

DISSEMINATION

Published papers:

17. Exploring the structure and mechanics of thin supported inverse bicontinuous cubic phase lipid films

Andrea Ridolfi, Lucrezia Caselli, Costanza Montis, Tommy Nylander, Debora Berti, Marco Brucale, Francesco Valle

doi: <https://doi.org/10.1101/2021.03.29.437497>

Repository link: <https://www.biorxiv.org/content/10.1101/2021.03.29.437497v1>

16. Stiffness of fluid and gel phase lipid nanovesicles: weighting the contributions of membrane bending modulus and luminal pressurization

Andrea Ridolfi, Lucrezia Caselli, Matteo Baldoni, Costanza Montis, Francesco Mercuri, Debora Berti, Francesco Valle and Marco Brucale.

Doi: <https://doi.org/10.1101/2021.06.17.448831>

Repository link: <https://www.biorxiv.org/content/10.1101/2021.06.17.448831v1.full.pdf>

15. Human milk extracellular vesicles target nodes in interconnected signalling pathways that enhance oral epithelial barrier function and dampen immune responses

Marijke I. Zonneveld, Martijn J.C. van Herwijnen, Marcela M. Fernandez-Gutierrez, Alberta Giovanazzi, Anne Marit de Groot, Marije Kleinjan, Toni M.M. van Capel, Alice J.A.M. Sijts, Leonie S. Taams, Johan Garssen, Esther C. de Jong, Michiel Kleerebezem, Esther N.M. Nolte-'t Hoen, Frank A. Redegeld, Marca H.M. Wauben

J Extracellular Vesicles. 2021, Vol10(5)

ISSN: 2001-3078 , 2001-3078

Doi: <https://doi.org/10.1002/jev2.12071>

Repository link: <https://www.narcis.nl>

14. Regular Industrial Processing of Bovine Milk Impacts the Integrity and Molecular Composition of Extracellular Vesicles

Marije Kleinjan, Martijn JC van Herwijnen, Sten FWM Libregts, RJ Joost van Neerven, Anouk L Feitsma, Marca HM Wauben

The Journal of Nutrition 2021, 25 March 2021, nxab031

DOI: <https://doi.org/10.1093/jn/nxab031>

Repository link: <https://www.narcis.nl>

13. Charge-Based Separation of Micro-and Nanoparticles.

Bao D. Ho, Jason P. Beech and Jonas O. Tegenfeldt.

Micromachines 2020, 11, 1014.

DOI: <https://doi.org/10.3390/mi11111014>

Repository link: <https://zenodo.org/record/4610908#.YFnf8UhKiw4>

12. Fluorescent Labeling of Helminth Extracellular Vesicles Using an In Vivo Whole Organism Approach.

A.T. Boysen, B. Whitehead, A. Stensballe, A. Carnerup, T. Nylander, P. Nejsum.

Biomedicines. 2020 Jul 14;8(7):E213.

<https://doi.org/10.3390/biomedicines8070213>

Repository link: [https://pure.au.dk/portal/da/publications/fluorescent-labeling-of-helminth-extracellular-vesicles-using-an-in-vivo-whole-organism-approach\(6f641b5e-82cd-4feb-8550-dd155d78cc0a\).html](https://pure.au.dk/portal/da/publications/fluorescent-labeling-of-helminth-extracellular-vesicles-using-an-in-vivo-whole-organism-approach(6f641b5e-82cd-4feb-8550-dd155d78cc0a).html)

11. AFM-Based High-Throughput Nanomechanical Screening of Single Extracellular Vesicles.

A. Ridolfi, M. Brucale, C. Montis, L. Caselli, L. Paolini, A. Borup, A.T. Boysen, F. Loria, M.J.C. van Herwijnen, M. Kleinjan, P. Nejsum, N. Zarovni, M.H.M. Wauben, D. Berti, P. Bergese, F. Valle. *Anal Chem.* 2020 Jul 13.

doi: <https://doi.org/10.1021/acs.analchem.9b05716>

Repository link: doi: <https://doi.org/10.1101/854539>

10. Gold nanoparticles interacting with synthetic lipid rafts: an AFM investigation.

A. Ridolfi, L. Caselli, C. Montis, G. Mangiapià, D. Berti, M. Brucale, F. Valle.

J. Microsc. First published: 20 May 2020.

doi: <https://doi.org/10.1111/jmi.12910>

Repository link: <https://doi.org/10.1101/2020.05.03.075101>

9. Biogenic supported lipid bilayers as a tool to investigate nano-bio interfaces

C. Montis, A. Salvatore, F. Valle, L. Paolini, F. Carlà, P. Bergese, D. Berti. *J Colloid Interface Sci.* June 2020, 570: 340-349.

doi: <https://doi.org/10.1016/j.jcis.2020.03.014>

Repository link: <https://flore.unifi.it/handle/2158/1218287#.YDYI05NKhsM>

8. Fourier-transform Infrared (FT-IR) spectroscopy fingerprints subpopulations of extracellular vesicles of different sizes and cellular origin.

