

Mari Palviainen
Supervisor for doctoral programme
Helsinki One Health (HOH)
Doctoral Programme in Integrative Life Science
Doctoral Programme in Biomedicine
Doctoral Programme in Drug Research
Type of address: Postal address.
Finland



Employment

Helsinki One Health (HOH)

University of Helsinki
HELSINGIN YLIOPISTO, Finland
3 Mar 2020 → present

Supervisor for doctoral programme

Doctoral Programme in Integrative Life Science
University of Helsinki
Finland
18 Jul 2023 → present

Supervisor for doctoral programme

Doctoral Programme in Biomedicine
University of Helsinki
Finland
1 Jan 2021 → present

Supervisor for doctoral programme

Doctoral Programme in Drug Research
University of Helsinki
Finland
1 Jan 2014 → present

Publications

Platelet-derived extracellular vesicles induced through different activation pathways drive melanoma progression by functional and transcriptional changes

Tavukcuoglu, Z., Butt, U., de Sousa Faria, A. V., Oesterreicher, J., Holnthoner, W., Laitinen, S., Palviainen, M. & Siljander, P., 18 Dec 2024, In: Cell Communication and Signaling.

Beyond Basic Characterization and Omics: Immunomodulatory Roles of Platelet-Derived Extracellular Vesicles Unveiled by Functional Testing

Palviainen, M., Puutio, J., Ostergaard, R., Eble, J., Maaninka, K., Butt, U., Ndika, J., Kari, O., Kamali-Moghaddam, M., Kjaer-Sorensen, K., Oxvig, C., Aransay, A., Falcon-Perez, J. M., Federico, A., Greco, D., Laitinen, S., Hayashi, Y. & Siljander, P., Oct 2024, In: Journal of Extracellular Vesicles. 13, 10

Increased circulating platelet-derived extracellular vesicles in severe COVID-19 disease

Helin, T., Palviainen, M., Lemponen, M., Maaninka, K., Siljander, P. & Joutsu-Korhonen, L., 21 Feb 2024, In: Platelets (London). 35, 1, 9 p., 2313362.

Tetraspanin profiles of serum extracellular vesicles reflect functional limitations and pain perception in knee osteoarthritis

Mustonen, A.-M., Palviainen, M., Säisänen, L., Karttunen, L., Tollis, S., Esrafilian, A., Reijonen, J., Julkunen, P., Siljander, P.R.-M., Kroger, H., Mäki, J., Arokoski, J. & Nieminen, P., 22 Jan 2024, In: Arthritis research & therapy. 26, 1, 16 p., 33.

Menopause-associated proteomic and lipidomic alterations in high-density lipoprotein: Perimenopause is characterized by smaller triacylglycerols-enriched vesicles.

Lehti, S., Korhonen, T.-M., Soliymani, R., Ruhanen, H., Lähteenmäki, E., Palviainen, M., Siljander, P., Lalowski, M., Käkelä, R., Lehti, M. & Laakkonen, E. K., 10 Jan 2024, (Submitted) In: *BioRxiv beta : the preprint server for biology*.

International Society for Extracellular Vesicles workshop. QuantitatEVs: Multiscale analyses, from bulk to single extracellular vesicle

Basso, M., Gori, A., Nardella, C., Palviainen, M., Holcar, M., Sotiropoulos, I., Bobis-Wozowicz, S., D'Agostino, V. G., Casarotto, E., Ciani, Y., Suetsugu, S., Gualerzi, A., Martin-Jaular, L., Boselli, D., Kashkanova, A., Parisse, P., Lippens, L., Pagliuca, M., Blessing, M. & Frigerio, R. & 22 others, Fourniols, T., Meliciano, A., Fietta, A., Fioretti, P. V., Soroczyńska, K., Piccolini, S., Salviano-Silva, A., Bergese, P., Zocco, D., Chiari, M., Jenster, G., Waldron, L., Milosavljevic, A., Nolan, J., Monopoli, M. P., Witwer, K. W., Bussolati, B., Di Vizio, D., Falcon Perez, J., Lenassi, M., Cretich, M. & Demichelis, F., Jan 2024, In: *Journal of Extracellular Biology*. 3, 1, e137.

OxLDL sensitizes platelets for increased formation of extracellular vesicles capable of finetuning macrophage gene expression

Maaninka, K., Neuvonen, M., Kerkelä, E., Hyvärinen, K., Palviainen, M., Kamali-Moghaddam, M., Federico, A., Greco, D., Laitinen, S., Öörni, K. & Siljander, P. R. M., Jun 2023, In: *European Journal of Cell Biology*. 102, 2, 15 p., 151311.

Effects of intrauterine devices on proteins in the uterine lavage fluid of mares

Alamo, M. M. R. D., Katila, T., Palviainen, M. & Reilas, T., 15 Apr 2021, In: *Theriogenology*. 165, p. 1-9 9 p.

