

CV Date	21/05/2023
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## Part A. PERSONAL INFORMATION

First Name *	PAULA		
Family Name *	OLIVER VARA		
Sex *		Date of Birth *	
ID number Social Security, Passport *		Phone Number *	
URL Web	http://palou.uib.es		
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Researcher's identification number	Open Researcher and Contributor ID (ORCID) *	0000-0002-7821-8806	
	Researcher ID	H-6285-2015	
	Scopus Author ID		

\* Mandatory

### A.1. Current position

Job Title	University professor		
Starting date	2019		
Institution	Universidad de las Islas Baleares		
Department / Centre	Department of Fundamental Biology and Health Sciences / Faculty of Sciences		
Country	Spain	Phone Number	971172548
Keywords			

### A.3. Education

Degree/Master/PhD	University / Country	Year
Doctorate in Biochemistry (with European mention)	University of the Balearic Islands	2000
Degree in Biochemistry (with Honour Degree Award)	University of the Balearic Islands	1998
Degree in Sciences (Biology)	University of the Balearic Islands	1995

## Part B. CV SUMMARY

Full Professor of Biochemistry and Molecular Biology at the University of the Balearic Islands. Co-PI of the research group 'Nutrigenomics, Biomarkers and risk Assessment' of the CIBER of Physiopathology of Obesity and Nutrition (CIBEROBN) and of the Health Research Institute of the Balearic Islands (IdISBa). Co-author of 65 articles in international peer-reviewed research journals (72% in Q1), 35 of them as first/last or corresponding author. Co-author of 2 books on nutrition and 5 book chapters (3 international). H-index: 26. Guest editor of the journals "Frontiers in Physiology" and "Nutrients". She has 4 research 'sexenios' (i.e., 6-year periods recognized). More than 200 communications to international/national congresses. She has received 6 prizes for the best communication (SEEDO, 1999; Glaxo Smith Kline prize, 2003; SENBA, 2003, NuGO Conference, 2005; SENBA 2007; and SEEDO, 2018). She has directed 7 doctoral theses.

Her research is addressed mainly to the study of the effect of diet and diet compounds on health, with a particular interest in the molecular mechanisms involved in body weight control (obesity). Currently, she is focused on the search for early molecular biomarkers of diet-related pathologies (mainly obesity and its medical complications) using blood cells. She has led several preclinical and human studies demonstrating the usefulness of peripheral blood cells (mainly the PBMC fraction) to obtain biomarkers of nutrition and health. In this line, Prof. Oliver

was co-PI of the METAHEALTH-TEST project founded by the research institute IdISBa, which aimed to design a test for the early identification of metabolic risk using blood cells. In global, she has been involved in more than 40 research projects funded by the Spanish Government and other public and private entities. At present, she is part of the 'coordination office' of the European project INTEGRactiv ('Identification and validation of integrative biomarkers of physical activity level and health in children and adolescents') in which she is also co-leader of the work package 'Epidemiological platform'. Also, as part of her participation in EU projects, highlight her role as Spanish co-responsible, together with Prof. Andreu Palou, of the 7FP EU project DIABAT ('Recruitment and activation of brown adipocytes as preventive and curative therapy').

Prof. Oliver is actively involved in transference activities. She has one "sexenio" of transference (obtained a pilot call launched by the Spanish Minister in 2020). Author of 4 patents (2 with international extension) related to nutrition and health, and of a genomic license transfer agreement to Agilent Technologies, Inc. for the design of a ferret chip-array. She has participated in 9 private contracts (more than 500,000 Eur), in 3 of them as PI. She was co-responsible of a research contract linked to the SMARTFOODS project, funded by CDTI (CIEN Program). She is a founder member and participates in research assessment of the UIB spin-off company Alimentómica, focused on research and development of new components, technologies, and innovations to improve people's diet and health.

Relevant expertise as evaluator (ANECA, DEA-ACC, AGAUR). Large teaching expertise (more than 3000 hours of official teaching in a total of 22 academic years), including international teaching. She was secretary of the Academic Commission of the inter-university doctorate on Nutrigenomics and Personalized Nutrition (UIB-UPV-URV) and of the Quality Commission of this doctorate. Highly implicated in research communication to society, with more than 50 divulgation conferences on nutrition/obesity and health.

