

Scientific production ensuing from the theses defended on the PhD programme in Nutrigenomics and Personalised Nutrition

1. UIB doctorands

Year of viva	Doctorand	Thesis title
2016	Rubén Díaz Rúa	Identificación de alteraciones metabólicas y marcadores moleculares asociados a la ingesta prolongada de dietas desequilibradas

Ensuing scientific contributions

1: **Díaz-Rúa R**, García-Ruiz E, Caimari A, Palou A, Oliver P. Sustained exposure to diets with an unbalanced macronutrient proportion alters key genes involved in energy homeostasis and obesity-related metabolic parameters in rats. Food Funct. 2014 Dec; 5(12): 3117-31. doi: 10.1039/c4fo00429a.

PMID: 25266916

I.F. 2,791; Q1

2: **Díaz-Rúa R**, Keijer J, Caimari A, van Schothorst EM, Palou A, Oliver P. Peripheral blood mononuclear cells as a source to detect markers of homeostatic alterations caused by the intake of diets with an unbalanced macronutrient composition. J Nutr Biochem. 2015 Apr; 26(4): 398-407. doi: 10.1016/j.jnutbio.2014.11.013.

Epub 2015 Jan 13.

PMID: 25660595

I.F. 4,668; Q1

3: **Díaz-Rúa R**, van Schothorst EM, Keijer J, Palou A, Oliver P. Isocaloric high-fat feeding directs hepatic metabolism to handling of nutrient imbalance promoting liver fat deposition. Int J Obes (Lond). 2016 Aug; 40(8):1250-9. doi: 10.1038/ijo.2016.47. Epub 2016 Mar 22.

PMID: 27089994

I.F. 5,487; D1

4: **Díaz-Rúa R**, Palou A, Oliver P. Cpt1a gene expression in peripheral blood mononuclear cells as an early biomarker of diet-related metabolic alterations.

Food Nutr Res. 2016 Nov 23; 60:33554. doi: 10.3402/fnr.v60.33554.

eCollection 2016.

PMID: 27885970

I.F. 2,039; Q2

5: **Díaz-Rúa R**, Keijer J, Palou A, van Schothorst EM, Oliver P. Long-term intake of a high-protein diet increases liver triacylglycerol deposition pathways and hepatic signs of injury in rats. J Nutr Biochem. 2017 Aug; 46:39-48. doi: 10.1016/j.jnutbio.2017.04.008.

PMID: 28454041

I.F. 4,414; Q1

Year of viva	Doctorand	Thesis title
2016	Yuriy Nozhenko	New metabolic aspects of Leptin: muscle cell activity and biological rhythms

Ensuing scientific contributions

1: Sánchez J, **Nozhenko Y**, Palou A, Rodríguez AM. Free fatty acid effects on myokine production in combination with exercise mimetics. Mol Nutr Food Res. 2013 Aug; 57(8):1456-67. doi: 10.1002/mnfr.201300126.

Epub 2013 May 5.

PMID: 23650203

I.F. 4,909; D1

2: **Nozhenko Y**, Asnani-Kishnani M, Rodríguez AM, Palou A. Milk Leptin Surge and Biological Rhythms of Leptin and Other Regulatory Proteins in Breastmilk. PLoS One. 2015 Dec 17; 10(12): e0145376. doi: 10.1371/journal.pone.0145376.

eCollection 2015.

PMID: 26680765

I.F. 3,057; Q1

3: **Nozhenko Y**, Rodríguez AM, Palou A. Leptin rapidly induces the expression of metabolic and myokine genes in C2C12 muscle cells to regulate nutrient partition and oxidation. Cell Physiol Biochem. 2015; 35(1):92-103. doi: 10.1159/000369678.

Epub 2015 Jan 2.

PMID: 25547246

I.F. 4,652; Q1

4: García-Carrizo F, **Nozhenko Y**, Palou A, Rodríguez AM. Leptin Effect on Acetylation and Phosphorylation of Pgc1 α in Muscle Cells Associated with Ampk and Akt Activation in High-Glucose Medium. J Cell Physiol. 2016 Mar; 231(3): 641-9. doi: 10.1002/jcp.25109.

