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 Date of birth: March 15, 1975
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Research experience

Jan 2023-Now	ICREA professor – Group Leader , Josep Carreras Leukaemia Research Institute (IJC), Barcelona.
July 2022-June 2025	President of the European Vascular Biology Organization (EVBO)
Feb 2021-Dec 2022	Group Leader – Josep Carreras Leukaemia Research Institute (IJC), Barcelona.
Jan 2018-Jan 2021	Group Leader – Institut d'Investigació Biomèdica de Bellvitge (IDIBELL), Barcelona.
Summer 2018	Invited professor at The Rockefeller University (Paul Cohen's laboratory), New York, US.
2015-2018	Principal Investigator – IDIBELL, Barcelona.
Oct 2009-2014	Ramón y Cajal Investigator - IDIBELL, Barcelona
Oct 2003-Sept 2009	Postdoctoral fellow - Ludwig Institute for Cancer Research & Barts Cancer Institute, London, UK. Supervisor: Prof. Bart Vanhaesebroeck
April-Sept 2003	Postdoctoral fellow – Institut d'Investigació Biomèdiques August Pi i Sunyer (IDIBAPS), Barcelona. Supervisor: Prof. Jaume Bosch
1999-March 2003	Ph.D. in Biochemistry IDIBAPS, Barcelona. Supervisor: Prof. Jaume Bosch & Dr. Joan Carles Garcia-Pagán

Education

March/03	Ph.D. in Biochemistry, University of Barcelona (UB), Barcelona, Spain. <u>Title</u> : <i>Mechanisms involved in the regulation of increased intrahepatic vascular tone in Cirrhosis. Role of Arachidonic acid derived compounds.</i> <u>Supervisors</u> : Prof. Jaume Bosch & Dr. Joan-Carlos Garcia-Pagan. Qualification: cum maxima laude - awarded as the best thesis in Biochemistry from the UB in 2003
1993-1997	B.Sc. in Biochemistry University of Barcelona, Barcelona, Spain

Research summary

Total number of publications: 82 - H-Index: 42

I began to develop an interest in **vascular biology** during my PhD where I studied portal hypertension, a vascular syndrome associated with liver cirrhosis. I completed my PhD at the Hemodynamic Liver Unit at the Barcelona Clinic Hospital under the supervision of Prof. Jaume Bosch and Dr. Joan-Carles García Pagan. My PhD studies led me to publish four **first-author papers**. I defended my PhD thesis in 2003 at the University of Barcelona, Spain, for which I was awarded with the "*premi extraordinari de doctorat*" from the University of Barcelona in 2003.

In late 2003, I joined Prof. Bart Vanhaesebroeck's laboratory in London, and I remained an active member of his laboratory for 6 years (including a maternity leave in 2008 for six months). As a postdoc, I identified the requirement for the PI3K α isoform during angiogenesis. This work, which still has a very strong impact in the field, was published in **Nature** (Graupera et al. *Nature* 2008).

In 2009, I established my lab as an independent investigator at IDIBELL, funded by the Ramon y Cajal program. From that moment, I embraced the opportunity to establish a research group to study mechanisms that regulate the vasculature during development, homeostasis, and disease. The Graupera lab has made seminal discoveries (J Exp Med, Nat Commun, Clin Cancer Res, Sci Transl Med, Circulation, Nature Metabolism, EMBO Mol Med, Science Sig, Cancer Discovery, Cell Metab), which are influencing the clinical management of vascular-related diseases. In recognition of my scientific contributions, I have been awarded with 31 competitive national and international grants amongst them **ERC-SyG** (2024), [H2020 MSCA-ITN (2013, 2016, 2020, 2020, 2024), AECC (2018, 2024, 2025), "La Caixa" Foundation (2019, 2021, 2022, 2023), PTEN Research (2020, 2024), BBVA Foundation (2020), WCR (2020), Leducq (2021), ERA4HEALTH (2023), La Marató Tv3 (2023)]. In February 2021, I joined the Josep Carreras Leukaemia Research Institute as a Group leader. In January 2023, I was appointed ICREA Professor.

Since 2009, when I was appointed PI, I have:

- published 70 peer-reviewed publications of which 21 as a last and/or corresponding author (J Exp Med, Nat Commun, Clin Cancer Res, Sci Transl Med, Circulation, Nature Metabolism, EMBO Mol Med, Science Sig, Cancer Discovery, Cell Metabolism), and 49 as collaborator (national and international collaborations),
- trained 15 MSc, 26 PhD students (17 defended), and 12 postdoctoral fellows,
- teach undergraduate and graduate students > 500 students,
- been awarded with 31 competitive grants, amongst which 1 ERC-SyG as coordinator, and 5 European ITN actions (1 FP7, 3 H2020, 1 HORIZON), 2 as coordinator, 4 research agreements, and 2 philanthropy agreements,
- done a sabbatical stage at the Rockefeller University, NYC (Laboratory of Paul Cohen) as an invited Professor in 2018
- been invited to give seminars at the most prestigious research institutes and meetings in Europe and the US.

