

ROSER VENTO-TORMO, PhD

VenToLab.org | Wellcome Genome Campus, Cambridge (UK)

EDUCATION -

- 2026 **Global adjunct principal investigator.** AITHYRA, Vienna, Austria
- 2019 **Group leader.** Wellcome Sanger Institute, Cambridge, UK
- 2016-2019 **Postdoctoral Fellow.** Sarah Teichmann, Wellcome Sanger Institute, Cambridge, UK
- 2011-2016 **Ph.D. Biomedicine/Immunology.** Esteban Ballestar, University of Barcelona, Spain
- 2009-2011 **M.Sc. Biomedical Biotechnology.** Polytechnic University of Valencia, Spain.
- 2004-2009 **B.Sc. Biotechnology.** Polytechnic University of Valencia, Spain.

FUNDING -

- 2025 PI, **Wellcome-LEAP**, Maximising the unique potential of menstrual fluid to understand and treat Heavy Menstrual bleeding, 09/2025 - 09/2028
- 2024 PI, **Ferring Pharmaceuticals A/S**, Incorporating immune cells into endometrial organoids, 04/2024 - 08/2026,
- 2023 Co-PI, **Wellcome-LEAP**, Female resilience on-chip, 09/2023 – 09/2026,
- 2023 Co-PI, **MSCA - Doctoral Networks**, IMMERGE: Storming Immune Monogenic Conditions through Multiomic and Gene Editing Approaches,
- 2023 PI, **ERC starting grant (UKRI funded)**, Placentomics - Dissecting the regulatory mechanisms driving trophoblast cell fate,
- 2023 Co-PI, **Open Targets**, Immerse – comprehensive CRISPR perturbations with multimodal readouts to unravel targets in immune cells, 05/2023 – 04/2027

Previous funding

- 2023 Co-PI, **NIH**, Integrating tissue engineering and microfluidics to model the spatial niches of the human endometrium in vitro with guidance from in vivo multiomics data, 09/2023 – 05/2028, Terminated prematurely due to USA administration challenges.
- 2022 PI, **CZI**, Cell-Cell Signalling Shaping Reproductive Function,
- 2021 PI, **CZI**, A single-cell map of the paediatric ovary in 3D, 10/2021 – 02/2026,
- 2021 PI, **Wellcome-LEAP**, Engineering Human B Cells Using Synthetic Biology and Tissue Engineering,
- 2021 Co-PI, **NHMRC**, How Do CD4+ T Cells Preserve Memories?,
- 2020 Co-PI, **H2020**, HUGODECA-Human Gonad Development Cell Atlas,
- 2020 Co-PI, **H2020**, HUTER-Human Uterus Atlas,

AWARDS AND PRIZES -

- 2025 **2025 Foulkes Foundation Academy of Medical Sciences Medal**
- 2023 **SRUK/CERU Emerging Talent Award**
- 2023 **Michelson Philanthropies & Science Magazine Prize for Immunology finalist award**
- 2021 **Biochemical Society Early Career Award.**
- 2017 **HFSP long-term Postdoctoral Fellowship.** Wellcome Sanger Institute. Cambridge, United Kingdom. Supervisor: Sarah Teichmann, PhD
- 2016 **EMBO long-term Postdoctoral Fellowship.** Wellcome Sanger Institute. Cambridge, United Kingdom. Supervisor: Sarah Teichmann, PhD
- 2010 **PFIS Predoctoral Fellowship.** Competitive grant from the Spanish Ministry of Health. University of Barcelona. Barcelona, Spain. Supervisor: Esteban Ballestar, PhD
- 2010 **Best Final Project Undergraduate Award.** Polytechnic University of Valencia. Supervisors: José Ramón Murguía and José Gadea.

SELECTED PUBLICATIONS (H index 40) –

Citations = 19772, <https://scholar.google.com/citations?user=CvJcpskAAAAJ&hl=en>

Publications arising from my independent laboratory: final and corresponding (*) author manuscripts

1. Lorenzi V, Icoresi-Mazzeo C, Cassie C, Yayan N, Ruiz-Morales ER, Sancho-Serra C, Colligan R, Wong FCK, Marečková M, Tuck E, Roberts K, Li T, Jacques MA, Ashcroft J, He X, Crespo B, Cakir B, Murray S, Gu Y, Predeus AV, Prete M, Kelava I, Barker R, Garcia-Alonso L, Marioni JC, **Vento-Tormo R***. Spatiotemporal cellular map of the developing human reproductive tract. **Nature**. 2026 Feb;650(8101):428-437