PMID: 26218179

I.F. 4,080; Q1

Year of viva	Doctorand	Thesis title
2017	Andrea Arreguín Coronado	Nuevos mecanismos y biomarcadores de la interacción de la vitamina A con el metabolismo lipídico y energético y su papel en la programación metabólica.

Ensuing scientific contributions

1: Tourniaire F, Musinovic H, Gouranton E, Astier J, Marcotorchino J, **Arreguín A**, Bernot D, Palou A, Bonet ML, Ribot J, Landrier JF. All-trans retinoic acid induces oxidative phosphorylation and mitochondria biogenesis in adipocytes. J Lipid Res. 2015 Jun; 56(6): 1100-9. doi: 10.1194/jlr.M053652.

Epub 2015 Apr 25.

PMID: 25914170

I.F. 4,368; Q1

2: **Arreguín A**, Ribot J, Mušinović H, von Lintig J, Palou A, Bonet ML. Dietary vitamin A impacts DNA methylation patterns of adipogenesis-related genes in suckling rats. Arch Biochem Biophys. 2018 Jul 15; 650:75-84. doi: 10.1016/j.abb.2018.05.009.

Epub 2018 May 11.

PMID: 29758201.

I.F. 3,559; Q2

3: Amengual J, García-Carrizo FJ, **Arreguín A**, Mušinović H, Granados N, Palou A, Bonet ML, Ribot J. Retinoic Acid Increases Fatty Acid Oxidation and Irisin Expression in Skeletal Muscle Cells and Impacts Irisin In Vivo. Cell Physiol Biochem. 2018; 46(1): 187-202. doi: 10.1159/000488422.

Epub 2018 Mar 21.

PMID: 29587291.

I.F. 5,500; D1

4: Ribot J, **Arreguín A**, Kuda O, Kopecky J, Palou A, Bonet ML. Novel Markers of the Metabolic Impact of Exogenous Retinoic Acid with A Focus on Acylcarnitines and Amino Acids. Int J Mol Sci. 2019 Jul 25; 20(15). pii: E3640. doi:10.3390/ijms20153640.

PMID: 31349613

I.F. 4,183; Q1

Year of viva	Doctorand	Thesis title
2018	Margalida Maria Cifre Calafat	An emerging approach using blood cells as an in vivo and in vitro tool to assess the impact of food on health

Ensuing scientific contributions

1: Reynés B, Díaz-Rúa R, **Cifre M**, Oliver P, Palou A. Peripheral blood mononuclear cells as a potential source of biomarkers to test the efficacy of weight-loss strategies. Obesity (Silver Spring). 2015 Jan; 23(1): 28-31. doi: 10.1002/oby.20918.

Epub 2014 Oct 8.

PMID: 25294800

I.F. 3,614; Q1

2: **Cifre M**, Díaz-Rúa R, Varela-Calviño R, Reynés B, Pericás-Beltrán J, Palou A, Oliver P. 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. Mol Nutr Food Res. 2017 Apr; 61(4). doi: 10.1002/mnfr.201600353.

Epub 2016 Dec 30.

PMID: 27873461

I.F. 5,151; D1

3: **Cifre M**, Palou A, Oliver P. Cognitive impairment in metabolically-obese, normal-weight rats: identification of early biomarkers in peripheral blood mononuclear cells. Mol Neurodegener. 2018 Mar 22; 13(1): 14. doi: 10.1186/s13024-018-0246-8.

PMID: 29566703

I.F. 8,274; D1

Year of viva	Doctorand	Thesis title
2018	Catalina Amadora Pomar Oliver	Factores determinantes y mecanismos en la programación metabólica de una dieta obesogénica

Ensuing scientific contributions

1: **Pomar CA**, van Nes R, Sánchez J, Picó C, Keijer J, Palou A. Maternal consumption of a cafeteria diet during lactation in rats leads the offspring to a thin-outside-fat-inside phenotype. Int J Obes (Lond). 2017 Aug; 41(8): 1279-1287. doi: 10.1038/ijo.2017.42.