Publications in chronological descending order

In red senior last author

In blue first author

† Joint last authors; * Corresponding Author

1. Chivite I, Monelli E, Munar-Gelabert M, Gómez-Valadés AG, Alvarado-Díaz A, Pozo M, Varela L, Ramírez S, Haddad-Tóvolli R, Toledo M, Fos-Domènech J, Díaz-Castro F, Tahiri I, García-Ramón P, Ferreira M, van Gelder C, Abot A, Osorio-Conles O, Valer[†], Arnaud Obri JA, Milà-Guasch M, Alvarez Luis J, Villacampa P, Eyre E, Altirriba J, Genßler S, Haake M, Schuberth-Wagner C, Remesar X, Zorzano A, Garcia-Rovés PM, Ventura F, Vidal J, Knauf C, Nogueiras R, Horvath TL, De Bock K*, **Graupera M***, Marc C*. *Deletion of Mfn2 in endothelial cells triggers a mitohormetic response that improves systemic metabolism and healthspan in mice*. Accepted in **Cell Metabolism**. 2025
2. Rondon-Lorence I, Lopez JI, Ugalde-Olano A, Zufiaurre M, Astobiza I, Martin-Martin N, Bozal-Basterra L, Garcia-Longarte S, Zabala-Letona A, Rey S, Santos-Martin A, Unda M, Loizaga-Iriarte A, Graupera M, Nuciforo P, Carracedo A, Mendizabal I. *Transcriptional network analysis of PTEN-protein-deficient prostate tumors reveals robust stromal reprogramming and signs of senescent paracrine communication*. **Mol Oncol**. 2025 Nov 17. doi: 10.1002/1878-0261.70164.
3. Martinez-Romero A, Martinez-Larrinaga A, Grego-Bessa J, Garcia-Longarte S, van Splunder H, Astobiza I, Ercilla A, Bozal-Basterra L, Mendizabal I, Villacampa, Carracedo A†, **Graupera M†**. *Aggressive prostate cancer is associated with pericyte dysfunction*. **Mol Oncol**. 2025 Oct 21. doi: 10.1002/1878-0261.70135
4. Ercilla A, Crespo JR, Garcia-Longarte S, Fidalgo M, Del Palacio S, Martin-Martin N, Carlevaris O, Astobiza I, Fernández-Ruiz S, Guiu M, Bárcena L, Mendizabal I, Aransay AM, Graupera M, Gomis RR, Carracedo A. *A bioinformatics screen identifies TCF19 as an aggressiveness-sustaining gene in prostate cancer*. **Mol Oncol**. 2025 Sep 15. doi: 10.1002/1878-0261.70118.
5. Martin-Martin N, Garcia-Longarte S, Corres-Mendizabal J, Lazcano U, Astobiza I, Bozal-Basterra L, Herranz N, van Splunder H, Carlevaris O, Pujana-Vaquerizo M, Blasco MT, Aransay AM, Rosino A, Tudela J, Jimenez D, Martinez A, Salca A, Santos-Martin A, Rey S, Ugalde-Olano A, Gonzalo D, Graupera M, Gomis RR, Mateo J, Unda M, Gonzalez-Billalabeitia E, Loizaga-Iriarte A, Mendizabal I, Carracedo A. *Transcriptional analysis of metastatic hormone-naïve prostate cancer primary tumor biopsies reveals a relevant role for SOX11 in prostate cancer cell dissemination*. **Genome Biol**. 2025 Jun 3;26(1):154. doi: 10.1186/s13059-025-03623-5.
6. Castillo SD, Perosanz X, Ressler, A.K., Ivars M, Rodriguez, J, Rovira C, Nola EM, Llena J, Grego-Bessa J, Toldán M, Arnau R, Martinez-Romero A, Barber I, Bejarano M, Vicente A, Celis V, Salvador H, Mora J, Marchul DA, Baselga E, **Graupera M**. *Somatic uniparental disomy of PTEN in endothelial cells causes vascular malformations in patients with PTEN Hamartoma Tumor Syndrome*. **Cancer Discovery**. 2025 Jul 3;15(7):1350-1362 doi: 10.1158/2159-8290.CD-24-0807.
7. Conduit SE, Pearce W, Bhamra A, Bilanges B, Bozal-Basterra L, Foukas LC, Cobbaut M, Castillo SD, Danesh MA, Adil M, Carracedo A, Graupera M, McDonald NQ, Parker PJ, Cutillas PR, Surinova S, Vanhaesebroeck B. *A class I PI3K signalling network regulates primary cilia disassembly in normal physiology and disease*. **Nat Commun**. 2024 Aug 21;15(1):7181. doi: 10.1038/s41467-024-51354-1.
8. Garcia-Gonzalez I, Rocha SF, Hamidi A, Garcia-Ortega L, Regano A, Sanchez-Muñoz MS, Lytvyn M, Garcia-Cabero A, Roig-Soucasse S, Schoofs H, Castro M, Sabata H, Potente M, Graupera M, Makinen T, Benedito R. iSuRe-HadCre is an essential tool for