2. Vilarrasa-Blasi R, Kim S, Pett JP, Korzhenevich J, Svaton M, Suo C, Wong FCK, Nashchekina O, Zhou D, Colligan R, Michaels YS, Zimmerman C, Troule K, Aliee H, Lorenzi V, Moullet M, Sancho-Serra C, Carra D, Morsut L, Prigmore E, Prete M, Kelava I, Teichmann SA, Warnatz K, Javierre BM, Garcia-Alonso L, Zandstra PW, Rizzi M, **Vento-Tormo R***. Decoding human B cell ontogeny in prenatal and adult bone marrow and in vitro models via single-cell multiomics. **Nature Genetics under revision**.
3. Armingol E, Ashcroft J, Mareckova M, Prete M, Lorenzi V, Icoresi Mazzeo C, Lee JTH, Moullet M, Bayraktar OA, Becker C, Zondervan K, Garcia-Alonso L, Lewis NE, **Vento-Tormo R***. Atlas-scale metabolic activities inferred from single-cell and spatial transcriptomics. **Cell Systems under revision**. biorxiv (2025). doi: <https://doi.org/10.1101/2025.05.09.653038>
4. Troulé K, Petryszak R, Cakir B, Cranley J, Harasty A, Prete M, Tuong ZK, Teichmann SA, Garcia-Alonso L, **Vento-Tormo R***. CellPhoneDB v5: inferring cell-cell communication from single-cell multiomics data. **Nat Protoc**. 2025 Mar 25.
5. Massalha H, Trinh MK, Armingol E, Tuck L, Predeus A, Mazin P, Sancho-Serra C, Oszlanczi A, Wood Y, Parks C, Ogbonah T, Whitfield HJ, Kelava I, Behjati S*, **Vento-Tormo R***, Schoenmakers N*. A developmental cell atlas of the human thyroid gland. **Nat Genetics under revision**. biorxiv (2024). doi: <https://doi.org/10.1101/2024.08.22.609152>.
6. Aliee H, Kapl F, Pham D, Cakir B, Jimba T, Cranley J, Teichmann SA, Meyer KB*, **Vento-Tormo R***, Theis FJ*. inVAE: Conditionally invariant representation learning for generating multivariate single-cell reference maps. **Nat Genet under revision**. biorxiv (2024). doi: <https://doi.org/10.1101/2024.12.06.627196>.
7. Rodríguez-Ubreva J, Calafell-Segura J, Calvillo CL, Keller B, Ciudad L, Handfield LF, de la Calle-Fabregat C, Godoy-Tena G, Andrés-León E, Hoo R, Porter T, Prigmore E, Hofmann M, Decker A, Martín J, **Vento-Tormo R***, Warnatz K*, Ballestar E*. COVID-19 progression and convalescence in common variable immunodeficiency patients show dysregulated adaptive immune responses and persistent type I interferon and inflammasome activation. **Nat Commun**. 2024 Nov 28;15(1):10344.
8. Marečková M, Garcia-Alonso L, Moullet M, Lorenzi V, Petryszak R, Sancho-Serra C, Oszlanczi A, Icoresi Mazzeo C, Wong F.C.K, Kelava I, Hoffman S, Krassowski M, Garbutt K, Kelava I, Gaitskell K, Yancheva S, Von Woon E, Male V, Granne I, Hellner K, Mahbubani KT, Saeb-Parsy K, Lotfollahi M, Prigmore E, Southcombe J, Dragovic RA, Becker CM, Zondervan KT*, **Vento-Tormo R***. An integrated single-cell reference atlas of the human endometrium. **Nat Genet**. 2024 Sep;56(9):1925-1937.
9. Hoo R, Ruiz-Morales ER, Kelava I, Rawat M, Mazzeo CI, Tuck E, Sancho-Serra C, Chelaghma S, Predeus AV, Murray S, Fernandez-Antoran D, Waller RF, Álvarez-Errico D, Lee MCS*, **Vento-Tormo R***. Acute response to pathogens in the early human placenta at single-cell resolution. **Cell Syst**. 2024 May 15;15(5):425-444.e9.
10. Li Q, Sharkey A, Sheridan M, Magistrati E, Arutyunyan A, Huhn O, Sancho-Serra C, Anderson H, McGovern N, Esposito L, Fernando R, Gardner L, **Vento-Tormo R***, Turco MY*, Moffett A*. Human uterine natural killer cells regulate differentiation of extravillous trophoblast early in pregnancy. **Cell Stem Cell**. 2024 Feb 1;31(2):181-195.e9.
11. Barmada A, Handfield LF, Godoy-Tena G, de la Calle-Fabregat C, Ciudad L, Arutyunyan A, Andrés-León E, Hoo R, Porter T, Oszlanczi A, Richardson L, Calero-Nieto FJ, Wilson NK, Marchese D, Sancho-Serra C, Carrillo J, Presas-Rodríguez S, Ramo-Tello C, Ruiz-Sanmartin A, Ferrer R, Ruiz-Rodríguez JC, Martínez-Gallo M, Munera-Campos M, Carrascosa JM, Göttgens B, Heyn H, Prigmore E, Casafont-Solé I, Solanich X, Sánchez-Cerrillo I, González-Álvaro I, Raimondo MG, Ramming A, Martin J, Martínez-Cáceres E, Ballestar E*, **Vento-Tormo R***, Rodríguez-Ubreva J*. Single-cell multi-omics analysis of COVID-19 patients with pre-existing autoimmune diseases shows aberrant immune responses to infection. **Eur J Immunol**. 2024 Jan;54(1):e2350633.
12. Arutyunyan A, Roberts K, Troulé K, Wong FCK, Sheridan MA, Kats I, Garcia-Alonso L, Velten B, Hoo R, Ruiz-Morales ER, Sancho-Serra C, Shilts J, Handfield LF, Marconato L, Tuck E, Gardner L, Mazzeo CI, Li Q, Kelava I, Wright GJ, Prigmore E, Teichmann SA, Bayraktar OA*, Moffett A*, Stegle O*, Turco MY*, **Vento-Tormo R***. Spatial multiomics map of trophoblast development in early pregnancy. **Nature**. 2023 Apr;616(7955):143-151.
13. Garcia-Alonso L, Lorenzi V, Icoresi Mazzeo C, Alves-Lopes JP, Roberts K, Sancho-Serra C, Engelbert J, Marečková M, Gruhn WH, Botting RA, Li T, Crespo B, van Dongen S, Kiselev V, Prigmore E, Moffett A, Chedotal A, Herbert M, Bayraktar O, Surani A, Haniffa M, **Vento-Tormo R***. Single-cell roadmap of human gonadal development. **Nature**. 2022 Jul;607(7919):540-547.
14. Alsinet C, Primo MN, Lorenzi V, Bello E, Kelava I, Jones CP, Vilarrasa-Blasi R, Sancho-Serra C, Knights AJ, Park JE, Wyspianska BS, Trynka G, Tough DF, Bassett A, Gaffney DJ*, Alvarez-Errico D*, **Vento-Tormo R***. Robust temporal map of human in vitro myelopoiesis using single cell genomics. **Nat Commun**. 2022 May 24;13(1):2885.