## Part C. RELEVANT ACCOMPLISHMENTS

### C.1. Publications

AC: corresponding author. (n° x / n° y): position / total authors. If applicable, indicate the number of citations

- 1 **Scientific paper**. Costa, A.; van der Stelt, I.; Reynés, B.; et al; Oliver, P.; Oliver, P.(10/10). 2023. Whole-Genome Transcriptomics of PBMC to Identify Biomarkers of Early Metabolic Risk in Apparently Healthy People with Overweight-Obesity and in Normal-Weight Subjects. 913001 - Molecular Nutrition & Food Research. 67-4. ISSN 1613-4125. <https://doi.org/10.1002/mnfr.202200503>
- 2 **Scientific paper**. Izquierdo, A.G.; Carreira, M.C.; Boughanem, H.; et al; Crujeiras, A.B.; Oliver, P.(6/16). 2022. Adipose tissue and blood leukocytes ACE2 DNA-methylation in obesity and after weight loss. 906826 - European Journal of Clinical Investigation. 52-2. ISSN 0014-2972. <https://doi.org/10.1111/eci.13685>
- 3 **Scientific paper**. Reynés, B.; Cifre, M.; Palou, A.; Oliver, P.(4/4). 2022. Leptin, but not celastrol, protects from metabolically obese, normal-weight phenotype in rats. 917083 - Nutrients. 14, pp.2277. ISSN 2072-6643. <https://doi.org/10.3390/nu14112277>
- 4 **Scientific paper**. Galmes-Panades, A.M.; Bennasar-Veny, M.; Oliver, P.; et al; Yañez, A.M.(3/18). 2022. Efficacy of Different Modalities and Frequencies of Physical Exercise on Glucose Control in People with Prediabetes (GLYCEX Randomised Trial). 919149 - Metabolites. 12-12, pp.1286. ISSN 2218-1989. <https://doi.org/10.3390/metabo12121286>
- 5 **Scientific paper**. Costa, A.; Konieczna, J.; Reynés, B.; Martín, M.; Fiol, M.; Palou, A.; Romaguera, D.; Oliver, P.(8/8). 2021. CUN-BAE index as a screening tool to identify increased metabolic risk in apparently healthy normal-weight adults and those with obesity. 902729 - Journal of Nutrition. 151-8, pp.2215-2225. ISSN 0022-3166. <https://doi.org/10.1093/jn/nxab117>

