Name, tittle:	Mariona Graupera, PhD
Date of birth:	March 15, 1975
Position:	Group leader
Current address:	Josep Carreras Leukaemia Research Institute Ctra de Can Ruti, Camí de les Escoles s/n, 08916 Badalona
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Research experience

Jan 2023-Now	**ICREA professor – Group Leader,** Josep Carreras Leukaemia Research Institute (IJC), Barcelona.
June 2022-May 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. Title: *Mechanisms involved in the regulation of increased intrahepatic vascular tone in Cirrhosis. Role of Arachidonic acid derived compounds.* Supervisors: 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: 72 - H-Index: 36

I began to develop an interest in vascular biology during my PhD where I studied portal hypertension, a vascular syndrome associate with liver cirrhosis. I did my PhD at the Hemodynamic Liver Unit in the Barcelona Clinic Hospital, under the supervision of Prof. Jaume Bosch and Joan-Carles García Pagan. My PhD studies led me to publish four first-author papers in high impact journals. I defended my PhD thesis in 2003 at the University of Barcelona, Spain, for which I was awarded with the "*premi extraodinari 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). While being a postdoc, I unveiled the requirement of the PI3Kα 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 create a multidisciplinary laboratory devoted to study mechanisms that regulate the vasculature in development, homeostasis, and disease. In this context, the Graupera lab has made seminal discoveries (J Exp Med, Nat Commun, Clin Cancer Res, Sci Transl Med, Circulation, Nature Metabolism*),* that are influencing the clinical management of vascular-related diseases. In recognition of my scientific contributions, I was awarded several competitive national and international grants amongst them [H2020 MSCA-ITN (2013, 2016, 2020, 2020), AECC (2018), "La Caixa" Foundation (2019, 2021, 2022, 2023), PTEN Research (2020), BBVA Foundation (2020), WCR (2020), Leducq (2021), ERA4HEALTH (2023), La Marató Tv3 (2023)] that have allowed me to maintain and further build up momentum in my research programme. In February 2021, I joined the Josep Carreras Leukaemia Research Institute as Group leader with an interest to study the ties between the hematopoietic and endothelial cell linages. In July 2022, I was awarded with a ICREA Senior Professorship, a unique program established the Catalan Government to fund the Scientific elite body of Catalunya.

As a PI, I have:

- published 61 publications of which were 18 peer-reviewed publications as a last and/or corresponding author (J Exp Med, Nat Commun, Clin Cancer Res, Sci Transl Med, Circulation, Nature Metabolism, EMBO Mol Med, Nature Cardiovascular Research, Science Sig*),* and 43 peer-reviewed publications as collaborator (national and international collaborations),
- trained 13 MSc, 23 PhD students (12 defended), and 9 postdoctoral fellows,
- teach undergraduate and graduate student > 500 students,
- been awarded with 25 competitive grants, amongst which there are 4 European ITN actions (1 FP7 and 3 H2020), 2 as coordinator, 4 research agreements and 2 philanthropy agreements,
- done a summer stage in 2018 (3 months) at the Rockefeller University, NYC (Laboratory of Paul Cohen) as an invited Professor
- been invited to give seminars at the most prestigious research institutes and meetings in Europe and US.
- Nominated president of the European Vascular Biology Organization (EVBO)

Publications in chronological descendent order

In red senior last author
In blue first author
† Joint last authors; * Corresponding Author

1. 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-C2β limits mTORC1 signaling and angiogenic growth.* **Sci Signal**. 2023 Nov 28;16(813):eadg1913. doi: 10.1126/scisignal.adg1913
2. 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.
3. 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 Nov 9. doi: 10.1038/s41556-023-01281-y
4. Arbaizar-Rovirosa 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 translatomics 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.
5. 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.
6. Banerjee K, Lin Y, Gahn J, Cordero J, Gupta P, Mohamed I, Graupera M, Dobreva 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.
7. 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.
8. 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.
9. 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.
10. 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
11. 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.