15. Rodríguez-Ubrevia J, Arutyunyan A, Bonder MJ, Del Pino-Molina L, Clark SJ, de la Calle-Fabregat C, Garcia-Alonso L, Handfield LF, Ciudad L, Andrés-León E, Krueger F, Català-Moll F, Rodríguez-Cortez VC, Polanski K, Mamanova L, van Dongen S, Kiselev VY, Martínez-Saavedra MT, Heyn H, Martín J, Warnatz K, López-Granados E, Rodríguez-Gallego C, Stegle O, Kelsey G, **Vento-Tormo R***, Ballestar E*. Single-cell Atlas of common variable immunodeficiency shows germinal center-associated epigenetic dysregulation in B-cell responses. **Nat Commun.** 2022 Apr 1;13(1):1779.
16. Garcia-Alonso L, Handfield L-F, Roberts K, Nikolakopoulou K, Gardner L, Fernando RC, Woodhams B, Arutyunyan A, Polanski K, Hoo R, Sancho-Serra C, Li T, Kwakwa K, Tuck E, Kleshchevnikov V, Tarkowska A, Porter T, Icoresi Mazzeo C, van Dongen S, Dabrowska M, Vaskivskiy V, Mahbubani KT, Park J-E, Jimenez-Linan M, Campos L, Kiselev V, Lindskog C, Ayuk P, Prigmore E, Stratton MR, Saeb-Parsy K, Moffett A, Moore L, Bayraktar OA*, Teichmann SA*, Turco MY*, **Vento-Tormo R***. Mapping the temporal and spatial dynamics of the human endometrium in vivo and in vitro. **Nature Genetics.** 2021 Dec;53(12):1698-1711.
17. Molè MA, Coorens THH, Shahbazi MN, Weberling A, Weatherbee BAT, Gantner CW, Sancho-Serra C, Richardson L, Drinkwater A, Syed N, Engley S, Snell P, Christie L, Elder K, Campbell A, Fishel S, Behjati S*, **Vento-Tormo R***, Zernicka-Goetz M*. A single cell characterisation of human embryogenesis identifies pluripotency transitions and putative anterior hypoblast centre. **Nat Commun.** 2021 Jun 17;12(1):3679
18. Efremova M, Vento-Tormo M, Teichmann SA, **Vento-Tormo R*** CellPhoneDB: inferring cell-cell communication from combined expression of multi-subunit ligand-receptor complexes. **Nat Protoc.** 2020 Apr;15(4):1484-1506.

