

Part A. PERSONAL INFORMATION

First name	Roger		
Family name	Gomis		
Gender (*)	Male	Birth date	
Social Security, Passport, ID number			
e-mail	roger.gomis@irbbarcelona.org	www.irbbarcelona.org	
Open Researcher and Contributor ID (ORCID) (*)	0000-0001-6473-2858		

A.1. Current position

Position	ICREA Research Professor / Group Leader		
Initial date	01/10/2010		
Institution	Institute for Research in Biomedicine (IRB Barcelona)		
Department/Center	Cancer Science Program		
Country	Spain	Teleph. number	934039959
Key words	Metastasis, Breast Cancer, Latency, Luminal		

A.2. Previous positions (research activity interruptions, indicate total months)

Period	Position/Institution/Country/Interruption cause
2007-2010	ICREA Researcher / IRB Barcelona / Spain
2003-2007	Postdoctoral / Memorial Sloan-Kettering Cancer Ctr/ USA
1997-2002	PhD student / University of Barcelona / SPain

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Licensed in Business Administration	Universitat Oberta de Catalunya	2011
PhD Biochemistry and Molecular Biology	University of Barcelona	2002
Licensed in Biochemistry and Molecular Biology	University of Barcelona	1997

Part B. CV SUMMARY

Publications: 67 original articles, 49 from my own laboratory, and 8 research monographs with 11557 citations and H-index 42 (Google Scholar). These publications include: 3× Nature, 1× Cell, 6× Nature Cell biology, 3× Cancer Cell, 5× Nature Communications, 1× Nature Cancer, 1× Lancet Oncol, 2× JNCI, 2× EMBO Molecular Medicine, 1× PNAS, 1× Science Advances, 1× EMBO J.; 35 publications with IF > 9. **Publications in D1: 40 in Q1: 65**

Number of doctoral thesis supervised (Last 10 years): 12

The metastasis laboratory, led by ICREA Research Professor Roger Gomis, is part of the Cancer Science Program at IRB Barcelona. It seeks to improve the prognosis, prevention, and treatment of cancer by studying the basic principles underlying the development of this disease. Since 2007, we have focused on identifying and functionally validating genes that enable breast and colon cancers to metastasize to clinically relevant sites. In particular, during the last ten years, we strived to unravel the tissue-specific mediators and time-dependent components of metastasis processes. Our recent work from previous Plan Estatal projects established how regulating the chromatin marks that modulate the transcription of genes involved in luminal cell differentiation, and deregulation of this facilitates the metastatic potential of latent BCa cells. Recently, we have also explained how MAF amplification licenses ER+ BCa metastasis. Our 49 publications from 2014–2024 in top international journals include:



Morales *et al.* **EMBO Mol Med** 2014; Urosevic *et al.* **Nature Cell Biol** 2014; Slebe *et al.* **Nature Comm** 2016; Cejalvo *et al.* **Cancer Research** 2017; Coleman *et al.* **Lancet Oncol.** 2017; Gawrzak *et al.* **Nature Cell Biol** 2018; Urosevic/Blasco *et al.* **Cancer Research** 2020; Gomis **Nature** 2019; Paterson *et al.* **JNCI** 2021; Blasco *et al.* **Trends in Cancer** 2022 and Llorente *et al.* **Nature Cell Biol** 2023 (see **Section C.1** for list).

Notably, the impact of our work on BCa metastasis to date has been strong, as evidenced by findings based on our work that have high clinical applications (e.g. Pavlovic *et al.* **JNCI** 2015, Coleman *et al.* **Lancet Oncol** 2017, Coleman *et al.* **J. Bone Oncol** 2018, and Paterson *et al.* **JNCIcs** 2021), and by the seven patents that we have filed (see details in CV). These patents were licensed to and are being further developed by a Biotech Company, INBIOMOTION S.L., a spin-off from our laboratory that was subsequently funded by a syndicate of investors led by Ysios Capital Partners (www.ysioscapital.com) and Caixa Capital Risc (www.caixacapitalrisc.com). The product developed, MAF test (www.MAF-Test.com) is planned to be launched to the market Q2 2023. In addition, a recent developed project from the lab has been licensed to biotech company, Ona Therapeutics (<https://ona-therapeutics.com>).