12. 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, ópez-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. IF: 14,3
13. 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. IF: 19,85
14. Crainiciuc G, Palomino-Segura M, Molina-Moreno M, Sicilia J, Aragones D.G., Yao J.L.L., Madurga R., Adrover J.M., Aroca-Crevillén A., Martin-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. IF: 49,96
15. Riera-Mestre A, Cerdà P, Iroarte A, Graupera M, Viñals F. Translational medicine in hereditary hemorragic 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
16. 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. IF:6,26
17. Sánchez-Guixé M, Hierro C, Jiménez J, Viaplana C, Villacampa G, Monelli E, Brasó-Maristany F, Ogbah Z, Parés M, Guzmán M, Grueso J, Rodriguez O, Oliveira M, Azaro A, Garralda E, Tabernero J, Casanovas O, Scaltriti M, Prat A, Dienstmann R, Nuciforo P, Saura C, Graupera M, Vivancos A, Rodon J, Serra V. *High FGFR1-4 mRNA expression levels correlate with response to selective FGFR inhibitors in breast cancer*. **Clin Cancer Res**. 2021 Sep 30;clincanres.CCR-21-1810-A.2021. IF:12,53
18. Riera-Mestre A, Cerdà P, Iriarte A, Graupera M, Viñals F. *Translational medicine in hereditary hemorrhagic telangiectasia.* **Eur J Intern Med**. 2021 Sep 16;S0953-6205(21)00303-4. IF:4,62
19. Mertens R, Graupera M, Gerhardt H, Bersano A, Tournier-Lasserve 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. IF:6,82
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21. Jones EAV, Graupera M, van Buul JD, Huveneers S. *Editorial: Endothelial Dynamics in Health and Disease*. **Front Physiol**. 2020 Nov 19;11:611117. doi: 10.3389/fphys.2020.611117. eCollection 2020. IF:4,56
22. **Iacono A**, Pompa A, De Marchis F, Panfili E, Greco FA, Coletti A, Orabona C, Volpi C, Belladonna ML, Mondanelli G, Albini E, Vacca C, Gargaro M, Fallarino F, Bianchi R, De Marcos Lousa C, Mazza EM, Bicciato 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. IF:8,8
23. Kobialka, P, Graupera M. *Revisiting PI3-Kinase signaling in angiogenesis.* **Vasc Biol.** 2019 Nov 29;1(1):H125-H134. doi: 10.1530/VB-19-0025. eCollection 2019. IF:5,5
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25. Figueiredo AM, Villacampa P, Dieguez-Hurtado R, Lozano JJ, Kobialka P, Cortazar AR, Angulo-Urarte A, Franco CA, Claret M, Aransay AM, Adams RH, Carracedo A, Graupera M. *PI3Kb-regulated pericyte maturation governs vascular remodeling.* **Circulation**. 2020 May 29. doi: 10.1161/CIRCULATIONAHA.119.042354). IF: 29,0
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30. Castillo SD, Baselga E, Graupera M. *PIK3CA mutations in vascular malformations*. **Curr Opin Hematol.** 2019 May;26(3):170-178. IF: 2,86
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Pre-PI career stage

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Grants

Active Funding

Reference. REPAIRQ
Project Title*:* Understanding and repairing *GNAQ*-mutant blood vessels.
Funding Source: ERA4HEALTH, CARDINNOV call
Coordinator: Mariona Graupera
Period. 2024-2026
Amount. 788,753.25€, MG: 289,190€,

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. 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€

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. 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€

Reference. 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€

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$

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

Project Title: Brown Fat and Cardiovascular Health: Genetic Determinants and Molecular Mechanisms
Funding Source: Leducq Foundation, this a 2-phase application, pending to know whether we have been selected by phase 2.
Beneficiary. Mariona Graupera
Partners: International (oversees) consortium (current composition, 4 US partners, 4 European partners (including Mariona Graupera)
Amount: 7.000.000$, MG 650,000€

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

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-ITN-2020
Beneficiary. Mariona Graupera
Coordinator. Roger Gomis, IRB
Period. March 2021- Feb 2025
Amount. 4.036.801,32€, MG 501.809,76€

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

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€

Project Title. Mapping the pathogenesis of vascular malformations (Map-VM)
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. Vulnerabilities of Tumour and Stroma Interactions in Castration-Naïve Metastatic Prostate Cancer (PROSTARGET)
Funding Source: Associación Española Contra el Cancer (AECC)
Period. 2018-2023
Beneficiary. Mariona Graupera
Coordinator. Arkaitz Carracedo, CIC-Biogune
Amount. 1.000.000€, MG 270.000€

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
Beneficiary. Mariona Graupera, IDIBELL
Coordinator. Arkaitz Carracedo, CIC-biogune
Period. 2018- Now
Amount. 80000€/year

Completed Funding

Project Title. Phosphoinositide 3-kinase Signalling in Oncogenic Vascular Malformations
Funding Source. Fundació Bancària Caixa d'Estalvis i Pensions de Barcelona,"la Caixa"

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 therapetic target in cancer
Funding Source. Spanish Ministry of Economy and Science
Beneficiary. Mariona Graupera, IDIBELL
Period. 2011-2013
Amount. 145.200€

Research Agreements

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-PI3Kα 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€

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: Caracterización molecular y celular de células endoteliales derivadas de pacientes con síndromes pediatricos mediados por mutaciones en PI3K

Funding Source: Asociación Española Síndrome de Sturge-Weber (AESSW)
Period: 2019-2023
Amount: 40.000€