- effective conditional genetics. **Nucleic Acids Res.** 2024 Jun 8:gkae472. doi: 10.1093/nar/gkae472.
9. Ayllon-Hermida A, Nicolau-Fernandez M, Martinez-Larrinaga A, Aparici-Herraiz I, Tintó-Font E, Llorà-Batlle O, Orban A, Fernanda Yasnot M, Graupera M, Esteller M, Popovici J, Cortés A, Del Portillo HA, Fernandez-Becerra C. *Plasmodium vivax* spleen-dependent protein 1 and its role in extracellular vesicles-mediated intrasplenic infections. **Front Cell Infect Microbio** 2024 May 17;14:1408451. doi: 10.3389/fcimb.2024.1408451.
 10. Serra F, Nieto-Alisenda A, Fanlo L, Roviroso LL, Carera-Pasadas, Lazarenkov A, Urmeneta B, Alcalde A, Nola EM, Okorokov AL, Fraser P, Graupera M, Castillo SD, Sardina JL, Valencia A, Javierre BM. *P53 rapidly restructures 3D chromatin organization to trigger a transcriptional response*. **Nat Commun.** 2024
 11. Kobialka P, Llena J, Deleyto-Seldas N, Munar M, Dengra JA, Villacampa P, Albinyà A, Muixi L, Andrade J, van Splunder H, Angulo-Urarte A, Potente M, Grego-Bessa J, Castillo SD, Vanhaesebroeck B, Efeyan A, **Graupera M**. *PI3K-C2b limits mTORC1 signaling and angiogenic growth*. **Sci Signal.** 2023 Nov 28;16(813):eadg1913. doi: 10.1126/scisignal.adg1913
 12. Langbroek GB, Stor MLE, Janssen V, de Haan A, Horbach SER, Graupera M, van Noesel CJM, van der Horst CMAM, Wolkerstorfer A, Huveneers S. *Characterization of patient-derived GNAQ mutated endothelial cells from capillary malformations*. **J Invest Dermatol.** 2023 Nov 25:S0022-202X(23)03115-9. doi: 10.1016/j.jid.2023.10.033.
 13. Llorente A, Blasco MT, Espuny I, Guiu M, Ballaré C, Blanco E, Caballé A, Bellmunt A, Salvador F, Morales A, Nuñez M, Loren G, Imbastari F, Fidalgo M, Figueras-Puig C, Gibler P, Graupera M, Monteiro F, Riera A, Holen I, Avgustinova A, Croce LD & R. Gomis RR. *MAF amplification licenses ERα through epigenetic remodelling to drive breast cancer metastasis*. **Nat Cell Bio** 2023 Dec;25(12):1833-1847. doi: 10.1038/s41556-023-01281-y
 14. Arbaizar-Roviroso M, Gallizioli M, Lozano JJ, Sidorova J, Pedragosa J, Figuerola S, Chaparro-Cabanillas N, Boya P, Graupera M, Claret M, Urra X, Planas AM. *Transcriptomics and translomics identify a robust inflammatory gene signature in brain endothelial cells after ischemic stroke*. **J Neuroinflammation.** 2023 Sep 11;20(1):207. doi: 10.1186/s12974-023-02888-6.
 15. Cerda P, Castillo SD, Aguilera C, Iriarte A, Rocamora JL, Larrinaga AM, Viñals F, Graupera M, Riera-Mestre A. *New genetic drivers in hemorrhagic hereditary telangiectasia*. **Eur J Intern Med.** 2023 Sep 7;S0953-6205(23)00308-4. doi: 10.1016/j.ejim.2023.08.024.
 16. Banerjee K, Lin Y, Gahn J, Cordero J, Gupta P, Mohamed I, Graupera M, Dobrev G, Schwartz MA, Ola R. *SMAD4 maintains the fluid shear stress set point to protect against arterial-venous malformations*. **J Clin Invest** 2023 Jul 25;e168352. doi: 10.1172/JCI168352.
 17. Van Splunder H, Villacampa P, Martinez-Romero A, **Graupera M**. *Pericytes at the disease spotlight*. **Trends in Cell Biology** 2023 Jul 18;S0962-8924(23)00111-3.
 18. Petkova M, Kraft M, Stritt S, Martinez-Corral, I, Ortsäter H, Vanlandewijck M, Jakic B, Baselga E, Castillo SD, Graupera M, Betsholtz C, Mäkinen T. *Immune-interacting lymphatic endothelial subtype at capillary terminals drives lymphatic malformation*. **J Exp Med** 2023. Apr 3;220(4):e20220741. doi: 10.1084/jem.20220741.
 19. Sánchez-Castillo C, Cuartero MI, Fernández-Rodrigo A, Briz V, López-García S, Jiménez-Sánchez, López JA, Graupera M, Esteban, JA. *Functional specialization of different PI3K isoforms for the control of neuronal architecture, synaptic plasticity, and cognition*. **Sci Adv.** 2022 Nov 25;8(47):eabq8109. doi: 10.1126/sciadv.abq8109.
 20. Angulo-Urarte A, **Graupera M**. *When, where and which PIK3CA mutations are pathogenic in congenital disorders*. **Nature Cardiovascular Research.** Vol 1. August 2022. 700-714

21. Gonzalez-Franquesa A, Gama-Perez P, Kulis M, Szczepanowska K, Dahdah N, Moreno-Gomez S, Latorre-Pellicer A, Fernández-Ruiz R, Aguilar-Mogas A, Hoffman A, Monelli E, Samino S, Miró-Blanch J, Oemer G, Duran X, Sanchez-Rebordelo E, Schneeberger M, Obach M, Montane J, Castellano G, Chapaprieta V, Sun W, Navarro L, Prieto I, Castaño C, Novials A, Gomis R, Monsalve M, Claret M, Graupera M, Soria G, Wolfrum C, Vendrell J, Fernández-Veledo S, Enríquez JA, Carracedo A, Perales JC, Nogueiras R, Herrero L, Trifunovic A, Keller MA, Yanes O, Sales-Pardo M, Guimerà R, Blüher M, Martín-Subero JI, Garcia-Roves PM. *Remission of obesity and insulin resistance is not sufficient to restore mitochondrial homeostasis in visceral adipose tissue*. **Redox Biol.** 2022 Jun 24;54:102353. doi: 10.1016/j.redox.2022.102353.
22. Kobialka P*, Sabata H^{1,*}, Vilalta O, Gouveia L, Angulo-Urarte A, Muixí L, Zanoncello J, Muñoz-Aznar O, Olaciregui NG, Fanlo L, Esteve-Codina A, Lavraino C, Javierre BM, Celis V, Rovira C, López-Fernández S, Baselga E, Mora J, Castillo S.D*, **Graupera M***. *The onset of PI3K-related vascular malformations occurs during angiogenesis and is prevented by the AKT inhibitor miransertib* **EMBO Molecular Medicine** 2022 Jun 13:e15619. doi: 10.15252/emmm.202115619.
23. Monelli E, Villacampa P, Gouveia L, Zabala-Letona A, Zagmutt S, Gama-Perez P, Beiroa D, Martín-Martín N, Chivite I, Castel P, Valcarcel-Jimenez L, Llena J, Fernandez-Ruiz S, Serra D, Herrero L, Garcia-Roves P, Nogueiras R, Cohen P, Claret M, Carracedo A, **Graupera M**. *Angiocrine polyamine production regulates adiposity* **Nat Metab.** 2022 Mar;4(3):327-343. doi: 10.1038/s42255-022-00544-6. Epub 2022 Mar 14.
24. Crainiciuc G, Palomino-Segura M, Molina-Moreno M, Sicilia J, Aragonés D.G., Yao J.L.L., Madurga R., Adrover J.M., Aroca-Crevillén A., Martín-Salamanca S., Serrano del Valle A. Castillo S.D., Welch H.C.E, Soehnlein O, Graupera M, Sánchez-Cabo F, Zarbock A, Smithgall TE, Pilato MD, Mempel TR, Tharaux PR, González SF, Ayuso-Sacido A, Ng LG, Calvo GF, González-Díaz I, Díaz-de-María F, Hidalgo A. *Behavioural immune landscapes of inflammation*. **Nature.** 2022 Jan 5; doi.org/10.1038/s41586-021-04263-y.
25. Riera-Mestre A, Cerdà P, Iroarte A, Graupera M, Viñals F. Translational medicine in hereditary hemorrhagic telangiectasia. *Eur J Intern Med.* 2022 Jan;95:32-37. doi:10.1016/j.ejim.2021.09.003 doi: 10.1016/j.ejim.2021.09.003
26. Ribera J, Portolés I, Córdoba-Jover B, Rodríguez-Vita J, Casals G, González-de la Presa B, Graupera M, Solsona-Vilarrasa E, Garcia-Ruiz C, Fernández-Checa JC, Soria G, Tudela R, Esteve-Codina A, Espadas G, Sabidó E, Jiménez W, Sessa WC, Morales-Ruiz M. *The loss of DHX15 impairs endothelial energy metabolism, lymphatic drainage and tumor metastasis in mice*. **Commun Biol.** 2021 Oct 15;4(1):1192. doi: 10.1038/s42003-021-02722-w.
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29. Mertens R, Graupera M, Gerhardt H, Bersano A, Tournier-Lasserre E, Mensah MA, Mundlos S, Vajkoczy P. *The Genetic Basis of Moyamoya Disease*. **Transl Stroke Res.** 2021 Sep 16. doi: 10.1007/s12975-021-00940-2.
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 32. **Iacono A**, Pompa A, De Marchis F, Panfilì E, Greco FA, Coletti A, Orabona C, Volpi C, Belladonna ML, Mondanelli G, Albinì E, Vacca C, Gargaro M, Fallarino F, Bianchi R, De Marcos Lousa C, Mazza EM, Biciato S, Proietti E, Milano F, Martelli MP, Iamandii IM, Graupera M, Llena Sopena J, Hawkins P, Suire S, Okkenhaug K, Stark AK, Grassi F, Bellucci M, Puccetti P, Santambrogio L, Macchiarulo A, Grohmann U, Pallotta MT. *Class IA PI3Ks regulate subcellular and functional dynamics of IDO. EMBO Rep.* 2020 Dec 3;21(12):e49756. doi: 10.15252/embr.201949756. Epub 2020 Nov 7.
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Pre-PI career stage