Part C. **RELEVANT MERITS**

C.1. **PUBLICATIONS (SELECTED PUBLICATIONS FROM LAST 10 Years – Extended list including all 64 papers at Pumed = “Gomis RR”) (*Corresponding author)**

1. Llorente, A., Blasco, M.T., Espuny, I., ...Gibler, P., Riera, A., Holen, I., Avgustinova, A., Di Croce, L., **Gomis, R.R.** *, (2023) *MAF Amplification licenses Estrogen Receptor a to Drive Breast Cancer Metastasis.* **Nature Cell Biol.** 25, 1833-1847 IF 21.3
2. Pérez-Núñez I, Rozalén C, Palomeque JÁ,... **Gomis RR**, Cejalvo JM, ...Pusztai L, Kang Y, Albanell J, Celià-Terrassa T. (2022) *LCOR mediates interferon-independent tumor immunogenicity and responsiveness to immune-checkpoint blockade in triple-negative breast cancer.* **Nature Cancer.** 3: 355-370. IF 23.5

→1+2: *Metastasis Phenotypic adaptation:* Here, we elucidated the molecular underpinnings of the adaptive plasticity of BCa tumor and metastatic cells. The regulation of a cell's phenotypic output is multilayered, and we show that both transcriptional and epigenomic mechanisms play key roles, rather than genetic mutations.

3. Paterson AHG, Lucas PC, Anderson SJ, Momounas EP.... and **Gomis RR*** (2021) *MAF amplification and adjuvant clodronate outcomes in early-stage breast cancer in NSABP B-34 and potential impact on clinical practice.* **JNCI-Cancer Spectrum** 5: pkab054 IF 4.4

4. Coleman RE, Hall A, Albanell J, Hanby A, ... and **Gomis RR*** (2017) *Effect of MAF amplification on treatment outcomes with adjuvant zoledronic acid in early breast cancer: a secondary analysis of the international, open-label, randomised, controlled, phase 3 AZURE (BIG 01/04).* **Lancet Oncol** 18:1543-52 IF 33.9

Commentary: **Lancet Oncol** 18: 1436-1437 (2017)

→3+4: *Clinical Application:* These findings have the potential to lead an objective approach of selecting breast cancer patients for adjuvant bisphosphonate treatment to prevent metastasis (Mentioned in ASCO and ESMO guidelines 2022 and 2021)

5. Gawrzak S., Rinaldi L, Gregorio S, Arenas, EJ... and **Gomis, RR*** (2018) *MSK1 regulates luminal cell differentiation and metastatic dormancy in ER+ breast cancer.* **Nat Cell Biol** 20:211-221 IF 20

Commentaries: **Nature Cell Biol.** 20:124-126 (2018) / **Nature Rev in Cancer** 18:136 (2018)

→5: *Metastasis Dormancy:* How micrometastatic lesions remain dormant before initiating colonization is unclear. We have provided insights into how breast cancer metastatic epithelial cells remain latent, by controlling luminal differentiation attributes through epigenetic marks, which limits their initiation and expansion at the metastatic site

6. Urosevic, J, Blasco, MT, Llorente A, Bellmunt, A, ... and **Gomis, RR*** (2020) *ANGPT2 and*



CXCR4 upregulation induced by ERK1/2-signaling mediates liver metastasis from colon cancer. **Cancer Research**; 80:4668–80 IF 12.7

7. Pavlovic, M., Arnal-Estapé, A., Rojo, F., Bellmunt, A., ...and **Gomis, RR*** (2015) Enhanced MAF oncogene expression and breast cancer bone metastasis. **JNCI** 107(12): djv256. IF 15

8. Urosevic, J, Garcia-Albéniz, X, Planet, E, Real, S, ... and **Gomis, RR*** (2014) Colon cancer cells colonize the lung from established liver metastases through p38 MAPK signaling and PTHLH. **Nature Cell Biol** 16: 685-94 IF 20 Commentary: EMBO J. 33:1737-9 (2014)