- 6 **Scientific paper.** Costa, A.; Reynés, B.; Konieczna, J.; Martín, M.; Fiol, M.; Palou, A.; Romaguera, D.; Oliver, P.(8/8). 2021. Use of human PBMC to analyse the impact of obesity on lipid metabolism and metabolic status: a proof-of-concept pilot study. 917079 - Scientific Reports. Nature Publishing Group. 11-1. ISSN 2045-2322. <https://doi.org/10.1038/s41598-021-96981-6>
- 7 **Scientific paper.** Cifre, M.; Palou, A.; Oliver, P.(3/3). 2020. Impaired CPT1A gene expression response to retinoic acid treatment in human PBMC as predictor of metabolic risk. 917083 - Nutrients. 12-8, pp.2269. ISSN 2072-6643. <https://doi.org/10.3390/nu12082269>
- 8 **Scientific paper.** Galmés, S; Cifre, M; Palou, A; Oliver, P; Serra, F.(4/5). 2019. A genetic score of predisposition to low-grade inflammation associated with obesity may contribute to discern population at risk for metabolic syndrome. 917083 - Nutrients. 11-2, pp.298. ISSN 2072-6643. <https://doi.org/10.3390/nu11020298>
- 9 **Scientific paper.** Reynés,B; van Schothorst, EM; Keijer, J; Ceresi, E., Oliver, P; Palou, A.(5/6). 2019. Cold induced depot-specific browning in ferret aortic perivascular adipose tissue. 917961 - Frontiers In Physiology. 10, pp.1171. ISSN 1664-042X. <https://doi.org/10.3389/fphys.2019.01171>
- 10 **Scientific paper.** Reynés, B; van Schothorst, E; Keijer, J; Palou, A; Oliver, P.(5/5). 2019. Effects of cold exposure revealed by global transcriptomic analysis in ferret peripheral blood mononuclear cells. 917079 - Scientific Reports. Nature Publishing Group. 9-1, pp.19985. ISSN 2045-2322. <https://doi.org/10.1038/s41598-019-56354-6>
- 11 **Scientific paper.** Cifre, M.; Palou, A.; Oliver, P.(3/3). 2018. Cognitive impairment in metabolically-obese, normal-weight rats: identification of early biomarkers in peripheral blood mononuclear cells. 915053 - Molecular Neurodegeneration. 13-1, pp.14. ISSN 1750-1326. <https://doi.org/10.1186/s13024-018-0246-8>
- 12 **Scientific paper.** Cifre, M.; Díaz-Rúa, R.; Varela-Calviño, R.; Reynés, B.; Pericás-Beltrán, J.; Palou, A.; Oliver, P.(7/7). 2017. Human peripheral blood mononuclear cell in vitro system to test the efficacy of food bioactive compounds: effects of polyunsaturated fatty acids and their relation with BMI. 913001 - Molecular Nutrition & Food Research. 61-4, pp.1600353. ISSN 1613-4125. <https://doi.org/10.1002/mnfr.201600353>
- 13 **Scientific paper.** Reynés, B; van Schothorst, E.M.; García-Ruiz, E; Keijer, J; Palou, A; Oliver, P.(6/6). 2017. Cold exposure down-regulates immune response pathways in ferret aortic perivascular adipose tissue. 901815 - Thrombosis and Haemostasis. 117-5, pp.981-991. ISSN 0340-6245. <https://doi.org/10.1160/TH16-12-0931>
- 14 **Scientific paper.** Díaz-Rúa R.; Keijer J.; Palou A.; van Schothorst E.M.; Oliver P.(5/5). 2017. Long-term intake of a high-protein diet increases liver triacylglycerol deposition pathways and hepatic signs of injury in rats. 905722 - Journal of Nutritional Biochemistry. 46, pp.39-48. ISSN 0955-2863. <https://doi.org/10.1016/j.jnutbio.2017.04.008>
- 15 **Scientific paper.** Reynés, B.; Klein Hazebroek, M.; García-Ruiz, E.; Keijer, J.; Oliver, P.; Palou, A.(5/6). 2017. Specific features of the hypothalamic leptin signaling response to cold exposure are reflected in peripheral blood mononuclear cells in rats and ferrets. 917961 - Frontiers In Physiology. 8, pp.581. ISSN 1664-042X. <https://doi.org/10.3389/fphys.2017.00581>
- 16 **Scientific paper.** Díaz-Rúa, R.; van Schothorst, E.M.; Keijer, J.; Palou, A.; Oliver, P.(5/5). 2016. Isocaloric high-fat feeding directs hepatic metabolism to handling of nutrient imbalance promoting liver fat deposition. 901159 - International Journal of Obesity. 40-8, pp.1250-1259. ISSN 0307-0565.
- 17 **Scientific paper.** Díaz-Rúa, R.; Palou, A.; Oliver, P.(3/3). 2016. Cpt1a gene expression in peripheral blood mononuclear cells as an early biomarker of diet-related metabolic alterations. 917671 - Food & Nutrition Research. 60, pp.33554. ISSN 1654-6628. <https://doi.org/10.3402/fnr.v60.33554>
- 18 **Scientific paper.** Petrov, P.D.; Bonet, M.L.; Reynés, B.; Oliver, P.; Palou, A.; Ribot, J.(4/6). 2016. Whole Blood RNA as a Source of Transcript-Based Nutrition- and Metabolic Health-Related Biomarkers. 915133 - Plos One. Public Library of Science. 11-5. ISSN 1932-6203. <https://doi.org/10.1371/journal.pone.0155361>

- 19 Review.** Reynés, B.; Priego, T.; Cifre, M.; Oliver, P.; Palou, A.(4/5). 2018. Peripheral blood cells, a transcriptomic tool in nutrigenomic and obesity studies: current state of the art. 913362 - Comprehensive Reviews In Food Science And Food Safety. pp.1-15. ISSN 1541-4337. <https://doi.org/10.1111/1541-4337.12363>