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Grants

Active Funding

Reference. ENDOSET

Project: Decoding ENDOthelial behavior during tumor onSET (ENDOSSET)

Funding Source: **AECC – Proyectos Generales**

Beneficiary. Mariona Graupera

Period. 2025-2030

Amount. 400.000€

Reference. BEMOSAIC

Project Decoding endothelial cell BEhavioral MOSAICism within vessels

Funding Source: **ERC-SyG**

Beneficiary. Mariona Graupera

Coordinator: Mariona Graupera

Period. 2025-2030

Amount. 10.624.448€, MG 3.507.418€

Reference. MAPten

Project Title: MAPping the mechanisms of lesion onset and progression in PHtS-related vascular malformations

Funding Source: **PTEN RESEARCH Foundation**

Beneficiary. Mariona Graupera

Coordinator: Mariona Graupera

Period. 2025-2028

Amount. 679.700€, MG 420.200€

References: PIKROADS

Project Title: *A roadmap of PIK3CA mutant clones driving lymphatic malformation*

Funding Source: **Spanish Ministry of Science and Innovation (MICINN), RETOS**

Beneficiary. Mariona Graupera

Period. 2024-2026

Amount. 406,250€

Reference. PRYCO247223GOMI - METEND

Project Title: Decoding Metastasis-ENDothelial co-dependencies in bone

Funding Source: **AECC – Grupos Coordinados**

Coordinator: Roger Gomis

PI: Mariona Graupera

Period. 2025-2029

Amount. 1,200,000€, MG 350,000€

Reference. ADAPTMET

Project Title: Deconstructing adaptive evolution of metastasis.

Funding Source: **HORIZON-ETN-MSCA-2023**

Beneficiary: Mariona Graupera

Coordinator. Roger Gomis, IRB

Period. March 2025- Feb 2030

Amount. 4.036.801,32€, MG 251.971,20€

Reference. REPAIRQ

Project Title: Understanding and repairing *GNAQ*-mutant blood vessels.

Funding Source: **ERA4HEALTH, CARDINNOV**

Coordinator: Mariona Graupera

Period: May 2024- April 2026

Amount: 288,750€

Reference. EndoTENSION

Project Title: Decoding the Endothelial cell intrinsic mechanisms causing portosinusoidal hyperTENSION.

Funding Source: **La Marato de Tv3 Edició 2022, en Salut Cardiovascular**

Coordinator: Mariona Graupera

Period. 2024-2026

Amount. 299,867.97€, MG 149.964,22€

Reference. BARCODEC, HR23-00090

Project Title: Applying DNA and optical barcoding to study endothelial progenitor cells in physiology and disease.

Funding Source: **“la Caixa” Banking Foundation Call Health Research**

Coordinator: Mariona Graupera

Period. 2024-2026

Amount. 999,918.00€, MG 413.348,00€

Reference. kineMET

Project Title: Identifying angiokines that promote BCa Metastatic growth in bone.

Funding Source: **FERO-GHD BREAST CANCER PROJECT**

Beneficiary. Mariona Graupera

Period. 2023-2024

Amount. 80,000€

Reference. AngioHeArt, HR22-00316

Project Title: Understanding and promoting the growth and regenerative functions of blood vessels in heart disease.

Funding Source: **“la Caixa” Banking Foundation Call Health Research**

Coordinator: Rui Benedito

Beneficiary. Mariona Graupera

Period. 2023-2025

Amount. 999,948.04€, MG 288.705,54€

Project Title: Brown Fat and Cardiovascular Health: Genetic Determinants and Molecular Mechanisms

Funding Source: **Leducq Foundation**

Coordinator: Robert Gerszten
Beneficiary. Mariona Graupera
Period. 2022-2026
Amount: 7.000.000\$, MG 650,000€

Reference. CIBER CANCER –CB16/12/00445
Project Title. Identification of the metabolic and signalling interplay underlying the acquisition of invasive and metastatic properties in PCa as a mean to define novel therapeutic targets and stratification markers.
Funding Source. **Spanish Ministry of Health – Carlos III**
Beneficiary. Mariona Graupera, IDIBELL
Coordinator. Arkaitz Carracedo, CIC-biogune
Period. 2018- Now
Amount. 80000€/year

Completed Funding

Reference. NUTRITHELIUM, HR21-00046
Project Title: Decoding the paracrine control of metabolic fitness by endothelial nutrient signalling.
Funding Source: **“la Caixa” Banking Foundation Call Health Research**
Coordinator: Alejo Efeyan
Beneficiary. Mariona Graupera
Period. 2023-2025
Amount. 992.780,6€, MG 410.189,4€

