

CURRICULUM VITAE (CVA)

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Part A. PERSONAL INFORMATION

CV date

03/11/2025

First name	Roger		
Family name	Bentanachs Raset		
Gender (*)	Masculin	Birth date (dd/mm/yyyy)	
ID number			
e-mail		URL Web	
Open Researcher and Contributor ID (ORCID) (*)	0000-0002-9714-163X		

(*) Mandatory

A.1. Current position

Position	Postdoctoral Researcher		
Initial date	03-11-2025		
Institution	IDIBELL		
Department/Center	institut català d'oncologia - Hospital duran i reynals		
Country	Spain	Teleph. number	664824372
Key words	Adrenoleukodistrophy, Rare diseases, lipid metabolism		

A.2. Education

PhD, Licensed, Graduate	University/Country	Year
PhD in Biomedicine	University of Barcelona	2025
Posgraduate: Research in Pharmaceutical sciences	University of Barcelona	2020
Pharmacy degree	University of Barcelona	2019

Part B. CV SUMMARY

I am a pharmacist with a PhD in Biomedicine from the University of Barcelona (June 2025), where I was a PREDOCS-UB fellow. My research focuses on identifying new therapeutic strategies and elucidating mechanisms involved in lipid metabolism disorders. During my PhD, I developed a drug-repurposing approach for metabolic dysfunction-associated steatotic liver disease (MASLD) using in vitro (cell cultures) and in vivo (rat and zebrafish) models. This work characterized the antisteatotic effects of bempedoic acid, pemafibrate, and telmisartan, revealing their protective mechanisms against lipotoxicity through genomic, molecular, and omics analyses. Moreover, I completed research stays at Charles University (Czechia) and Uppsala University (Sweden) and collaborated with other national and international groups investigating lipotoxicity in different pathologies. Recently, I joined Dr. Aurora Pujol's laboratory, a leading group in rare brain metabolic disorders, to further expand my expertise in lipotoxicity and its role in neurological diseases. My research has translational relevance, as our SRG group obtained approval for a clinical trial testing bempedoic acid in MASLD patients, and these efforts have resulted in 14 publications, several conference presentations, and multiple awards. Beyond research, I have co-supervised master's theses, taught over 100 hours at the University of Barcelona, and currently lecture in Pharmacology at UVic-UCC University.

Part C. RELEVANT MERITS

C.1. Publications (10 most relevant)

I have published **14 articles** in the last five years (2024-2019), first author in 7 articles

- Bentanachs R**, Ramírez-Carrasco P, Braster B,..., Alegret M. 2025. Telmisartan reverses hepatic steatosis via PCK1 upregulation: A novel PPAR-independent mechanism in

experimental models of MASLD. *Pharmacological Research*. 218:107860 IF: 10,5 (2024, Q1). (1/11). DOI: [10.1016/j.phrs.2025.107860](https://doi.org/10.1016/j.phrs.2025.107860)

2. **Bentanachs R**, Miró L, Ramírez-Carrasco P,..., Roglans N*, Laguna JC*. 2025. Mirabegron induces selective changes in the faecal microbiota of HFHFr rats without altering bile acid composition. *Frontiers in Pharmacology*. 16:1547749. IF: 4.8 (2024, Q1). (1/10) *Correspondance DOI: [10.3389/fphar.2025.1547749](https://doi.org/10.3389/fphar.2025.1547749)

3. Irisarri A, Corral A, Perez-Salvador N,..., Griñán-Ferré C. 2025. FTO inhibition mitigates high-fat diet-induced metabolic disturbances and cognitive decline in SAMP8 mice. *Molecular Medicine* 31(1):73 IF: 6,4 (2024, Q1). DOI: [10.1186/s10020-025-01126-4](https://doi.org/10.1186/s10020-025-01126-4)

4. **Bentanachs R**, Miró L, Sánchez RM,..., Roglans N*, Laguna JC*. 2024. Pemafibrate abrogates SLD in a rat experimental dietary model, inducing a shift in fecal bile acids and microbiota composition. *Biomedicine & Pharmacotherapy*. 177:117067. IF:7.5 (Q1). (1/9) *Correspondance. DOI: [10.1016/j.biopha.2024.117067](https://doi.org/10.1016/j.biopha.2024.117067)

5. Di Veroli B*, **Bentanachs R***, Roglans N,..., Buttari B. 2024. Sex Differences Affect the NRF2 Signaling Pathway in the Early Phase of Liver Steatosis: A High-Fat-Diet-Fed Rat Model Supplemented with Liquid Fructose. *Cells*. 13(15):1247. IF: 5,2 (Q2). (2*/10) *co-author. DOI: [10.3390/cells13151247](https://doi.org/10.3390/cells13151247)

6. **Bentanachs R**, Blanco L, Montesinos M,..., Roglans N*, Alegret M*. 2023. Adipose Tissue Protects against Hepatic Steatosis in Male Rats Fed a High-Fat Diet plus Liquid Fructose: Sex-Related Differences. *Nutrients*. 15(18):3909. IF: 4,8. (1/10) *Correspondance (1/10). DOI: [10.3390/nu15183909](https://doi.org/10.3390/nu15183909)