Matrix metalloproteinase (MMP)-2, MMP-9, semen quality and sperm longevity in fractionated stallion semen

Kareskoski, M., Vakkamäki, J., Laukkanen, K., Palviainen, M., Johannisson, A. & Katila, T., 1 Apr 2021, In: *Theriogenology*. 164, p. 93-99 7 p.

Cancer Alters the Metabolic Fingerprint of Extracellular Vesicles

Palviainen, M., Laukkanen, K., Tavukcuoglu, Z., Velagapudi, V., Kärkkäinen, O., Hanhineva, K., Auriola, S., Ranki, A. & Siljander, P., 6 Nov 2020, In: *Cancers*. 12, 11, 18 p., 3292.

Altered Basal Autophagy Affects Extracellular Vesicle Release in Cells of Lagotto Romagnolo Dogs With a Variant ATG4D

Syrjä, P., Palviainen, M., Jokinen, T., Kyöstilä, K., Lohi, H., Roosje, P., Andereg, L., Leeb, T., Sukura, A. & Eskelinen, E.-L., 1 Nov 2020, In: *Veterinary Pathology*. 57, 6, p. 926-935 10 p., 0300985820959243.

Extracellular vesicles from human plasma and serum are carriers of extravesicular cargo-Implications for biomarker discovery

Palviainen, M., Saraswat, M. K., Varga, Z., Kitka, D., Neuvonen, M., Puhka, M., Joenväärä, S., Renkonen, R., Nieuwland, R., Takatalo, M. & Siljander, P. R. M., 19 Aug 2020, In: *PLoS One*. 15, 8, 19 p., 0236439.

Upregulation of CRISP-3 and kallikrein in stallion seminal plasma is associated with poor tolerance of cooled storage

Kareskoski, A. M., Palviainen, M., Johannisson, A. & Katila, T., Apr 2020, In: *Reproduction in Domestic Animals*. 55, 4, p. 496-502 7 p.

Fast isolation of highly specific population of platelet-derived extracellular vesicles from blood plasma by affinity monolithic column, immobilized with anti-human CD61 antibody

Multia, E., Tear, C. J. Y., Palviainen, M., Siljander, P.R.-M. & Riekkola, M.-L., 24 Dec 2019, In: *Analytica Chimica Acta*. 1091, p. 160-168 9 p.

Metabolomics Applied to the Study of Extracellular Vesicles

Williams, C., Palviainen, M., Reichardt, N.-C., Siljander, P.R.-M. & Falcon-Perez, J. M., 12 Nov 2019, In: *Metabolites*. 9, 11, 14 p., 276.

Metabolic signature of extracellular vesicles depends on the cell culture conditions

Palviainen, M., Saari, H., Kärkkäinen, O., Pekkinen, J., Auriola, S., Yliperttula, M., Puhka, M., Hanhineva, K. & Siljander, P.R.-M., 1 Jan 2019, In: *Journal of Extracellular Vesicles*. 8, 1, 12 p., 1596669.

Extracellular vesicles derived from hypoxic colorectal cancer cells confer metastatic phenotype to non-metastatic cancer cells

Endzelins, E., Abols, A., Buss, A., Zandberga, E., Palviainen, M. J., Siljander, P.R.-M. & Line, A., Sept 2018, In: *Anticancer Research*. 38, 9, p. 5139-5147 9 p.

Changes in energy metabolism, and levels of stress-related hormones and electrolytes in horses after intravenous administration of romifidine and the peripheral alpha-2 adrenoceptor antagonist vatinoxan

Pakkanen, S. A. E., de Vries, A., Raekallio, M. R., Mykkänen, A. K., Palviainen, M. J., Sankari, S. M. & Vainio, O. M., 9 May 2018, In: *Acta Veterinaria Scandinavica*. 60, 8 p., 27.

The role of active transport in the transcellular movement of the peripheral alpha(2)-adrenoceptor antagonist, MK-467: An in vitro pilot study

Bennett, R., Palviainen, M., Peltoniemi, M., Vuorilehto, L., Scheinin, M., Raekallio, M. & Vainio, O., Oct 2017, In: *Canadian Journal of Veterinary Research*. 81, 4, p. 318-320 3 p.

Solunulkoiset vesikkelit - isoja asioita pienessä paketissa

Mari, P., Valkonen, S., Lindelöf, A., Puhka, M. & Siljander, P., 2017, In: *Kliin lab : kliinisen laboratorioalan julkaisu : SKKY:n jäsenlehti*. 34, 4, p. 75-79 5 p.

Activation of complement system in kidney after ketoprofen-induced kidney injury in sheep

Palviainen, M. J., Junnikkala, S., Raekallio, M., Meri, S. & Vainio, O., 15 Mar 2015, In: *Acta Veterinaria Scandinavica*. 57, 6 p., 15.