Reference. PIPgen - 955534
Project Title: PI3K/PTEN-related monogenic disease to understand cancer
Funding Source: **H2020-MSCA-ETN-2020**
Beneficiary. Mariona Graupera
Coordinator. Mariona Graupera
Period. 2021-2025
Amount. 4.036.801,32€, MG 890.969,75€

Reference. PID2020-116184RB-I00 – PIP-Code
Project Title: *PIK3CA* variants in PROS: cracking the Code of pathogenesis (PIP-Code)
Funding Source: **Spanish Ministry of Science and Innovation (MICINN), RETOS**
Beneficiary. Mariona Graupera
Period. 2021-2023
Amount. 302.000€

Reference: WCR- 21-0159
Title: Identifying properties of tumour suppressive pericytes for cancer therapy
Funding Agency: **World Cancer Research**
Beneficiary: Mariona Graupera
Period: 01/01/2021- 31/12/2023
Amount (euros): TOTAL: £189.500

Reference. Evomet- 955951
Project Title. Deconstructing the evolution of metastasis
Funding Source. **H2020-MSCA-ETN-2020**
Beneficiary. Mariona Graupera
Coordinator. Roger Gomis, IRB
Period. March 2021- Feb 2025
Amount. 4.036.801,32€, MG 501.809,76€

Reference. EndObese

Project Title. Endothelial molecular alterations induced by excessive energy intake - a new concept in obesity and metabolic disorders
Funding Source. **BBVA Foundation**
Beneficiary. Mariona Graupera
Period. 2020-2023
Amount. 125.000€

Reference. IJC-21-001
Project Title. Preclinical investigation of vascular malformations in PTEN hamartoma tumour syndrome
Funding Source. **PTEN RESEARCH Foundation**
Beneficiary. Mariona Graupera
Period. 2020-2024
Amount. 351.800€

Reference. PROSTARGET
Project Title. Vulnerabilities of Tumour and Stroma Interactions in Castration-Naïve Metastatic Prostate Cancer (PROSTARGET)
Funding Source: **AECC – Grupos Coordinados**
Period. 2018-2023
Beneficiary. Mariona Graupera
Coordinator. Arkaitz Carracedo, CIC-Biogune
Amount. 1.000.000€, MG 270.000€

Reference. HR19-00120 – Map-VM
Project Title. Mapping the pathogenesis of vascular malformations
Funding Source. **“la Caixa” Banking Foundation Call Health Research**
Beneficiary. Mariona Graupera
Coordinator. Mariona Graupera
Period. 2019-2022
Amount. 755.018€, MG 416.218€

Project Title: Identifying the molecular impact of PIK3CA variants in PROS towards stratification of patients and personalized medicine.
Funding Source: **CLOVES FOUNDATION 2021**
Beneficiary. Ana Angulo-Urarte (under Mariona Graupera’s Mentorship)
Period. 09/2021-04/2023
Amount. 25.000\$

Project Title. Phosphoinositide 3-kinase Signalling in Oncogenic Vascular Malformations
Funding Source. **“la Caixa” Banking Foundation Bilateral Agreement**
Beneficiary. Mariona Graupera
Period. 2017-2022
Amount. 255.535€

Reference. SAF2017-89116R
Project Title. Oncogenic vascular malformations from biology to modelling
Funding Source: **Spanish Ministry of Economy and Science**
Beneficiary. Mariona Graupera, IDIBELL
Period. 2018-2020
Amount. 242.000€

Project Title: Mitochondrial fusion in endothelial cells: impact on systemic energy and glucose homeostasis
Funding Source: **Lilly-European foundation for the study of diabetes (EFSD)**
Beneficiary. Mariona Graupera, IDIBELL & Marc Claret, IDIBAPS
Period: 2018-2019
Amount: 99.900€

Reference. SAF2017-82072-ERC

Project Title: Unravelling the interdependency between PI3K/PTEN signalling and cell metabolism in promoting endothelial cell activation in white adipose tissue

Funding Source: **Spanish Ministry of Economy and Science**

Beneficiary. Mariona Graupera, IDIBELL

Period: 2018

Amount: 68.800€

Reference. PhD-675392

Project Title. Deciphering PI3K biology in health and disease

Funding Source. **H2020-MSCA-ITN-2015**

Beneficiary. Mariona Graupera, IDIBELL

Coordinator. Mariona Graupera, IDIBELL

Period. Nov 2015- Oct 2019

Amount. TOTAL: 3.800.000€. MG 776.545€

Reference. SAF2014-59950-P

Project Title. PTEN-mediated endothelial cell quiescence as a novel vascular anti-tumour therapy

Funding Source: **Spanish Ministry of Economy and Science**

Beneficiary. Mariona Graupera, IDIBELL.

Period. 2015-2017

Amount. 133.100€

Reference. SAF2013-46542-P

Project Title. Exploiting PTEN biology as a novel antiangiogenic strategy

Funding Source. **Spanish Ministry of Economy and Science**

Beneficiary. Mariona Graupera, IDIBELL

Period. 2014

Amount. 40.000€

Reference. VESSEL-317250

Project Title. Vascular Endothelial Interactions and Specialization

Funding Source. **FP7-People-ITN-Marie Curie Actions**

Beneficiary. Mariona Graupera, IDIBELL

Coordinator. Alexander Medvinsky, University of Edinburgh

Period. 2013-2016

Amount. TOTAL: 4.037.128€. MG 455.463€

Reference. SAF2010-15661

Project Title. PI 3-kinase (PI3K) signalling in angiogenesis; a novel therapeutic target in cancer

Funding Source. **Spanish Ministry of Economy and Science**

Beneficiary. Mariona Graupera, IDIBELL

Period. 2011-2013

Amount. 145.200€

Sponsored research agreements (SRA)

Reference. 11PRV033

Project Title. Proposal to investigate Everolimus in a Neuroendocrine mouse model of cancer.

Funding Source. **NOVARTIS-USA**

Beneficiary. Oriol Casanovas & Mariona Graupera, IDIBELL

Period. 2011-2012

Amount. 95.000€

Reference. 15PRV050

Project Title. Proposal to investigate combination of Lanreotide with targeted therapies in experimental therapeutic trials in the RIP-Tag2 mouse model of cancer.