Publications arising from post-doctoral and PhD work

19. **Vento-Tormo R**, Efremova M, Botting RA, Turco MY, Vento-Tormo M, Meyer KB, Park JE, Stephenson E, Polański K, Goncalves A, Gardner L, Holmqvist S, Henriksson J, Zou A, Sharkey AM, Millar B, Innes B, Wood L, Wilbrey-Clark A, Payne RP, Ivarsson MA, Lisgo S, Filby A, Rowitch DH, Bulmer JN, Wright GJ, Stubbington MJT, Haniffa M, Moffett A, Teichmann SA. (2018) Single-cell reconstruction of the early maternal-fetal interface in humans. **Nature.** 2018 563(7731):347-353.
20. **Vento-Tormo R**, Álvarez-Errico D, Garcia-Gomez A, Hernández-Rodríguez J, Buján S, Basagaña M, Méndez M, Yagüe J, Juan M, Aróstegui JI, Ballestar E. DNA demethylation of inflammasome-associated genes is enhanced in patients with cryopyrin-associated periodic syndromes. **Journal of Allergy and Clinical Immunology.** 2017. 139(1):202-211.
21. **Vento-Tormo R**, Company C, Rodríguez-Ubrevia J, de la Rica L, Urquiza JM, Javierre BM, Sabarinathan R, Luque A, Esteller M, Aran JM, Álvarez-Errico D, Ballestar E. IL-4 orchestrates STAT6-mediated DNA demethylation leading to dendritic cell differentiation. **Genome Biology.** 2016. 17(1):4.
22. **Vento-Tormo R**, Álvarez-Errico D, Rodríguez-Ubrevia J, Ballestar E. Gains of DNA methylation in myeloid terminal differentiation are dispensable for gene silencing but influence the differentiated phenotype. **FEBS Journal.** 2015. 282, 1815-1825.
23. **Vento-Tormo R**, Rodríguez-Ubrevia J, Lisio LD, Islam AB, Urquiza JM, Hernando H, López-Bigas N, Shannon-Lowe C, Martínez N, Montes-Moreno S, Piris MA, Ballestar E. NF-κB directly mediates epigenetic deregulation of common microRNAs in Epstein-Barr virus-mediated transformation of B-cells and in lymphomas. **Nucleic Acids Research.** 2014. 42, 11025-11039

Reviews and comments

24. Atkeson T, Wilson SB, Ruiz-Morales ER, Little MH, **Vento-Tormo R**, Neavin D, Powell JE. A novel paradigm for single-cell annotation in stem cell research. **Stem Cell Reports.** 2025 Dec 9;20(12):102707.
25. **Vento-Tormo R***. How machine learning can help us understand what we have grown in the dish. **Nat Rev Mol Cell Biol.** 2025 Jun 10.
26. Wong FC, Kim CE, Garcia-Alonso L, **Vento-Tormo R***. The human endometrium: atlases, models, and prospects. **Curr Opin Genet Dev.** 2025 Mar 26;92:102341. Online ahead of print.
27. Moffitt JR, Li M, Nie Q, Kanemaru K, Teichmann SA, Dar D, Kagohara LT, Itzkovitz S, **Vento-Tormo R**, Yanai I, Fertig EJ, Theis FJ. What is the main bottleneck in deriving biological understanding from spatial transcriptomic profiling? **Cell Syst.** 2025 Feb 19;16(2):101200.
28. Gilbertson RJ, Behjati S, Böttcher AL, Bronner ME, BurrIDGE M, Clausing H, Clifford H, Danaher T, Donovan LK, Drost J, Eggermont AMM, Emerson C, Flores MG, Hamerlik P, Jabado N, Jones A, Kaessmann H, Kleinman CL, Kool M, Kutscher LM, Lindberg G, Linnane E, Marioni JC, Maris JM, Monje M, Macaskill A, Niederer S, Northcott PA,