Current lab composition

Member	Position
Mariona Graupera, PhD	Group Leader
Laia Muixi, PhD	Project/Lab manager
Joaquim Grego, PhD	Senior Researcher
Sandra Castillo, PhD	Senior Postdoctoral Fellow **PERIS, Beatriu de Pinós and MSCA-IF** **La Caixa Junior PI** from January 2021 Starting her own lab in Sept 2024 with a RyC
Ana Angulo-Urarte, PhD	Senior Postdoctoral Fellow **MSCA-IF**
Leonor Gouveia, PhD	Junior Postdoctoral Fellow **Vetenskapsradet International Postdoc Grant**
Frederic Morales, PhD	Junior Postdoctoral Fellow
Odena Vilalta	PhD Student - **FI**
Xabier Perosanz	PhD Student
Marta Fidalgo	PhD Student - **ITN MSCA**
Hielke Van Splunder	PhD Student - **ITN MSCA**
Margalida Munar	PhD Student
Ane Martinez	PhD Student
Louis Maes	PhD Student - **ITN MSCA**
Emmanuelle Nola	PhD Student - **ITN MSCA**
Jose Dendra	PhD Student - **FPI**
Ariadna Roca	PhD Student
Alba Albinyà	Master Student
Elena Castillo	Part-time technician

PhD Supervisor

	Year	PhD student	Title of thesis
1	2014	Helena Serra Busquet	Role of Pten in sprouting angiogenesis
2	2016	Adriana Soler Salas	Role of stromal inhibition of p110α isoform as a therapeutic target in cancer
3	2017	Ana Angulo Urarte	Regulation of actomyosin contractility by p110α PI3-kinase in sprouting angiogenesis
4	2017	Ana Raquel Martins Figueiredo	Role of PI3K in pericytes during the angiogenesis
5	2017	Erika Monelli	Deciphering the role of endothelial cells in the regulation of physiological and pathological white adipose tissue remodelling
6	2019	Mónica Sánchez Guixé	ER+ metastatic breast cancer targeted therapy: Biomarkers of response and mechanisms of resistance to PI3K and FGFR inhibitors *Co-directed with Dr. Violeta Serra (VHIO)*
7	2020	Iñigo Chivite Araiz	Role of systemic metabolic disturbances induced my alteration in endothelial cells. *Co-directed with Dr. Marc Claret (IDIBAPS)*
8	2020	Jasmina Zanoncello	Oncogenic PI3K Signalling in venous malformations Co-directed with Dr. Sandra Castillo (IDIBELL)
9	2020	Piotr Kobialka	Understanding PI3K signalling in vessel growth and

			pathophysiology
10	2022	Judith Llena Sopena	Generación, desarrollo y estudio de modelos fisiopatológicos de angiogénesis con PI3K como eje central.
11	2023	Anabel Martínez	La progresión del cáncer de próstata mediante la vía de señalización TGF-β favorece la modificación de los pericitos y la disfuncionalidad vascular. *Co-directed with Arkaitz Carracedo*.
12	2023	Helena Sabata Pérez	Caracterització de les malformacions vasculars causades per mutacions activadores al gen PIK3CA *Co-directed with Sandra Castillo*
13	2022	Pau Cerda Serra, MD	Identifying and characterizing new mutations as a cause of HHT. *Co-directed* with Dr. Antoni Riera-Mestre (HUB)
14	2024	Odena Vilalta Castany	Pathogenic study of cutaneous capillary malformations and Sturge-Weber syndrome. Co-directed with Dr. Sandra Castillo (IJC)
15	2025	Xabier Perosanz Hidalgo	Modelling vascular malformations in PHTS Co-directed with Dr. Sandra Castillo (IJC)
16	2025	Marta Fidalgo	Identifying stromal determinants in the bone metastatic niche Co-directed with Roger Gomis.
17	2025	Hielke Van Splunder	Characterizing stromal populations in prostate cancer at single cell resolution
18	2025	Ane Martinez Larrinaga	Developing a computational model to integrate scRNAseq and spatial transcriptomics.
19	2026	Margalida Munar Gelabert	Role of endothelial polyamines in adipose tissue biology.
20	2026	Louis Maes	Role of *PIK3CA* variants in vascular malformations Co-directed with Dr. Ana Angulo-Urarte (IJC)
21	2026	Emanuelle Nola	Role of *PIK3CA* in paediatric glioblastoma Co-directed with Dr. Sandra Castillo (IJC)
22	2027	Jose Dengra	Understanding PIK3CA biology in arteries
23	2027	Ariadna Roca	Understanding PIK3CA mechanism in lymphatic endothelial cells

* Defended thesis 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 p110α isoform en l'angiogenesis tumoral.
3	2011	Silvana Iridia Elizondo Rosales	Papel de la via PI3K en el control de la angiogénesis
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 Llena 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	

* Defended thesis are shown in yellow

Invited speaker (since 2017)

Conference

- Vascular Cell Biology Gordon Conference, January 2025
- 13th Kloster Seeon Meeting “Angiogenesis”, Germany September 2024
- 2024 FASEB Phospholipid Meeting, St Paul, US, July 2024
- EASL Congress 2024, Milan, June 2024
- CRC1366 meeting "Vascular Control of Organ Function", May 2024
- Lymphatic Gordon Conference, 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

- 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 Surgey and Medicine (Host: Annalisa Berzigottti)
- 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 Medicine 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 Heaven, 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. "PI3Kα 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 Organization (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 University of Barcelona
- 1999 PhD fellowship, Spanish Government

Organization of Scientific Meetings

- 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