### C.3. Research projects and contracts

- 1 Project.** AC21\_2/00033, Identification and validation of integrative biomarkers of physical activity level and health in children and adolescents (INTEGRActiv). JPI HDHL STAMIFY Call.. Instituto de Salud Carlos III. (Fundació Institut d'Investigació Sanitària Illes Balears (IdISBa)). 01/03/2022-28/02/2025. 174.240 €.
- 2 Project.** EXP\_75081, Comparación de la eficacia de diferentes modalidades y frecuencias de ejercicio físico supervisado en el control glucémico de personas con diabetes tipo 2. Ministeri de Cultura i Esport. (Universidad de las Islas Baleares). 27/03/2023-30/09/2023. 132.125,95 €.
- 3 Project.** PGC2018-097436-B-I00, Diferencias dependientes del sexo en la programación metabólica por bioactivos de la leche materna: nuevos ingredientes para la prevención del sobrepeso y sus mecanismos - X-MILK. Ministerio de Ciencia, Innovación y Universidades. (Universidad de las Islas Baleares). 01/01/2019-31/12/2022. 315.810 €.
- 4 Project.** SYN18/02, Estudio de la utilidad de las células sanguíneas para el análisis de la recuperación metabólica tras la mejora del estilo de vida y/o la pérdida de peso (METAHEALTH-TEST). Role: PRINCIPAL INVESTIGATOR. Fundació Institut d'Investigació Sanitària Illes Balears (IdISBa). (Universidad de las Islas Baleares). 01/01/2019-31/03/2022. 80.000 €.
- 5 Project.** OBN18PI04/2018, Microbiome and methylome relationship before and after a weight loss treatment in liquid biopsy from patients with obesity-related liver disease for the identification of liver risk biomarkers (ONCOHEPATOBESITY-MARK). Role: PRINCIPAL INVESTIGATOR. CIBER-Fisiopatología de la Obesidad y Nutrición.. (Universitat de les Illes Balears y CIBER de Fisiopatología de la Obesidad y Nutrición (CIBERObn)). 01/03/2018-31/12/2019. 18.000 €.
- 6 Project.** AGL2015-67019-P, La interacción entre nutrientes/bioactivos de los alimentos como determinante de la programación metabólica en la prevención de la obesidad y sus complicaciones. Acrònim: INTERBIOBES. Ministerio de Economía y Competitividad (MINECO). (Universidad de las Islas Baleares). 01/01/2016-31/12/2018. 183.799 €.
- 7 Project.** HEALTH-F2-2011-278373, DIABAT - Recruitment and activation of brown adipocytes as preventing and curative therapy for type 2 diabetes. European Commission. (Universidad de las Islas Baleares). 01/10/2011-30/09/2015. 211.260 €.
- 8 Project.** FP7-244995, BIOMarkers of Robustness of Metabolic Homeostasis for Nutrigenomics-derived Health CLAIMS Made on Food (BIOCLAIMS). Coordinador del proyecto: Andreu Palou. Unió Europea. (Universidad de las Islas Baleares). 2010-2015. 998.532 €.
- 9 Contract.** Diseño y validación de protocolos de alimentación personalizada y selección de nutrientes y bioactivos sobre una base nutrigenómica. Contrato incluido como subproyecto (selección competitiva) en el proyecto SMARTFOODS. Role: PRINCIPAL INVESTIGATOR Centro para el Desarrollo Tecnológico e Industrial. (Universitat de les Illes Balears y CIBER de Fisiopatología de la Obesidad y Nutrición (CIBERObn)). 17/07/2014-18/07/2018. 60.000 €.

### C.4. Activities of technology / knowledge transfer and results exploitation

- 1 Intellectual Property (others).** Design of a ferret-specific whole genome microarray. Acuerdo de transferencia de licencia tecnológica a la empresa Agilent Technologies, Inc. (EEUU) Spain. 2020.
- 2 Patent of invention.** P201331329. Composiciones y usos en la activación de la termogénesis Spain. 12/09/2013. UIB - Universitat de les Illes Balears.
- 3 Patent of invention.** P200500408. Uso de la leptina para la prevención del exceso de peso corporal y composición que contiene leptina. Spain. 23/02/2005. UIB - Universitat de les Illes Balears.