L. Paolini, S. Federici, G. Consoli, D. Arceri, A. Radeghieri, I. Alessandri, P. Bergese. *J Extracell Vesicles.* 2020; 9(1): 1741174.

doi: <https://doi.org/10.1080/20013078.2020.1741174>

Repository link: <https://iris.unibs.it/handle/11379/529275>

7. Shedding light on membrane-templated clustering of gold nanoparticles.

C. Montis, L. Caselli, F. Valle, A. Zendrini, F. Carlà, R. Schweins, M. Maccarini, P. Bergese, D. Berti. *J Colloid Interface Sci.* August 2020, 573: 204-214

doi: <https://doi.org/10.1016/j.jcis.2020.03.123>

Repository link: <https://iris.unibs.it/handle/11379/529276>

6. Augmented COlorimetric NANoplasmonic (CONAN) Method for Grading Purity and Determine Concentration of EV Microliter Volume Solutions.

A. Zendrini, L. Paolini, S. Busatto, A. Radeghieri, M. Romano, M. H. M. Wauben, M. J. C. van Herwijnen, P. Nejsum, A. Borup, A. Ridolfi, C. Montis, P. Bergese. *Front Bioeng Biotechnol.* 2019; 7: 452.

doi: <https://doi.org/10.3389/fbioe.2019.00452>

Repository link: <https://iris.unibs.it/handle/11379/528221>

5. Nanoparticles and organized lipid assemblies: from interaction to design of hybrid soft devices.

M. Mendoza, L. Caselli, A. Salvatore, C. Montis* and D. Berti*. *Soft Matter*, 2019,15, 8951-8970.

doi: <https://doi.org/10.1039/C9SM01601E>

Repository link: <https://flore.unifi.it/handle/2158/1175074.2#.YDYmTpNKhsM>

4. The nanostructured secretome.

S. Busatto, A. Zendrini, A. Radeghieri, L. Paolini, M. Romano, M. Presta, P. Bergese. *Biomater Sci.* 2019 Dec 17;8(1):39-63.

doi: <https://doi.org/10.1039/C9BM01007F>

Repository link: <https://iris.unibs.it/handle/11379/526980>

3. Biological membranes in EV biogenesis, stability, uptake, and cargo transfer: an ISEV position paper arising from the ISEV membranes and EVs workshop.

AE. Russell, ..., P. Bergese, ..., M. Wauben et al. *J Extracell Vesicles.* 2019 Nov 8;8(1):1684862.

doi: <https://doi.org/10.1080/20013078.2019.1684862>

Repository link: <https://iris.unibs.it/handle/11379/526637>

2. Active Posts in Deterministic Lateral Displacement Devices.

J.P. Beech, K. Keim, B.D. Ho, C. Guiducci, J.O. Tegenfeldt. *Advanced Materials Technologies* 2019 Sept. 4;9: 1900339.

doi: <https://doi.org/10.1002/admt.201900339>

Repository link: <http://zenodo.org/record/3352780#.XZHEh1Uzapo>

1. Tangential Flow Filtration for Highly Efficient Concentration of Extracellular Vesicles from Large Volumes of Fluid.

S. Busatto, G. Vilanilam, T. Ticer, W.-L. Lin, D.W. Dickson, S. Shapiro, P. Bergese, J. Wolfram. *Cells*. 2018 Dec 16;7(12)

doi: <https://www.mdpi.com/2073-4409/7/12/273>

Repository link: <http://hdl.handle.net/11379/515026>

Research data dissemination:

1. Keynote speaker, Annalisa Radeghieri, at International Conference on Bioengineering and Cell Therapy, 21 September 2018, University of Brescia, Italy.
2. Invited talk at Membrane Biophysics of Exo-Endocytosis: From Model Systems to Cells. 3-6 April 2019 Mandelieu la Napoule (France). Debora Berti.
3. Poster communication at the Spring Symposium 2019 in Danish Society for Parasitology, 5 April 2019, Copenhagen (Denmark). "Modulation of inflammation by helminth-derived EVs". Anne Borup, Bent W. Deleuran, Peter Nejsum.
4. Poster communication at the PhD day at Aarhus University, 25 January 2019, Aarhus (Denmark). "Modulation of inflammation by helminth-derived EVs". Anne Borup, Bent W. Deleuran, Peter Nejsum.
5. Oral presentation. Mini-workshop on Extracellular Vesicles: from biophysical properties to therapeutic applications. Area Science Park Padriciano, 11 April 2019. Organized by EXOTHERA project. "evFOUNDRY: the extracellular vesicle foundry". Lucia Paolini.
6. Oral presentation. Towards an innovation hub on extracellular vesicles research. Consiglio Nazionale delle Ricerche, Area della Ricerca di Milano, MILANO Auditorium 9 May 2019. "evFOUNDRY: the extracellular vesicle foundry". Paolo Bergese.
7. Poster Communication. ISEV2019, 24-28 April 2019, Kyoto (Japan). "evFOUNDRY: the extracellular vesicle foundry". Lucia Paolini, Martijn van Herwijnen.
8. Lecture at ISEV2019, 24-28 April 2019, Kyoto (Japan). "Therapeutic Potential of Milk EVs" during the educational day of the ISEV2019. Martijn van Herwijnen
9. Oral presentation at ISEV2019, 24-28 April 2019, Kyoto (Japan). "Different ATT isoforms are associated to EVs from ATT type II deficient patients". Annalisa Radeghieri
10. Poster communication at ISEV2019, 24-28 April 2019, Kyoto (Japan). "Taxonomy of individual extracellular vesicles by nanomechanics". Andrea Ridolfi, Marco Brucale, Lucia Paolini, Costanza Montis, Debora Berti, Francesco Valle, Paolo Bergese

11. Poster communication at ISEV2019, 24-28 April 2019, Kyoto (Japan). “Fourier-transform Infrared Spectroscopy (FT-IR) to fingerprint EV subpopulations as a whole”. Lucia Paolini, Stefania Federici, Giovanni Consoli, Diletta Arceri, Annalisa Radeghieri, Ivano Alessandri, Paolo Bergese

12. Oral presentation at 9th International Colloids Conference. Young investigator perspective presentation, 16-19 June 2019 Sitges (Spain). "Interaction of inorganic nanoparticles with synthetic and biogenic lipid membranes: fundamental understanding and biomedical applications". Costanza Montis.

13. Oral presentation at Swedish Microfluidics in Life Science 2019, June 2019, Gothenburg (Sweden). “Electrokinetic deterministic lateral displacement”. Bao D. Ho.

14. Oral presentation at 13th International Symposium on Electrokinetics, 12-14 June 2019, Boston (USA). “AC electrokinetics in a deterministic-lateral-displacement device”. Hywel Morgan

15. Oral presentation at 21st International Vacuum Conference (IVC-21), July 2019, Malmö (Sweden). “Cell sorting using Electrokinetic Deterministic Lateral Displacement”. Bao D. Ho

16. Oral presentation at XLVII National meeting of the Physical Chemistry Division of the Italian Chemistry Society, 1-4 July 2019 Rome (Italy). "Interaction of inorganic nanoparticles with synthetic and biogenic lipid membranes: fundamental understanding and biomedical applications". Costanza Montis

17. Oral presentation at XLVII National meeting of the Physical Chemistry Division of the Italian Chemistry Society, 1-4 July 2019 Rome (Italy). "Nanostructured materials interacting with synthetic and natural lipid mesophases: challenges and opportunities". Debora Berti.

18. Poster communication at XLVII National meeting of the Physical Chemistry Division of the Italian Chemistry Society, 1-4 July 2019 Rome (Italy). “Nanomechanical classification of extracellular vesicles”. Andrea Ridolfi, Marco Brucale, Lucia Paolini, Costanza Montis, Debora Berti, Francesco Valle, Paolo Bergese

19. Oral presentation at Fulgsø Seminar for Department of Infectious Diseases, Aarhus University Hospital (Denmark), 3-4 July 2019. “Modulation of inflammation by helminth-derived EVs”. Anne Borup.

20. Research seminar, National University of Singapore (NUS), Dept. of Pharmacy, 30 July 2019, Singapore. Paolo Bergese. Host: Prof. Rachel Ee

21. Oral Presentation at 33rd Conference of the European colloid and interface society (ECIS), 8-13 September, Leuven (Belgium). “Nanostructured Materials interacting with Synthetic and Natural Lipid Mesophases: Challenges and Opportunities”. Debora Berti.

22. Invited talk at 14th Multinational Congress on Microscopy, 15-20 September, Belgrade. Francesco Valle.

23. Invited talk at NanoScientific Forum Europe, 11-13 September, “Nanomechanics of liposomes and extracellular vesicles”. Francesco Valle.