Funding Source. **IPSEN-SPAIN**

Beneficiary. Oriol Casanovas & Mariona Graupera, IDIBELL

Period. 2016-2017

Amount. 45.000€

Reference. 18PNJ054

Project Title. Proposal to investigate Venthera-PI3K α inhibitor in experimental therapeutic trials.

Funding Source. **VENTHERA**

Beneficiary. Mariona Graupera, IDIBELL

Period. 2018-2019

Amount. 43.732€

Reference. 18PNJ079

Project Title. Proposal to investigate ARQ 092 inhibitor in experimental therapeutic trials.

Funding Source. **ARQULE**

Beneficiary. Mariona Graupera, IDIBELL

Period. 2018-2019

Amount. 38.710€

Project Title. Proposal to investigate RLY-2608 in experimental therapeutic trials in Pik3ca^{H1047R} mouse postnatal retinas

Funding Source. **Relay Therapeutics**

Beneficiary. Mariona Graupera, IJC

Period. 2024

Amount. 109.800€

Project Title. Proposal to investigate Atavistik-AKTi-001 in experimental therapeutic trials in Pik3ca^{H1047R} mouse postnatal retinas

Funding Source. **Atavistik Therapeutics**

Beneficiary. Mariona Graupera, IJC

Period. 2025

Amount. 63.800€

Philanthropy research

Project Title: Understanding the Pathogenesis of Sturge-Weber Syndrome and Cutaneous Capillary Malformation towards their Cure

Funding Source: **Asociación Española Síndrome de Sturge-Weber (AESSW)**

Period: 2019-2022

Amount: 24.000€

Project Title: Modelling Sturge-Weber Syndrome and Cutaneous Capillary Malformation in mice

Funding Source: **Asociación Española Síndrome de Sturge-Weber (AESSW)**

Period: 2024-2025

Amount: 20.000€

Current lab composition

Member	Position
Mariona Graupera, PhD	Group Leader
Laia Muixi, PhD	Project manager
Joaquim Grego, PhD	Senior Researcher
Ana Angulo-Urarte, PhD	Senior Postdoctoral Fellow MSCA-IF, Junior PI La Caixa
Leonor Gouveia, PhD	Junior Postdoctoral Fellow Vetenskapsradet International Postdoc Grant
Frederic Morales, PhD	Postdoctoral Fellow
Sandra Camargo	AECC Talent Postdoctoral Fellow
Constance Delwarde	MSCA coFUND Postdoctoral fellow
Guillermo Turiel	Postdoctoral Fellow
Mareike Neumann	Postdoctoral Fellow
Xabier Perosanz	PhD Student - Postdoctoral Fellow from Jan 2026
Marta Fidalgo	PhD Student - ITN MSCA - Postdoctoral Fellow from Jan 2026
Margalida Munar	PhD Student
Ane Martinez	PhD Student - Postdoctoral Fellow from Jan 2026
Jose Dengra	PhD Student - FPI
Ariadna Roca	PhD Student
Alba Albinyà	PhD Student - FI
Annamaria Inneo	PhD Student – DN coFUND
Maria Garrido	PhD Student - FPI
Elena Castillo	PhD Student
Marta Saraiva	PhD Student - ITN MSCA
Laisa Bonin	Technician
Jon Cristobalena	Technician
Blanca Cenxual	Technician

PhD Supervisor

	Year	PhD student	Title of thesis
1	05/12/2014	Helena Serra Busquet	Role of Pten in sprouting angiogenesis
2	29/01/2016	Adriana Soler Salas	Role of stromal inhibition of p110 α isoform as a therapeutic target in cancer
3	24/02/2017	Ana Angulo Urarte	Regulation of actomyosin contractility by p110 α PI3-kinase in sprouting angiogenesis
4	09/06/2017	Ana Raquel Martins Figueiredo	Role of PI3K in pericytes during the angiogenesis
5	23/06/2017	Erika Monelli	Deciphering the role of endothelial cells in the regulation of physiological and pathological white adipose tissue remodelling
6	24/01/2020	Iñigo Chivite Araiz	Role of systemic metabolic disturbances induced my alteration in endothelial cells. <i>Co-directed with Dr. Marc Claret (IDIBAPS)</i>
7	31/07/2020	Jasmina Zanoncello	Oncogenic PI3K Signalling in venous malformations <i>Co-directed with Dr. Sandra Castillo (IDIBELL)</i>
8	13/11/2020	Piotr Kobialka	Understanding PI3K signalling in vessel growth and pathophysiology
9	15/07/2022	Judith Llena Sopena	Generación, desarrollo y estudio de modelos fisiopatológicos de angiogénesis con PI3K como eje central.
10	21/07/2023	Anabel Martínez	La progresión del cáncer de próstata mediante la

		Romero	vía de señalización TGF- β favorece la modificación de los pericitos y la disfuncionalidad vascular. <i>Co-directed with Arkaitz Carracedo.</i>
11	06/10/2023	Helena Sabata Pérez	Caracterització de les malformacions vasculars causades per mutacions activadores al gen PIK3CA <i>Co-directed with Sandra Castillo</i>
12	01/12/2023	Pau Cerda Serra, MD	Identifying and characterizing new mutations as a cause of HHT. <i>Co-directed with Dr. Antoni Riera-Mestre (HUB)</i>
13	18/04/2024	Odena Vilalta Castany	Estudi de la patobiologia de les malformacions capil·lars i la síndrome Sturge-Weber causades per mutacions en el gen GNAQ. <i>Co-directed with Dr. Eulàlia Baselga (HSJD)</i>
14	30/04/2025	Louis Maes	Understanding the genotype-phenotype relation between <i>PIK3CA</i> variant signalling and vascular malformations. <i>Co-directed with Dr. Ana Angulo-Urarte (IJC)</i>
15	13/01/2026	Marta Fidalgo	Angiocrine Signaling from Bone Endothelial niches drives breast cancer metastatic progression <i>Co-directed with Roger Gomis.</i>
16	14/01/2026	Ane Martinez Larrinaga	A Pan-Single Cell Atlas of the Human Perivascular Niche: Defining Mural Cell identify and Remodeling in Tumors. <i>Co-directed with Dr. Isabel Mendizabal (cic-BIOGUNE)</i>
17	16/01/2026	Xabier Perosanz Hidalgo	Estudio de los mecanismos implicados en la patogénesis de las malformaciones vasculares en PHTS <i>Co-directed with Dr. Sandra Castillo (HSJD)</i>
18	2026	Hielke Van Splunder	Characterizing stromal populations in prostate cancer at single cell resolution
19	2026	Margalida Munar Gelabert	Role of endothelial polyamines in adipose tissue biology.
20	2026	Jose Dengra	Understanding PIK3CA biology in arteries
21	2027	Ariadna Roca Coll	Understanding PIK3CA mechanism in lymphatic endothelial cells
22	2028	Alba Albinyà Pedrós	Deciphering the origin of Sturge-Weber
23	2028	Annamaria Inneo	Role of endothelial cells in non-Hodgkin lymphoma relapse
24	2029	Maria Garrido Cruz	<i>PIK3CA</i> -related pathogenesis: a matter of strength
25	2030	Marta Saravia	Understanding EC populations in the metastatic bone niche
26	2030	Elena Castillo	<i>PIK3CA</i> -related clonal dynamics in lymphatic malformations