- Peeters E, Plieger-van Solkema W, Preußner L, Rios AC, Rippe K, Sandford P, Sgourakis NG, Shlien A, Smith P, Straathof K, Sullivan PJ, Suvà ML, Taylor MD, Thompson E, **Vento-Tormo R**, Wainwright BJ, Wechsler-Reya RJ, Westermann F, Winslade S, Al-Lazikani B, Pfister SM. The Virtual Child. **Cancer Discov.** **2024** Apr 4;14(4):663-668.
- 29. Vento-Tormo R***, Vilarrasa-Blasi R. Cell-level reference maps for the human body take shape. **Nature.** **2023** Jul;619(7970):467-468.
- 30.** Theis FJ, Dar D, **Vento-Tormo R**, Vicković S, Wang L, Kagohara LT, Rendeiro AF, Joyce JA. What do you most hope spatial molecular profiling will help us understand? **Cell Syst.** **2023** Jun 21;14(6):423-427.
- 31. Vento-Tormo R***. Single-cell omics meets organoid cultures. **Nat Rev Genet.** **2023** Aug;24(8):492.
- 32.** Garcia-Alonso L, Zondervan KT, **Vento-Tormo R***. A novel resource to study endometriosis at the single-cell level. **Nat Rev Endocrinol.** **2023** May;19(5):256-257.
- 33. Vento-Tormo R***. Decoding foreign antigen tolerance. **Science.** **2023** Feb 17;379(6633):655.
- 34.** Lorenzi V, **Vento-Tormo R***, Garcia-Alonso L*. Human gonadal development, cell by cell. **Clin Transl Med.** **2022** Dec;12(12):e1123
- 35.** Williams CG, Lee HJ, Asatsuma T, **Vento-Tormo R**, Haque A. An introduction to spatial transcriptomics for biomedical research. **Genome Med.** **2022** Jun 27;14(1):68.
- 36.** Marečková M, Massalha H, Lorenzi V, **Vento-Tormo R***. Mapping Human Reproduction with Single-Cell Genomics. **Annu Rev Genomics Hum Genet.** **2022** Aug 31;23:523-547.
- 37.** Hoo R, Nakimuli A, **Vento-Tormo R***. Innate immune mechanisms to protect against infection at the human maternal-fetal interface. **Front Immunol.** **2020** Sep 10;11:2070.
- 38.** Svensson V, **Vento-Tormo R**, Teichmann SA. Exponential scaling of single-cell RNA-seq in the last decade. **Nature Protocols.** **2018** 13(4):599-604
- 39.** Álvarez-Errico D, **Vento-Tormo R**, Sieweke M & Ballestar E. Epigenetic control of myeloid cell differentiation, identity and function. **Nature Reviews Immunology.** **2014**, 15, 7-17
- Additional publications as collaborator**
- 40.** Hu W, Sancho-Serra C, Gantner CW, Szafranska HM, Solanky N, Metcalfe K, **Vento-Tormo R**, Zernicka-Goetz M. Atlas of amnion development during the first trimester of human pregnancy. **Nat Cell Biol.** **2025** Jul;27(7):1175-1185.
- 41.** Michaels YS, Major MC, Bonham-Carter B, Zhang J, Heydari T, Edgar JM, Siu MM, Greenstreet L, Vilarrasa-Blasi R, Kim S, Castle EL, Forrow A, Ibanez-Rios MI, Zimmerman C, Chung Y, Stach T, Werschler N, Knapp DJHF, **Vento-Tormo R**, Schiebinger G, Zandstra PW. Tracking the gene expression programs and clonal relationships that underlie mast, myeloid, and T lineage specification from stem cells. **Cell Syst.** **2024** Dec 18;15(12):1245-1263.e10.
- 42.** Gopee NH, Winheim E, Olabi B, Admane C, Foster AR, Huang N, Botting RA, Torabi F, Sumanaweera D, Le AP, Kim J, Verger L, Stephenson E, Adão D, Ganier C, Gim KY, Serdy SA, Deakin C, Goh I, Steele L, Annusver K, Miah MU, Tun WM, Moghimi P, Kwakwa KA, Li T, Basurto Lozada D, Rumney B, Tudor CL, Roberts K, Chipampe NJ, Sidhpura K, Englebert J, Jardine L, Reynolds G, Rose A, Rowe V, Pritchard S, Mulas I, Fletcher J, Popescu DM, Poyner E, Dubois A, Guy A, Filby A, Lisgo S, Barker RA, Glass IA, Park JE, **Vento-Tormo R**, Nikolova MT, He P, Lawrence JEG, Moore J, Ballereau S, Hale CB, Shanmugiah V, Horsfall D, Rajan N, McGrath JA, O'Toole EA, Treutlein B, Bayraktar O, Kasper M, Progzatzky F, Mazin P, Lee J, Gambardella L, Koehler KR, Teichmann SA, Haniffa M. A prenatal skin atlas reveals immune regulation of human skin morphogenesis. **Nature.** **2024** Nov;635(8039):679-689.
- 43.** Irie N, Lee SM, Lorenzi V, Xu H, Chen J, Inoue M, Kobayashi T, Sancho-Serra C, Drousioti E, Dietmann S, **Vento-Tormo R**, Song CX, Surani MA. DMRT1 regulates human germline commitment. **Nat Cell Biol.** **2023** Oct;25(10):1439-1452.
- 44.** Goh I, Botting RA, Rose A, Webb S, Engelbert J, Gitton Y, Stephenson E, Quiroga Londoño M, Mather M, Mende N, Imaz-Rosshandler I, Yang L, Horsfall D, Basurto-Lozada D, Chipampe NJ, Rook V, Lee JTH, Ton ML, Keitley D, Mazin P, Vijayabaskar MS, Hannah R, Gambardella L, Green K, Ballereau S, Inoue M, Tuck E, Lorenzi V, Kwakwa K, Alsinet C, Olabi B, Miah M, Admane C, Popescu DM, Acres M, Dixon D, Ness T, Coulthard R, Lisgo S, Henderson DJ, Dann E, Suo C, Kinston SJ, Park JE, Polanski K, Marioni J, van Dongen S, Meyer KB, de Bruijn M, Palis J, Behjati S, Laurenti E, Wilson NK, **Vento-Tormo R**, Chédotal A, Bayraktar O, Roberts I, Jardine L, Göttgens B, Teichmann SA, Haniffa M. Yolk sac cell atlas reveals multiorgan functions during human early development. **Science.** **2023** Aug 18;381(6659):eadd7564.

