[Impact of Musashi-1 and Musashi-2 Double Knockdown on Notch Signaling and the Pathogenesis of Endometriosis](#) 

Author(s): Theresa Strauß; Burkhard Greve; Michael Gabriel; Nurjannah Achmad; Dhanusha Schwan; Nancy Adriana Espinoza-Sanchez; Antonio Simone Laganà; Ludwig Kiesel; Matti Poutanen; Martin Götte; Sebastian Daniel Schäfer
Published in: International Journal of Molecular Sciences, Issue 23, 2022, Page(s) 2851, ISSN 1422-0067
Publisher: Multidisciplinary Digital Publishing Institute (MDPI)
DOI: 10.3390/ijms23052851

[Corrigendum to “Diagnostic delay of endometriosis in adults and adolescence-current stage of knowledge” \[Adv. Med. Sci. \(2022 Mar\) 67 \(1\) 148-153\]](#) 

Author(s): Monika Wróbel; Mirosław Wielgoś; Piotr Laudański
Published in: Advances in Medical Sciences, Issue 68, 2022, Page(s) 69, ISSN 1896-1126
Publisher: Medical University of Białystok
DOI: 10.1016/j.advms.2022.12.004

[The Influence of Lactoferrin in Plasma and Peritoneal Fluid on Iron Metabolism in Women with Endometriosis](#) 

Author(s): Ewa Skarżyńska, Monika Wróbel, Hanna Zborowska, Mateusz Franciszek Kołek, Grzegorz Mańka, Mariusz Kiecka, Michał Lipa, Damian Warzecha, Robert Spaczyński, Piotr Piekarski, Beata Banaszewska, Artur Jakimiuk, Tadeusz Issat, Wojciech Rokita, Jakub Młodawski, Maria Szubert,

Piotr Sieroszewski, Grzegorz Raba, Kamil Szczupak, Tomasz Kluz, Marek Kluza, Mirosław Wielgoś, Barbara Lisowska-Myjak,

Published in: International Journal of Molecular Sciences, Issue 24, 2024, Page(s) 1619, ISSN 1422-0067

Publisher: Multidisciplinary Digital Publishing Institute (MDPI)

DOI: 10.3390/ijms24021619

Last update: 13 February 2025

Permalink: <https://cordis.europa.eu/project/id/101008193/results>

European Union, 2025