* Defended theses are shown in blue

Master Supervisor

	Year	PhD student	Title of thesis
1	2010	Helena Serra Busquet	El paper de la via PI3K/PTEN en l'angiogènesi per sprouting
2	2010	Adriana Soler Salas	L'estudi de del paper de la isoforma p110 α isoform en l'angiogenesis tumoral.
3	2011	Silvana Iridia Elizondo	Papel de la via PI3K en el control de la angiogénesis

		Rosales	
4	2012	Ana Angulo Urarte	Role of the p110a/p85a heterodimer in sprouting angiogenesis
5	2014	Iñigo Chivite Araiz	Role of PTEN overexpression in developmental angiogenesis
6	2015	Cecilia Orbegoso Aguilar	Relevance of vascular PI3K inhibition in breast cancer
7	2016	Maria Milà Guasch	Estudi de la interacció p110a/PI3K amb el citoesquelet
8	2016	Alejandro Dolset Neal	Endothelial/Adipose cell crosstalk in mice lacking PTEN
9	2017	Judith Llana Sopena	Gaining insight into the effect of PI3K signal in endothelial cells on adipose tissue
10	2018	Helena Sabata Pérez	Characterization of PIK3CA-driven venous malformations
11	2021	Xabier Perosanz Hidalgo	Identification of PI3K/AKT/mTOR pathway inhibitors for the treatment of PTEN-driven vascular malformations associated with PHTS
12	2023	Ariadna Roca Coll	Deciphering the role of COUF-TFII in PIK3CA-driven vascular malformations
13	2024	Alba Albinyà Pedrós	Molecular characterization of <i>Gnaq</i> ^{R183Q} -related capillary malformations and Sturge-Weber Syndrome in endothelial cells
14	2025	Sofia Petrissans Moll	Studying the heterogeneity of endothelial cells within adipose tissue using scRNAseq
15	2026	Marta Fernández	Studying endothelial cell dynamics in nascent tumors

* Defended thesis are shown in light green

Invited speaker (since 2017)

Conference

- [Keystone Symposia on Somatic Mosaicism in Human Development, Aging, and Diseases, Vancouver, BC, Canada, March 2027](#)
- [Phosphoinositides 2026 Congress, Mont Sainte-Odile, France, Oct 2026](#)
- [IVBM – Australia, Sep 2026](#)
- [Endothelial Cell Phenotypes Gordon Conference, Castelldefels, Spain, July 2026](#)
- [FASEB SRC on Cell Signalling in Cancer: From Mechanism to Therapy, Louisville, Kentucky, July 2026](#)
- [CRC1366 meeting, Mannheim, May 2026](#)
- [Australian Cardiovascular and Developmental Society, Adelaide, Oct 2025](#)
- [Angiogenesis Gordon Conference, Rode Island, US, July 2025](#)
- [Wihuri research Institute Symposium 2025, Helsinki, June 2025](#)
- [1st European Lymphatic Symposium on April 23-25, 2025, in Toulouse](#)
- [Perspectives in Cardiovascular Biology 2025 on April 3-5 in Frankfurt](#)
- [Vascular Cell Biology Gordon Conference, January 2025, Cancelled](#)
- [ASEICA, Zaragoza, Nov 2024](#)
- [13th Kloster Seeon Meeting “Angiogenesis”, Germany, September 2024](#)
- [2024 FASEB Phospholipid Meeting, St Paul, US, July 2024](#)
- [Endothelial Cell Phenotypes Gordon Conference, June 2024](#)
- [EASL Congress 2024, Milan, June 2024](#)
- [CRC1366 meeting "Vascular Control of Organ Function", May 2024](#)
- [Lymphatic Gordon Research Conference, Ventura, March 2024](#)
- [Lymphatic Gordon Research Seminar, Ventura, March 2024](#)

- French Society of Angiogenesis, Bordeaux, October 2023
- Yale- Uppsala- Munster (YUM) 7 PI meeting– Sep 2023
- Biochemical Society “The PI3K-AKT-mTOR-PTEN pathway: a new era in basic research and clinical translation”, Sep 2023
- Angiogenesis Gordon Conference, Rode Island, US, July 2023
- Symposium on Vascular Development and Malformations in Berlin July 2023
- 2nd Workshop of the Spanish Vascular Biology Group, June 9, 2023
- 2nd Frontiers in Cardiac and Vascular Biology, Tel Aviv, May 2023
- European Society of Microcirculation, April 2023
- Oxford Vascular Biology Symposium; 27th of March 2023
- Adipose Biology - Metabolic Buffering in an obesogenic world, Edinburgh 23rd - 24th March 2023,
- International Conference on Vascular Anomalies, Brussels February 2023
- Vascular Cell Biology Gordon Conference, January 2023
- 22nd International Vascular Biology Meeting, San Francisco 2022
- 14th International HHT Scientific Conference, September 2022
- 12th Kloster Seeon Meeting “Angiogenesis”, Germany September 2022
- Endothelial Cell Phenotypes Gordon Conference, June 2022
- EMBO Meeting on Building Networks – *Engineering in Vascular Biology*, May 2022
- Yale- Uppsala- Munster (YUM) 6 PI meeting– May 2022
- PTEN Research Meeting 2022 – Feb 2022
- 4th Vascular Research Symposium, Interlaken, December 2021, Switzerland
- Joint Vascular Biology meeting German-Dutch Societies 2021, Göttingen, November 2021
- NAVBO Vascular Biology 2021, October 2021
- EMBO meeting on Vascular Malformations, Barcelona, October 2021. Organizer
- 11th Kloster Seeon Meeting “Angiogenesis”, Germany September 2021
- 21st International Vascular Biology Meeting, Korea September 2020
- Keystone Symposium “PI3K and PTEN at the Interface of Cell Growth, Vesicular Trafficking and Disease”, Germany May 2020 - *Cancelled*
- FOR 2325 (virtual) meeting, June 2020, “Understanding the genetic circuitry that governs mural cell maturation”
- Hypoxia National network, November 2019
- PTEN and its pathways, Boston September 2019
- Kick-Off Meeting CRC1366 - “Vascular Control of Organ Function”, March 2019
- IX New Frontiers in Cardiovascular Biology Madrid, November 2018
- 16th ASEICA International Congress 2018, November 2018
- Current Trends in Biomedicine Baeza, October 2018
- International Vascular Biology Meeting Helsinki, June 2018
- Annual meeting of the Catalan Metabolism Network Barcelona, May 2018
- Phd ITN workshop Berlin, April 2018
- The Netherlands Vascular Biology Meeting Biezenmortel, The Netherlands, Nov 2017