45. Godoy-Tena G, Barmada A, Morante-Palacios O, de la Calle-Fabregat C, Martins-Ferreira R, Ferreté-Bonastre AG, Ciudad L, Ruiz-Sanmartín A, Martínez-Gallo M, Ferrer R, Ruiz-Rodriguez JC, Rodríguez-Ubreva J, **Vento-Tormo R**, Ballestar E. Epigenetic and transcriptomic reprogramming in monocytes of severe COVID-19 patients reflects alterations in myeloid differentiation and the influence of inflammatory cytokines. **Genome Med.** 2022 Nov 29;14(1):134.
46. Shilts J, Severin Y, Galaway F, Müller-Siennerth N, Chong ZS, Pritchard S, Teichmann S, **Vento-Tormo R**, Snijder B, Wright GJ. A physical wiring diagram for the human immune system. **Nature.** 2022 Aug;608(7922):397-404.
47. McGlacken-Byrne SM, Del Valle I, Quesne Stabej PL, Bellutti L, Garcia-Alonso L, Ocaka LA, Ishida M, Suntharalingham JP, Gagunashvili A, Ogunbiyi OK, Mistry T, Buonocore F; GOSgene, Crespo B, Moreno N, Niola P, Brooks T, Brain CE, Dattani MT, Kelberman D, **Vento-Tormo R**, Lagos CF, Livera G, Conway GS, Achermann JC. Pathogenic variants in the human m6A reader YTHDC2 are associated with primary ovarian insufficiency. **JCI Insight.** 2022 Mar 8;7(5):e154671. doi: 10.1172/jci.insight.154671.
48. Kleshchevnikov V, Shmatko A, Dann E, Aivazidis A, King HW, Li T, Elmentaite R, Lomakin A, Kedlian V, Gayoso A, Jain MS, Park JS, Ramona L, Tuck E, Arutyunyan A, **Vento-Tormo R**, Gerstung M, James L, Stegle O, Bayraktar OA. Cell2location maps fine-grained cell types in spatial transcriptomics. **Nat Biotechnol.** 2022 May;40(5):661-671.
49. Coorens THH, Oliver TRW, Sanghvi R, Sovio U, Cook E, **Vento-Tormo R**, Haniffa M, Young MD, Rahbari R, Sebire N, Campbell PJ, Charnock-Jones DS, Smith GCS, Behjati S. Inherent mosaicism and extensive mutation of human placentas. **Nature.** 2021 Apr;592(7852):80-85.
50. Reynolds G, Vegh P, Fletcher J, Poyner EFM, Stephenson E, Goh I, Botting RA, Huang N, Olabi B, Dubois A, Dixon D, Green K, Maunder D, Engelbert J, Efremova M, Polański K, Jardine L, Jones C, Ness T, Horsfall D, McGrath J, Carey C, Popescu DM, Webb S, Wang XN, Sayer B, Park JE, Negri VA, Belokhvostova D, Lynch MD, McDonald D, Filby A, Hagai T, Meyer KB, Husain A, Coxhead J, **Vento-Tormo R**, Behjati S, Lisgo S, Villani AC, Bacardit J, Jones PH, O'Toole EA, Ogg GS, Rajan N, Reynolds NJ, Teichmann SA, Watt FM, Haniffa M. Developmental cell programs are co-opted in inflammatory skin disease. **Science.** 2021 Jan 22;371(6527):eaba6500
51. Davidson S, Efremova M, Riedel A, Mahata B, Pramanik J, Huuhtanen J, Kar G, **Vento-Tormo R**, Hagai T, Chen X, Haniffa MA, Shields JD, Teichmann SA. Single-Cell RNA Sequencing Reveals a Dynamic Stromal Niche That Supports Tumor Growth. **Cell Rep.** 2020 May 19;31(7):107628.
52. Park JE, Botting RA, Domínguez Conde C, Popescu DM, Lavaert M, Kunz DJ, Goh I, Stephenson E, Ragazzini R, Tuck E, Wilbrey-Clark A, Roberts K, Kedlian VR, Ferdinand JR, He X, Webb S, Maunder D, Vandamme N, Mahbubani KT, Polanski K, Mamanova L, Bolt L, Crossland D, de Rita F, Fuller A, Filby A, Reynolds G, Dixon D, Saeb-Parsy K, Lisgo S, Henderson D, **Vento-Tormo R**, Bayraktar OA, Barker RA, Meyer KB, Saeys Y, Bonfanti P, Behjati S, Clatworthy MR, Taghon T, Haniffa M, Teichmann SA. A cell atlas of human thymic development defines T cell repertoire formation. **Science.** 2020 Feb 21;367(6480). pii: eaay3224.
53. Stewart BJ, Ferdinand JR, Young MD, Mitchell TJ, Loudon KW, Riding AM, Richoz N, Frazer GL, Staniforth JUL, Vieira Braga FA, Botting RA, Popescu DM, **Vento-Tormo R**, Stephenson E, Cagan A, Farndon SJ, Polanski K, Efremova M, Green K, Del Castillo Velasco-Herrera M, Guzzo C, Collord G, Mamanova L, Aho T, Armitage JN, Riddick ACP, Mushtaq I, Farrell S, Rampling D, Nicholson J, Filby A, Burge J, Lisgo S, Lindsay S, Bajenoff M, Warren AY, Stewart GD, Sebire N, Coleman N, Haniffa M, Teichmann SA, Behjati S, Clatworthy MR. Spatiotemporal immune zonation of the human kidney. **Science.** 2019 365(6460):1461-1466.
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SCIENCE COMMUNICATION -