7. Laguna JC, Roglans N, **Bentanachs R**. Pemafibrate: PROMINENT failure or an urgent need for therapeutic replacement?. 2023. *Clínica e Investigación en Arteriosclerosis*. 25(4):202-2025 IF:1.9 (Q3) (3/3) DOI: [10.1016/j.arteri.2023.05.001](https://doi.org/10.1016/j.arteri.2023.05.001)

8. Velázquez A.*; **Bentanachs R.***; Sala-Vila A,..., Roglans N*, Alegret M*. 2022 KHK, PNPLA3 and PPAR as Novel Targets for the Anti-Steatotic Action of Bempedoic Acid. *Biomedicines*. 10(7):1517 IF: 4,7 (Q1). *co-author *Correspondance (2*/9). DOI: [10.3390/biomedicines10071517](https://doi.org/10.3390/biomedicines10071517)

9. **Bentanachs R**, Velázquez AM, Sánchez RM, Alegret M, Laguna JC, Roglans N. 2022. Bempedoic acid as a PPAR α activator: new perspectives for hepatic steatosis treatment in a female rat experimental model. *Clínica e Investigación en Arteriosclerosis*. 34(2):57-67. IF: 1,6 (Q3). (1/7). DOI: [10.1016/j.arteri.2021.09.004](https://doi.org/10.1016/j.arteri.2021.09.004)

10. Velázquez AM*, Roglans N*, **Bentanachs R**,..., Alegret M. 2020. Effects of a Low Dose of Caffeine Alone or as Part of a Green Coffee Extract, in a Rat Dietary Model of Lean Non-Alcoholic Fatty Liver Disease without Inflammation. *Nutrients*. 12(11):3240. IF: 5,7 (Q1). (3/10) DOI: [10.3390/nu12113240](https://doi.org/10.3390/nu12113240)

11. Pourová J, Applová L, Macáková K,..., Mladěnka P. 2019. The Effect of Silymarin Flavonolignans and Their Sulfated Conjugates on Platelet Aggregation and Blood Vessels Ex Vivo. 11(10):2286. IF: 4,5 (Q1). (6/14). DOI: [10.3390/nu11102286](https://doi.org/10.3390/nu11102286)

C.2. Congress (10 most relevant)

Invited Conference

1. Sex-related susceptibility to fatty liver in response to a high fat diet supplemented with liquid fructose. **Bentanachs R**, Sala-Vilà A, Lázaro I, Laguna JC, Roglans N, Alegret M. **Organization for the Study of Sex Differences (OSSD) Annual Meeting**. Bergen (Norway), 2024. International.

Oral Communications

2. Exploring a drug repurposed strategy to treat NAFLD in a rat experimental model. **Bentanachs R**, Blanco L, Montesinos M, Roglans N, Alegret M, Laguna JC. **26th MetNet Meeting**. Barcelona (Spain), 2024. National

3. Is Bempedoic Acid a PPAR α agonist?. **Bentanachs R**, Velazquez AM, Roglans N, Laguna JC, Alegret M. **19th MetNet Meeting 2020**. Barcelona (Spain). National.
4. Study of the effects of Pemafibrate on a hepatic-steatosis rat model. **Bentanachs R**, Blanco L, Montesinos M, Roglans N, Alegret M, Laguna JC. PhD Conferences 2023. Barcelona (Spain). National

Poster Communications

5. Exploring the repurposing of Telmisartan for the treatment of MASLD: characterization of its antisteatotic mechanism of action. **Bentanachs R**, Braster B, Emmanouilidou A,..., den Hoed M **EASL congress 2025**. Amsterdam (Netherlands). International.
6. En un modelo experimental de esteatosis simple en rata, el telmisartán desvía el flujo metabólico de la fructosa desde la síntesis de lípidos hacia la vía de los polioles. N Roglans, **R Bentanachs**, J Zhou-Wu, L Vilà, JC Laguna, M Alegret. **XXXVII Congreso de la SEA. National**. Sitges (Spain). **Award for best electronic poster.**
7. Telmisartan restores hepatic ACE2 levels and improves steatosis in a dietary rodent model. **Bentanachs R**, Fernández J, Roglans N, Alegret M, Laguna JC, Roglans N. **9th MetNet International Annual Meeting**. Barcelona (Spain). National.
8. Pemafibrate abrogates lipid liver accretion in a dietary model of fatty liver in rat. **Bentanachs R**, Blanco L, Montesinos M, Roglans N, Alegret M, Laguna JC. **EASL Congress 2023. Viena (Austria)**. International
9. Sex-related susceptibility to fatty liver in response to a high-fat diet supplemented with liquid fructose. **Bentanachs R**, Mateu M, Tikeridis N, Laguna JC, Alegret M, Roglans N. **8th MetNet International Annual Meeting**. International
10. Increased DNL and PNPLA3 expression by liquid fructose are essential in the production of fatty liver and hypertriglyceridemia in a non-obese HFD-fed rat model. **Bentanachs R**, Velazquez AM, Roglans N, Alegret M, Laguna JC. **90th EAS Congress 2022**. Milan (Italy)

C.3. Research projects

Researcher in four funded research projects.