9. Morales, M, Arenas, EJ, Urosevic, Guiu, M., ...and **Gomis, RR*** (2014) RARRES3 suppresses breast cancer lung metastasis by regulating adhesion and differentiation. **EMBO Mol Med** 6:865-881. IF 9.2 Highlighted in: Nature Rev Clin Oncol 11:10 (2014)

→6–9: *Organ-Specific Metastasis: We focused on identifying and functionally validating genes that enable breast and colon cancers to metastasize to clinically relevant sites. In particular, we strived to unravel the tissue-specific mediators and time-dependent components of metastasis processes.*

10. Slebe, F., Rojo, F., Vinaixa, M., García-Rocha, M., ... and **Gomis, RR*** (2016) FoxA and LIPG endothelial lipase control the uptake of extracellular lipids for breast cancer growth. **Nature Comm** 7: 11199. IF 12

11. Torrano, V., Valcarcel-Jimenez, L., Cortazar, AR., Liu, D., ...and **Gomis, RR** and Carracedo A. (2016) The metabolic co-regulator PGC1 α suppresses prostate cancer metastasis. **Nature Cell Biol** 18: 645-56 IF 20

Commentary: Nature Cell Biol (2016) 18:589-590

12. Mateo, F., Arenas, E.J., Aguilar, H...**Gomis, R.R.*** and Pujana M.A.* (2016) MEK-EV11-SOX9 Signaling Mediates Metastatic Resistance to mTOR Inhibition. **Oncogene**. 36(19):2737-2749.

→10–12: *Cancer, metastasis and metabolism: Oncogenes and tumor suppressor genes maintain functional metabolic homeostasis, and alterations in these genes promote an imbalance in the metabolic pathways and coordinately induce the metabolic switch. We have significantly contributed to unravelling the metabolic rewiring process required for metastasis growth and treatment resistance.*

RESEARCH MONOGRAPHS (selected Last 5 years)

1. Blasco T, Espuny I, and **Gomis, R.R.*** (2022) “Ecology and evolution of dormant metastasis.” **Trends in Cancer** 22;1157-59 IF 19.16

2. Pereira, C., Parolo, C., Idili, A., **Gomis, R.R.**, ... and Merkoçi, A. (2022) “Paper-based biosensors for cancer diagnostics” **Trends in Chemistry** 4: 554-567 IF:15.37

3. Blasco T and **Gomis RR*** (2020) PDL1 controls cancer pyroptosis **Nat Cell Biol** 22;1157-59 IF 28

4. **Gomis RR*** (2019) Survival Skills ensure that cancer spreads **Nature** 573, 353-354 IF 43.07

5. Salvador F, Llorente A, **Gomis RR*** (2019) From latency to overt bone metastasis in breast cancer: potential for treatment and prevention **J Pathol.** 249:6-18. IF 7.9

7. Cejalvo JM, Pascual, T, Fernández, A, Brasó-Maristany, F, **Gomis, RR**, Perou, CM, Muñoz, M, and Prat, A (2018) Clinical implications of the non-luminal intrinsic subtypes in hormone receptor-positive breast cancer. **Cancer Treat Rev** 67:63-70; Review IF 12.1

8. Urosevic J and **Gomis RR*** (2018) A tissue-decellularization method enables the culture organ-specific metastases on a dish. **Nature Biomedical Engineering** 2:347-348 IF 17.15

9. Salvador F and **Gomis RR*** (2018) Paraspeckle factor turns TGF-B1 pro-metastatic. **Nature Cell Biol** (2018) 20: 367-69 IF 20

10. Seoane, J and **Gomis, RR*** (2017) “TGF β family signaling in tumor suppression and cancer progression” **Cold Spring Harbor Perspectives**; Invited review IF 9.1

C.2. CONGRESS



ORGANISATION OF SCIENTIFIC MEETINGS (Last 10 years)

- 2024 Scientific committee Evomet Conference Deconstructing the evolution of metastasis, Brussels, Belgium
2024. Steering Committee Congreso CIBER 10 años, Valencia, Spain
- 2023 Scientific committee 19th ASEICA International Congress, Spain
- 2022 Scientific committee 18th ASEICA International Congress, Spain
- 2021 Organizer 2021 Evolution in metastasis symposium. Barcelona, Spain
- 2018 Co-organizer of the International Meeting “Mechanisms of Metastasis”. BBVA Biomed Conferences, Barcelona, Spain
- 2016 and 2014 Member of the “Advanced Metastatic Breast Cancer” Scientific Committee of the ESMO Congress 2016 and 2014, Copenhagen and Madrid, Denmark and Spain

PRESENTATIONS AS INVITED SPEAKER AT INTERNATIONAL CONFERENCES

Gave over 30 presentations in total at international conferences (2019-2024). In addition to several invited seminars at different institutions.