Organiser & chair

2025-onwards Co-lead of project Gynaware for Science dissemination of reproductive biology
2022-onwards Organiser of WCS - Single Cell Biology (2022, 2024)
2022 Chair of “predictive models of stem cell behaviour” at the ISSCR Annual Meeting
2020-2021 Co-chair of “The Wellcome Sanger Institute Seminar Series” (on-line, open)
2019-onwards Coordinator of the reproductive network from Human Cell Atlas (www.humancellatlas.org)

Selected invited speaker to national and international meetings (since being a group leader)

Total = 87

2026 3R LÄND conference – Tübingen (Germany) (Keynote)
2026 Probing Human Disease using Single-Cell Technologies Conference, Cancun (Mexico)
2026 Fertility 2026, Edinburgh (UK)
2025 Computational Biology Symposium, Lausanne (Switzerland)
2025 ISMB/ECCB, Liverpool (UK) (Keynote)
2025 UK Functional Genomics Initiative inaugural meeting, Exeter-Devon (UK)
2025 OZ Single Cell 2025, Sydney (Australia)
2025 European Phagocyte Workshop, Madrid (Spain)
2025 Women's Health: Genes, Data and Advancing Approaches Cambridge (UK)
2024 4th Fusion Conference on Epigenetics, Malta (Italy)
2024 ECI (European Congress of Immunology), Dublin (Ireland)
2024 SRI (Society for Reproductive Investigation), Dublin (Ireland) (Keynote)
2024 ESHG (The European Society of Human Genetics), Berlin (Germany)
2024 EMBO meeting: Tissue-resident immune cells in health and disease, Marseille (France)
2023 MPS (MicroPhysiological Systems) World Summit, Berlin (Germany) (Keynote)
2023 ESHRE (European Society of Human Reproduction & Embryology), Copenhagen (Denmark)
2023 Spatial Multi-Omics symposia Lausanne (Switzerland).
2022 The power of genomic technologies, Cell Press conference, Shanghai, China (Virtual meeting)
2022 FEBS course: Exploring the human proteome, Stockholm (Sweden) (Keynote)
2022 Gordon Research Conference: Mammalian reproduction, Vermont (USA)
2022 ISSCR annual meeting: 20th anniversary, San Francisco (USA)
2022 EMBO Practical course: Spatial analysis of gene expression in tissues (online) (Keynote)
2021 The Single Cell Revolution and Precision Medicine. Hans Sigrist symposium. (online)
2021 8th Annual Conference: SBI2 High Content (online)
2021 Global health integrated organoid convening. Bill & Melinda Gates foundation. (online)
2021 EMBL Conference: Visualizing Biological Data (VIZBI2021) (online)
2021 Spatially resolved single-cell biology D-BSSE (online)
2021 Keystone Symposia Single Cell Biology (online)
2020 Annual ACR (American College of Rheumatology) Convergence meeting (online).
2020 Single Cell Biology Conference, Wellcome Genome Campus, Hinxton, UK (online).