1. REF: PID2023-146140OB-I00. Repurposing Drug therapy for liver fibrosis and atherosclerosis: A double-hit approach (HepaAthero2hit). Ministry of Science Education and Universities – 2023 call. PI: Marta Alegret Jordà and Núria Roglans Ribas (University of Barcelona), 1/1/2024 – 31/12/2027. 287,500€.
2. REF: FERP-2022-77. Impact of bempedoic acid on inflammation and vascular remodeling in abdominal aortic aneurysm. Emilio Rodríguez Pascual Foundation – 2022 call. PI: Cristina Rodríguez (Institut de Recerca Sant Pau, IR Sant Pau). 19/12/2022 - 18/12/2024. 24.990€.
3. REF: 2021SGR00345. Receptores Nucleares, Metabolismo Energético y Terapia de las Enfermedades del Metabolismo. AGAUR. PI: Marta Alegret Jordà (University of Barcelona), 1/1/2022 – 31/12/2024. 40,000€
4. REF: PID2020-112870RB-I00. Activation of PPAR alpha, BETA3-Adrenergic Receptor and ACE/ANG (1-7)/MAS as therapeutic targets in fatty liver: A repositioning and pharmacological combination project. Ministry of Science and Innovation – 2020 Call. PI: Juan Carlos Laguna and Marta Alegret Jordà (University of Barcelona). 01/09/2021 - 31/08/2024. 121.000€

C.4. Contracts, technological or transfer merits

Clinical developments: The SGR group received the approval to conduct the observational clinical trial: Impacto del ácido bempedoico sobre la inflamación sistémica en humanos (Currently recruiting fase). REF: EOM037/23

C.5. Dissemination and outreach activities

- Oral presentation in “XV Jornades de Recerca” at Faculty of Pharmacy and School Sciences, UB. Exploring the repurposing of Telmisartan for the treatment of MASLD in a Zebrafish larval model. **Award for best Oral Communication.**
- Research outcomes received media attention and were featured in multiple newspaper articles (Medical News Today, Newsweek).

C.6. Research stays

International centers

- 02/2024 – 08/2024. PhD stay. Department of Immunology, Genetics and Pathology (BMC), **Uppsala University, Sweden**. (Dr. Marcel den Hoed group).
- 10/2018 – 1/2019. Undergraduate stay. Department of Pharmacology and Toxicology. Faculty of Pharmacy, **Charles University, Czechia** (Dr. Přemysl Mladěnka group).

National centers

- 09/2019- 09/2021. Postgraduate and research assistant stay. Department of Pharmacology, Toxicology and Therapeutic Chemistry. Faculty of Pharmacy and Food Sciences, University of Barcelona, Spain (Dr. Juan Carlos Laguna group)

C.7. Teaching activities.

- (2025 – to date) **Adjunct professor** at University of Vic – Central University of Catalonia (**UVIC-UCC**). Taught 6 ECTS credits (60 hours) of pharmacology in Nursery degree. Tasks included: theoretical lectures, student supervision and examination duties.
- (2020-2024) Practical classes in the **pharmacy degree, University of Barcelona** (Subject:hours): General pharmacology: 16H Gr@d / Pharmacology and therapeutics I: 64H Gr@d / Pharmacology and therapeutics II: 24H Gr@d / Pharmacology RDI: 2H Gr@d

C.8. Teaching courses/congresses.

- Comunicació efectiva a l'aula, 2025 – Carles Caño. University of Barcelona.
 - 1a Jornada de Grups d'Innovació Docent “**GID PharmaFood**”. 2025
 - POSTER AUTHORS: Roglans N, Alegret M, Barroso E, Bentanachs R, Camins A, Canudas A.M, Ettcheto M, Griñán C, Guerrero A, Jiménez A, Pallàs M, Palomer X, Pubill D, Vázquez M, Sánchez RM
- Title: valoració del grau d'adquisició de competències amb les pràctiques de simulació per ordinador en assignatures troncal de l'àmbit de farmacologia en el grau de farmàcia.
- ORGANIZING ENTITY: Faculty of Pharmacy, University of Barcelona
- CONGRESS: *XII Trobada de Professorat de Ciències de la Salut*, 2025

C.8. Students Supervision

Bachelor thesis, Fall 2023: (6 hours GR@D, **Clara Campoamor Award for the Best Bachelor's Degree Final Projects with a Gender Perspective**). Undergraduate and postgraduate students 2020-2024 (5 hours GR@D).

C.9. Awards

- o Fellow: Grants for carrying out research stays abroad during the 2023-24 academic year for students of the “Biomedicine” Doctoral Programme, University of Barcelona.
- o Fellow: Grants to carry out research work outside Catalonia, Fundació Pedro i Ponts.(2023).
- o Fellow:Beca Universitat Oberta de Catalunya (UOC) - fundación dr. antoni esteve para el curso de investigación “writing for the biomedical sciences” de la escuela de doctorado referente al primer semestre del curso académico 2022-2023.