24. Poster communication at 1st annual meeting in The Danish Society of Extracellular Vesicles (DSEV) held in Aarhus, Denmark. 3rd October 2019. Anne Borup
25. Oral presentation at 1st Lugano ExoDay on: “EV subpopulations fingerprinting by Fourier-transform Infrared (FT-IR) spectroscopy”, 25th October 2019 Lugano (Switzerland). Lucia Paolini
26. Poster communication at 23rd International Conference on Miniaturized Systems for Chemistry and Life Sciences (μ TAS 2019), 27-31 October 2019, Basel (Switzerland). “Tuning deterministic lateral displacement with AC electrokinetics”. Hywel Morgan
27. Poster communication at 23rd International Conference on Miniaturized Systems for Chemistry and Life Sciences (μ TAS 2019), 27-31 October 2019, Basel (Switzerland). “Viable/Non-Viable Cell Assay Using Electrokinetic Deterministic Lateral Displacement”. Bao D. Ho
28. Oral presentation at 23rd International Conference on Miniaturized Systems for Chemistry and Life Sciences (μ TAS 2019), 27-31 October 2019, Basel (Switzerland): “The Separation Of Nano-Sized Particles In Micro-Scaled Post Arrays”; Jason P. Beech
29. Keynote, Peter Nejsum. @ 1st EVIta symposium. “A new level of complexity in host-parasite interaction – extracellular vesicles”. Palermo, 6th Nov 2019
30. Oral presentation at 1st EVIta symposium. “Projecting extracellular vesicles in two dimensions”. Palermo, 6th Nov 2019. Paolo Bergese
31. Oral presentation at 1st EVIta symposium. Palermo, 6th Nov 2019. “Nanomechanics of individual extracellular vesicles”. Marco Brucale.
32. Poster communication at 1st EVIta symposium. Palermo, 6th Nov 2019. Lucia Paolini.
33. Keynote, Paolo Bergese at Science through Scanning Probe Microscopy. Bologna, 21-22 Nov 2019
34. Poster communication at The UK Society for Extracellular Vesicles (UKEV) in London, UK, 10th December 2019. “Continuous microfluidic separation of extracellular vesicles from biological samples”. Richard Gillams
35. Poster communication at Workshop “Bill2019” Grenoble, France, 11th-13th December 2019. “Nanomechanical properties of synthetic and natural lipid bilayers through Atomic Force Microscopy (AFM): from Supported Lipid Bilayers (SLBs) to vesicles”. Andrea Ridolfi
36. Poster communication at ISEV Workshop: Open, Reproducible and Standardized EV Research. 2-3 December 2019, Ghent, Belgium. “EV-Hub: a multi-laboratory hub for extensive characterization of extracellular vesicles”. Annalisa Radeghieri.
37. Oral presentation at NANO-DAY IV, December 11-14, 2019 – Univ. Milano-Bicocca, Italy. “Exploiting blood nanoparticles for augmented pathogenesis Identification”. Annalisa Radeghieri/Lucia Paolini.
38. Oral presentation at One-Health Seminar, March 10 2020, Utrecht University, Netherlands. “Integrating proteomics data into in vitro data: linking proteins to signaling cascades”. Martijn van Herwijnen.

39. Oral Presentation at ISEV 2020 Annual virtual meeting, 20-22 July 2020.
 “The CONAN assay: purity grade and concentration of EV microliter formulations by colloidal nanoplasmonics”. Andrea Zendrini.
WINNER of the “Outstanding Oral Abstract Award”

40. Keynote. Paolo Bergese at EVIta society on-line workshop on «EV based Biomarkers». “Physical chemistry fo EV diagnostics”. 25 September 2020

41. Poster entitled “High Throughput Extracellular Vesicle Sorting Using Electrokinetic Deterministic Lateral Displacement”. Conference on Miniaturized Systems for Chemistry and Life Sciences (μ TAS 2020; 4-9 October 2020). Bao Ho.

42. Flash talk “Microfluidic separation of EVs”. UK EV Forum hosted by UK Society for Extracellular Vesicles. 7-8 December 2020, on-line. Ric Gillams.

43. Abstract talk at ISEV Infectious Diseases Meeting, 25-28 January 2021.
 “Comparison of three enrichment methods for immunomodulatory extracellular vesicles from Helminths”. Anne Borup.

44. Poster and flash talk presentation at the Virtual RMS AFM & SPM Meeting, November 3 - 4, 2020. “High throughput nanomechanical study of Extracellular vesicles by AFM”. Andrea Ridolfi.

45. Flash talk “Microfluidic separation of EVs”. UK EV Forum hosted by UK Society for Extracellular Vesicles. 7- 8 December 2020, on-line. Ric Gillams.

46. Poster presentation at MLZ User meeting & German Neutron Scattering Conference 2020, December 8 - 10, 2020. “Curvature effects on the stability of lipid bicontinuous cubic phase films interacting with gold nanoparticles”. Andrea Ridolfi.

47. Abstract talk “Comparison of three enrichment methods for immunomodulatory extracellular vesicles from Helminths”. ISEV Infectious Diseases Meeting, 2