Invited seminars

- [University of Oxford \(Oliver Stone, March 2026\)](#)
- [University College of London \(Bart Vahnaesebroeck, March 2026\)](#)
- [AMC, Amsterdam \(Stephan Huveneers, Feb 2026\)](#)
- CRCT, Oncopole, Toulouse (Julie Guillermet-Guibert, dec 2025)
- University of Torino (Emilio Hirschi, Dec 2025)
- CBMSO-Madrid (Natalia Reglero, Nov 2025)
- CIB-Madrid (Ignacio Benedicto, Nov 2025)
- Universitätsmedizin Mannheim (Host: Hellmut Augustin, Oct 2025)
- International Centre for Genetic Engineering and Biotechnology (Host: Serena Zacchigna, March 2025)
- IRB (Cayetano Gonzalez, June 2024)

- Duve Institute (Host: Miikka Vikkula, Feb 2024)
- Lymphatic Malformations forum (Host: Michael Delinger, June 2023)
- Excellence Cluster of vascular biology (Host: Stefanie Dimmeler, June 2023)
- IMIM Barcelona (Host: Anna Bigas & Toni Celià Terrasa), Jan 2022
- ETH Zurich (Host: Katrien de Bock), Dec 2021
- Inselspital, University Clinic for Visceral Surgery and Medicine (Host: Annalisa Berzigotti)
- Second EVBO Series of Seminars, (Host: Lena Classon-Welsh), June 2020. "Understanding the genetic circuitry that governs mural cell maturation"
- University de Lausanne, (Host: Tatiana Petrova), Feb 2020. "PI3King the endothelium"
- Max Delbrück Center for Molecular Medicine, (Host: Holger Gerhardt), Dec 2019. "Oncogenic signalling in the vascular compartment"
- Centro de Investigaciones Biológicas (Host: Joaquim Teixidó), Oct 2019. "PI3King the endothelium".
- Institute of Oncology research (Host: Andrea Alimonti), May 2019. "PI3King blood vessels"
- Uppsala University (Host: Elisabetta Dejana), Nov 2018. "PI3King the vascular compartment"
- Instituto de Medicina Molecular (Host: Claudio Franco), Nov 2018. "PI3King the vascular compartment"
- Perelman School of Medicine (Host: Zoltan Arany), Pennsylvania, July 2018. "Pi3K signalling during vessel growth: the importance of keeping PIP3 levels in shape"
- Yale Cardiovascular Research Institute (Host: Anne Eichmann), New Haven, July 2018. "Role of endothelium in the control of systemic metabolism"
- Memorial Sloan Kettering Center (Host: Scott Lowe), New York, Sep2018. Pi3K signalling during vessel growth: the importance of keeping PIP3 levels in shape"
- Barts Institute of Cancer (Host: Kairbaan Hodivala-Dilke), London, Nov 2017. "PI3K α and blood vessels: a love story"
- AMC, (Host: Stephan Huveneers), Amsterdam Nov 2017. "PI3K as a driver of angiogenesis in health and disease".
- IBIS (Host: Francisco Vega), Sevilla June 2017. "Endothelial cells (and pericytes) under the effect of PI3K signalling"
- CNIC (Host: Rui Benedito), Madrid May 2017. "Endothelial cells (and pericytes) under the effect of PI3K signalling"

Fellowships & Awards

- 2022 European Vascular Biology Organisation (EVBO) President.
- 2020 2nd EVBO Lecture Award for 21st IVBM, Seoul, Korea September 2020.
- 2019 Best Female Scientist of CIBERONC
- 2018 Salvador de Madariaga Fellowship
- 2017 Leonardo BBVA Foundation Fellowship
- 2008 Reintegration Fellowship: "Ramon y Cajal" young research investigator tenure track position from the Spanish Ministry of Science and Education
- 2006 Cancer Research-UK fellowship
- 2004 EMBO Post-doctoral Fellowship (LTF364-2004)
- 2003 Best Thesis honorary award in Biochemistry of the University of Barcelona
- 1999 FPI PhD fellowship, Spanish Government

Organization of Scientific Meetings

- [Vascular Anomalies Conference, Barcelona, March 2027](#)
- Vascular Anomalies Conference, Berlin, Feb 2025
- Biochemical Society Meeting on PI3K signalling, Barcelona, Sep 2023
- EVBO Summer School, Barcelona, July 2023.
- International Scientific Advisory Board of IVBM, Oakland, US 2022
- 2nd Spanish Workshop on Endothelium, Santiago de Compostela, Nov 2022
- EMBO meeting on Vascular Malformations, Barcelona October 2021
- Young Investigator Session, ESM-EVBO meeting, Maastricht April 2019
- 1st Spanish Workshop on Endothelium, Madrid 26/1/2018
- Biology of Cancer Microenvironment joint symposia for the Catalan Society of Biology and the VESSEL Network, Barcelona 22/1/2016
- PI3K: Role in physiology and pathology symposia for the Catalan Society of Biology, Barcelona 24/10/2014