Upregulation of Alveolar Levels of Activin B, but not Activin A, in Lungs of West Highland White Terriers with Idiopathic Pulmonary Fibrosis and Diffuse Alveolar Damage

Lilja-Maula, L., Syrjä, P., Laurila, H. P., Sutinen, E., Palviainen, M., Ritvos, O., Koli, K., Rajamäki, M. M. & Myllärniemi, M., 2015, In: *Journal of Comparative Pathology*. 152, 2-3, p. 192-200 9 p.

Potential urinary biomarkers of acute kidney injury in domestic animals

Palviainen, M., 2014, Helsinki: University of Helsinki. 86 p.

The effect of P-glycoprotein on the transport of the acepromazine and dexmedetomidine, and the peripheral alpha-2-antagonist, MK-467, in vitro

Bennett, R., Palviainen, M. J., Peltoniemi, S. M., Scheinin, M., Raekallio, M. R. & Vainio-Kivinen, O. M., 2014, *The Proceedings of the Association of Veterinary Anaesthetists Spring Meeting, Nottingham, 23-26.4.2014*.

Evaluation of renal impairment in dogs after envenomation by the common European adder (*Vipera berus berus*)

Palviainen, M., Raekallio, M., Vainionpää, M., Lahtinen, H. & Vainio, O., Dec 2013, In: *Veterinary Journal*. 198, 3, p. 723-724 2 p.

Clinical proteomics stretch goals: EuPa 2012 roundtable report

O'Neil, S. E., Palviainen, M. J., Ten Have, S., Filiou, M., Gonzalez, A., Hodge, K., Surinova, S., Penque, D. & Baker, M. S., 2 Aug 2013, In: *Journal of Proteomics*. 88, p. 37-40 4 p.

Proteomic analysis of bronchoalveolar lavage fluid samples obtained from West Highland White Terriers with idiopathic pulmonary fibrosis, dogs with chronic bronchitis, and healthy dogs

Lilja-Maula, L. I. O., Palviainen, M. J., Heikkilä, H. P., Raekallio, M. R. & Rajamäki, M. M., Jan 2013, In: *American Journal of Veterinary Research*. 74, 1, p. 148-154 7 p.

Proteomic profiling of dog urine after European adder (*Vipera berus berus*) envenomation by two-dimensional difference gel electrophoresis

Palviainen, M., Raekallio, M., Vainionpää, M., Kosonen, S. & Vainio, O., 1 Dec 2012, In: *Toxicon*. 60, 7, p. 1228-1234 7 p.

Enantiospecific plasma concentrations of racemic ketoprofen after oral and intramuscular administration in growing pigs
Mustonen, K., Niemi, A., Raekallio, M., Heinonen, M., Peltoniemi, O. A. T., Palviainen, M., Siven, M., Peltoniemi, M. & Vainio, O., 2012, In: *Acta Veterinaria Scandinavica*. 54, 8 p., 55.

Kidney-derived proteins in urine as biomarkers of induced acute kidney injury in sheep

Palviainen, M., Raekallio, M., Rajamäki, M. M., Lindén, J. & Vainio, O., 2012, In: *The Veterinary Journal*. 193, 1, p. 287-289

New Potential Biomarkers for Canine Idiopathic Pulmonary Fibrosis

Lilja-Maula, L., Palviainen, M., Heikkilä, H. P., Raekallio, M. & Rajamäki, M. M., Sept 2011, *Compendium of Conference of the European College of Veterinary Internal Medicine*.

Urinary excretion of complement component C3 associated to acute kidney injury induced by an overdose of NSAID in an animal model

Palviainen, M., Raekallio, M., Rajamäki, M. & Vainio, O., 2011, *Eläinlääkäripäivät Luentokokoelma: Eläinlääkäripäivät 2011, Helsinki 30.11.-2.12.2011*. Fennovet, p. 304-305 2 p. (Eläinlääkäripäivien luentokokoelma).

Early detection of ketoprofen-induced acute kidney injury in sheep as determined by evaluation of urinary enzyme activities

Raekallio, M., Saario-Paunio, E., Rajamäki, M. M., Sankari, S. M., Siven, M. S., Palviainen, M., Peltoniemi, M., Leinonen, M.-E., Honkavaara, M. J. & Vainio, O., Oct 2010, In: *American Journal of Veterinary Research*. 71, 10, p. 1246-1252 7 p.