Epub 2017 Feb 13.

PMID: 28190874

I.F. 5,159; D1

2: **Pomar CA**, Kuda O, Kopecky J, Rombaldova M, Castro H, Picó C, Sánchez J, Palou A.

Alterations in plasma acylcarnitine and amino acid profiles may be indicative of poor nutrition during the suckling period due to maternal intake of an unbalanced diet and predict later metabolic dysfunction. FASEB J. Jan; 33(1): 796-807, 2019. doi: 10.1096/fj.201800327RR.

Epub 2018 Aug 6.

PMID: 30080446

I.F. 5,391; Q1

3: **Pomar CA**, Castro H, Picó C, Serra F, Palou A, Sánchez J. Cafeteria diet consumption during lactation in rats, rather than obesity per se, alters miR-222, miR-200a and miR-26a levels in milk. *Mol Nutr Food Res*. 2019 Apr; 63(8): e1800928. doi: 10.1002/mnfr.201800928.

Epub 2019 Feb 7.

PMID: 30698333

I.F. 4,653; D1

4: **Pomar CA**, Castro H, Picó C, Palou A, Sánchez J. Maternal Overfeeding during Lactation Impairs the Metabolic Response to Fed/Fasting Changing Conditions in the Postweaning Offspring. *Mol Nutr Food Res*. 2019 Oct; 63(20): e1900504. doi: 10.1002/mnfr.201900504.

Epub 2019 Sep 6.

PMID: 31419033

I.F. 4,653; D1

5: **Pomar CA**, Kuda O, Kopecky J, Rombaldova M, Castro H, Picó C, Sánchez J, Palou A.

Maternal diet, rather than obesity itself, has a main influence on milk triacylglycerol profile in dietary obese rats. *Biochim Biophys Acta Mol Cell Biol Lipids*. 2019 Oct 31; 1865(2): 158556. doi: 10.1016/j.bbalip.2019.158556.

PMID: 31678620

I.F. 4,402; Q1

Year of viva	Doctorand	Thesis title
2019	Sebastián Galmes Monroig.	Estudio nutrigenético de la obesidad en la población de Mallorca

Ensuing scientific contributions

1: **Galmés S**, Serra F, Palou A. Vitamin E Metabolic Effects and Genetic Variants: A Challenge for Precision Nutrition in Obesity and Associated Disturbances. *Nutrients*. 2018 Dec 4; 10(12). pii: E1919. doi: 10.3390/nu10121919.

Review. Free PMC Article.

PMID: 30518135

I.F. 4,171; Q1

2: **Galmés S**, Cifre M, Palou A, Oliver P, Serra F. A Genetic Score of Predisposition to Low-Grade Inflammation Associated with Obesity May Contribute to Discern Population at Risk for Metabolic Syndrome. *Nutrients*. 2019 Jan 30; 11(2). pii: E298. doi: 10.3390/nu11020298.

Free PMC Article.

PMID: 30704070

I.F. 4,171; Q1

Year of viva	Doctorand	Thesis title
2020	Agustí Sabater Bibiloni	Investigación industrial dirigida al desarrollo de conocimiento para avalar nuevos productos alimenticios. Enfoque en su aplicabilidad en función del genotipo, necesidades nutricionales específicas y poblaciones diana

Ensuing scientific contributions

1: **Sabater AG**, Ribot J, Priego T, Vazquez I, Frank S, Palou A, Buchwald-Werner S.

Consumption of a Mango Fruit Powder Protects Mice from High-Fat Induced Insulin Resistance and Hepatic Fat Accumulation.

Cell Physiol Biochem. 2017 Jun 5;42(2):564-578

I.F. 5,500; D1