C.3. RESEARCH PROJECTS (Active the past 5 years)

1. **FA:** Fundació La Caixa **PI:** R.R. Gomis **Date:** 2024-2027 (€650K)
2. **FA:** ITN-MSCA **PI and Coordinator:** Roger R. Gomis **Date:** Mar 2025-Feb 2029 (€4.3M, 1.5M to IRB Barcelona)
3. **FA:** Asociación Española Contra el Cáncer. **COORD:** R.R. Gomis **Date:** 2024-2029 (€1.2M)
4. **FA:** Spanish Government **PI:** R.R. Gomis **Date:** 2023-2025. (€450K)
5. **FA:** Spanish Government- (Publico-Privada) **PI:** R.R. Gomis **Date:** 2023-2026. (€450K)
6. **FA:** Asociación Española Contra el Cáncer. **PI:** R.R. Gomis **Date:** 2023-2025 (€300K)
7. **FA:** ACCIO-SGR, Generalitat de Catalunya **co-PI:** R.R. Gomis **Date:** 2023-2024. (€60K)
8. **FA:** Spanish Government PoC **PI:** R.R. Gomis **Date:** 2022-2024. (€120K)
9. **FA:** ITN-MSCA EU H2020 **PI and Coordinator:** R.R. Gomis **Date:** Mar 2021-Feb 2025 (€4.2M, €1.2M to IRB Barcelona)
10. **FA:** Spanish Government **PI:** R.R. Gomis **Date:** 2021-2023. (€390K)
11. **FA:** Fundació La Marató **Partner:** R.R Gomis **Date:** 2020-2022 (€300K)
12. **FA:** Fundación FERO. MANGO grant. **PI:** R.R Gomis **Date:** 2020- 2021(€80K)
13. **FA:** Fundació La Caixa **PI:** R.R. Gomis **Date:** 2019-2021 (€498K)
14. **FA:** Asociación Española Contra el Cáncer **Partner:** R.R Gomis **Date:**2019-2024 (€1.2M)
15. **FA:** Instituto de Salud Carlos III, CIBER Cáncer. **co-PI:** Gomis **Date:** 2017-Open (€75K/y)

C.4. CONTRACTS, TECHNOLOGICAL OR TRANSFER MERITS, CONTRACTS

Inbiomotion S.L. “GOI mechanism of action” Jan 2015-Jun 2016. **PI:** Roger R Gomis.

GRANTED, LICENSED PATENTS AND PATENT APPLICATIONS

Summary GOMIS RR as an inventor: Granted 205 patents, with 48 pending, out of 10 patent families. Main jurisdictions including US, EU (Several Jurisdictions), China, Japan, Brazil, Korea, Canada, Mexico, Australia. **All Licensed (L) to Inbiomotion (www.inbiomotion.com)**
WO/2012/045905 (L); WO/2013/153458 (L); WO/2013/182912 (L); WO/2014/140933 (L); WO/2014/140896 (L); WO/2014/057357 (L); WO/2014/184679 (L); WO/2015/052583 (L); WO/2016/092524 (L); WO/2019/102380 (L)

LEADERSHIP IN INDUSTRIAL INNOVATION

2010-ongoing Founder of INBIOMOTION SL (www.inbiomotion.com); **> 15M€ in capital in various financing rounds** led by Ysios Capital (www.ysioscapital.com), Caixa Capital Risc (www.caixacapitalrisc.es), and Alta life Sciences (www.altals.com).

2011 SK2011-1396 for Nlic Eclipse Massage SK1553, Licensed to Eclipse Therapeutics, Inc
2024 Licensing ADC technology to Ona Therapeutics SL for two new candidates