Activities

Supervisor of Master thesis of Emila Pessi

Palviainen, M. (Supervisor), Siljander, P. (Co-supervisor) & Tavukcuoglu, Z. (Co-supervisor)
May 2023 → Apr 2024

ISEV workshop QuantitatEVs: multiscale analyses: from bulk to single vesicles

Palviainen, M. (Attendee)
31 Jan 2023 → 2 Feb 2023

Aarhus Univeristy

Palviainen, M. (Visiting researcher)
30 Nov 2022 → 2 Dec 2022

Journal of Extracellular Vesicles (Journal)

Palviainen, M. (Reviewer)
26 Sept 2022

Principles of bioscience omics, Lectures 10 cr, NEU-561

Pietiäinen, V. (Teacher), Käkälä, R. (Teacher) & Palviainen, M. (Teacher)
2022 → ...

External examiner (opponent) of Amina Rezza Lebza

Palviainen, M. (Supervisor)
15 Jul 2021

The annual meeting of the International Society for Extracellular Vesicles 2021

Palviainen, M. (Attendee)
18 May 2021 → 21 May 2021

CICbioGUNE

Palviainen, M. (Visiting researcher)
9 Mar 2020 → 13 Mar 2020

Cancers (Journal)

Palviainen, M. (Reviewer)
2 Jan 2020

PhD supervisor of Zeynep Tavukcuoglu

Palviainen, M. (Supervisor)
1 Jan 2020 → ...

PhD supervisor of Johanna Puutio

Palviainen, M. (Supervisor)
2020 → ...

Science Advances (Journal)

Palviainen, M. (Reviewer)
2 Aug 2019

Cells (Journal)

Palviainen, M. (Reviewer)
25 May 2019

Natalia Koralewska

Palviainen, M. (Host) & Siljander, P. (Host)
1 Mar 2019 → 30 Jun 2019

Gordon research Conference, Cell Biology of megakaryocytes and Platelets

Palviainen, M. (Attendee)
23 Feb 2019 → 1 Mar 2019

Academic Medical Center, Amsterdam

Palviainen, M. (Visiting researcher)
21 Jan 2019 → 25 Jan 2019

Tampereen yliopisto

Palviainen, M. (Visiting researcher)
1 Jul 2017 → 31 Jul 2017

Histochemistry and Cell Biology (Journal)

Palviainen, M. (Reviewer)
23 May 2017

ISEV2017

Palviainen, M. (Attendee)
18 May 2017 → 21 May 2017

CICbioGUNE

Palviainen, M. (Visiting researcher)
20 Mar 2017 → 26 Mar 2017

Jesus Gullon Sanz

Siljander, P. (Host) & Palviainen, M. J. (Host)
Mar 2017 → May 2017

International Society of Extracellular Vesicles 2016

Palviainen, M. (Attendee)
4 May 2016 → 7 May 2016

HUPO 2014

Palviainen, M. (Poster Presentation)
5 Oct 2014 → 8 Oct 2014

PLoS One (Journal)

Palviainen, M. (Reviewer)
17 Aug 2014

41st Scandinavian Society for Immunology Meeting

Palviainen, M. (Poster Presentation)
14 Apr 2013 → 17 Apr 2013

The Veterinary Journal (Journal)

Palviainen, M. (Reviewer)
9 Apr 2013

Veterinary Clinical Pathology (Journal)

Palviainen, M. (Reviewer)
18 Jan 2013

EuPa/SSPR Proteomic meeting

Palviainen, M. (Poster Presentation)
9 Jul 2012 → 12 Jul 2012

Finnish Proteomic Society (External organisation)

Palviainen, M. (Board member)
7 May 2012 → ...

HUPO 2011

Palviainen, M. (Poster Presentation)
3 Sept 2011 → 7 Sept 2011

Press/Media

EV Core Web Pages

Palviainen, M. J., Puhka, M. K. & Siljander, P.R.-M.
15/02/2017
1 item of Media coverage

Awards (funding wbs)

SKKY / Mari Palviainen H5510: Suomen Kliinisen Kemian Yhdistys ry/Mari Palviainen H5510

Palviainen, M. (Project manager)
Suomen Kliinisen Kemian Yhdistys ry: €25,000.00
17/04/2019 → 30/04/2022

Projects

EV core facility

Puhka, M. (Project manager), Siljander, P. (Project manager), Palviainen, M. (Participant) & Barreiro, K. (Participant)
01/03/2016 → ...

Parantumaton haava: Verihiutaleperäisten solunulkoisten vesikkelien molekulaariset mekanismit ja teranostiset mahdollisuudet syövässä (PLEASER)

Siljander, P. (Project manager), Butt, U. (Participant), Hartman, R. H. (Participant), Maaninka, K.A.-L. (Participant), Palviainen, M. (Participant), Puutio, J. (Participant), Spinola, K. T. (Participant) & Tavukcuoglu, Z. (Participant)
SUOMEN AKATEMIA Vähäkylä Leena

01/09/2020 → 31/12/2024

Verihiutaleiden uusi vesikkeli-välitteinen rooli kudosten regeneraatiossa

Palviainen, M. (Project manager)

01/09/2018 → 01/09/2021