- 2020 Applied Bioinformatics in Life Sciences, Leuven (Belgium)
- 2020 Single Cell Genomics Day: A Practical Workshop (Satija Lab), New York (USA).
- 2019 18th CRG Symposium: single cell and single molecule biology, Barcelona (Spain).
- 2019 Finnish Society for Immunology: Single Cell Immunology, Turku (Finland).
- 2019 Human Genome Meeting, Seoul (South Korea).
- 2019 Society for Reproductive Investigation, Paris (France).
- 2019 Single-Cell Symposium, Paris (France).

Selected Invited lectures (since being a group leader)

Total = 33

- 2025 Hudson Institute seminars, Melbourne (Australia)
- 2025 MIT Biological Engineering Seminars, Boston (USA)
- 2024 Karolinska Institute (Sweden)
- 2024 CRG, Barcelona (Spain)
- 2024 IRB, Barcelona (Spain)
- 2024 Max Planck Institute, Berlin (Germany)
- 2023 CNIC (Spanish National Center for Cardiovascular Research), Madrid (Spain)
- 2022 King's College, CIBCI, London (UK)
- 2022 Boston Children's Hospital lectures (online)
- 2022 Neurogenomics: Computational Molecular Neuroscience at MIT (online)
- 2022 GBSBC Seminar at USCD (San Diego, CA) (online)
- 2021 Biochemistry Focus ECR webinar series 2021 Early Career Research Award (online)
- 2021 Caltech/USC DevBio seminar series (online)
- 2021 Joint Oncology/Institute of Reproductive & Developmental Biology (IRDB) Seminar Series
- 2020 Institute for Research in Barcelona (IRB) (online)
- 2019 Institute for Global Health (ISGlobal), Barcelona (Spain)
- 2019 University College London (UCL), London (UK)
- 2019 Universite libre de Bruxelles, Brussels (Belgium)

TRAINING OF NEXT GENERATION -

I have supervised 4 PhD students: Dr. Anna Arutyunyan (Cambridge University), Dr. Magda Mareckova (University of Oxford), Dr. Elias Ruiz-Morales (Cambridge University), and Dr. Valentina Lorenzi (Cambridge University), and 5 postdoctoral fellows: Dr. Hana Aliee, Dr. Hassan Massalha, Dr. Kevin Troule, Dr. Regina Hoo, Dr. Louis-Francois Handfield. Dr. Hana Aliee is now a PI at CRUK-Cambridge, Dr. Regina Hoo is now a PI at the Centre of Computational Biology, Duke-NUS Medical School (Singapore) and Dr. Magda Mareckova is now Assistant Professor at University of Oxford. I currently supervise 8 postdoctoral fellows (3 MSCA, 2 EMBO, 1 ESPOD) and 5 PhD students.

OUTREACH –

I try to share my enthusiasm for scientific discovery and technological in order to inspire those in science and outside of it, and to advocate for the importance of understanding reproductive pathologies. I have talked extensively to media outlets about our research, and my lab leads ‘Pelvic Matters’ (details at <https://ventolab.org/pelvicmatters-outreach/>), which aims to increase awareness of common gynecological conditions via accessible, scientifically accurate information posted across campus.

ADDITIONAL INFORMATION –

Member of Centre for Trophoblast Research (CTR). Manuscript reviewer for Nature, Nature Biotechnology, Nature Immunology, Nature Communications, Cell, Immunity, Bioinformatics and Nucleic Acid Research. Grant reviewer for ERC, W. M. Keck Foundation and ETH Zurich Research. Selection committee “Jaume I”, prestigious scientific prize in Spain.