

ANAXOMICS – TRACK RECORD



APRIL 2023



ABOUT US

Anaxomics is a company specialized in Bioinformatics and Systems Biology. Anaxomics offers a unique combination of cutting-edge artificial intelligence developments and the work of a highly skilled team of professionals to provide a wide array of continuously refined services.

Our proprietary technology, TPMS, molecularly models the human (patho)physiology, integrating the information available in the scientific literature and the experimental information generated by each partner or customer, with special emphasis in the clinical translation of results. This allows us to perform in silico experiments such as: (1) Identification of the molecular mechanism 'of action' of a drug or gene/protein, (2) Biomarker discovery (lower false positives thanks to AI), (3) High-throughput data analysis, (4) Drug repositioning, (5) Therapeutic target identification, (6) Mechanistic protein/gene/miRNA/... candidate filtering (de-risking), (7) Clinical trial molecular (re)analysis (e.g. identifying drugs and concomitant disease to avoid for a better efficacy), (8) Patient molecular clustering, and others.

Anaxomics is a privately owned, limited liability company incorporated in Barcelona in 2007, under the laws of Spain and the European Union. Anaxomics is a Small-Medium Enterprise (SME) as recognized by European Union Directives (EC) No 2049/2005. Anaxomics has 20-30 employees, headquartered in Barcelona (Spain).

In the last 10 years the company has run multiple projects from clients from Europe, US, Canada and Japan; participated in many international collaborative research projects, currently 10 ongoing; more than 80 publications have arisen from our technology.

BACKGROUND

The Company was founded in 2007 by a team of experienced entrepreneurs with a large experience in the drug discovery and pharmaceutical industry. The founders had been working together for more than 15 years as founders and owners of a clinical research company (Infociencia SL) that was merged with a multinational company (Research Pharmaceutical Services Inc) in 2008. The founders have successfully created and managed several other technological start-ups. Besides, the Company has appointed a Scientific Board to help guide research aspects.

INDEXED RESEARCH PUBLICATIONS (AS CO-AUTHORS)

1. Junet, V., P. Matos-Filipe, J. M. Garcia-Illarramendi, E. Ramirez, B. Oliva, J. Farres, X. Daura, J. M. Mas and R. Morales (2023). *A Decision Support System Based on Artificial Intelligence and Systems Biology for the Simulation of Pancreatic Cancer Patient Status*. **CPT Pharmacometrics Syst Pharmacol**.
2. Segu-Verges, C., L. Artigas, M. Coma and R. W. Peck (2023). *Artificial Intelligence Assessment of the Potential of Tocilizumab Along with Corticosteroids Therapy for the Management of Covid-19 Evoked Acute Respiratory Distress Syndrome*. **PLoS One**. 18, no. 2: e0280677.
3. Segu-Verges, C., J. Gomez., P. Terradas-Montana, L. Artigas, S. Smeets, M. Ferrer, and S. Savic (2023). *Unveiling chronic spontaneous urticaria pathophysiology through systems biology*. **The Journal of Allergy and Clinical Immunology**. 151(4): p. 1005-1014.
4. Zaragoza-Infante, L., V. Junet, N. Pechlivanis, S. C. Fragkouli, S. Amprachamian, T. Koletsa, A. Chatzidimitriou, M. Papaioannou, K. Stamatopoulos, A. Agathangelidis and F. Psomopoulos (2022). *IgIDivA: immunoglobulin intraclonal diversification analysis*. **Brief Bioinform**. 23(5).
5. Fernandez-Carballido, C., C. Sanchez-Piedra, R. Valls, K. Garg, F. Sanchez-Alonso, L. Artigas, J. M. Mas, V. Jovani, S. Manrique, C. Campos, M. Freire, O. Martinez-Gonzalez, I. Castrejon, C. Perella, M. Coma and I. E. van der Horst-Bruinsma (2023). *Female Sex, Age, and Unfavorable Response to Tumor Necrosis Factor Inhibitors in Patients With Axial Spondyloarthritis: Results of Statistical and Artificial Intelligence-Based Data Analyses of a National Multicenter Prospective Registry*. **Arthritis Care Res (Hoboken)**. 75(1): p. 115-124.
6. Segu-Verges, C., S. Cano, E. Calderon-Gomez, H. Bartra, T. Sardon, S. Kaveri and J. Terencio (2022). *Systems biology and artificial intelligence analysis highlights the pleiotropic effect of IVIg therapy in autoimmune diseases with a predominant role on B cells and complement system*. **Front Immunol**. 13: p. 901872.
7. Gil, J., M. Marques-Pamies, M. Sampedro, S. M. Webb, G. Serra, I. Salinas, A. Blanco, E. Valassi, C. Carrato, A. Pico, A. Garcia-Martinez, L. Martel-Duguech, T. Sardon, A. Simo-Servat, B. Biagetti, C. Villabona, R. Camara, C. Fajardo-Montanana, C. Alvarez-Escola, C. Lamas, C. V. Alvarez, I. Bernabeu, M. Marazuela, M. Jorda and M. Puig-Domingo (2022). *Data mining analyses for precision medicine in acromegaly: a proof of concept*. **Sci Rep**. 12(1): p. 8979.
8. Van Schooten, T. S., S. Derks, E. Jimenez-Marti, F. Carneiro, C. Figueiredo, E. Ruiz, M. Alsina, C. Molero, M. Garrido, A. Riquelme, C. Caballero, E. Lezcano, J. M. O'Connor, F. Estes, J. Farres, J. M. Mas, F. Lordick, J. Vogt, A. Cardone, C. Girvalaki, A. Cervantes and T. Fleitas (2022). *The LEGACy study: a European and Latin American consortium to identify risk factors and molecular phenotypes in gastric cancer to improve prevention strategies and personalized clinical decision making globally*. **BMC Cancer**. 22(1): p. 646.
9. Reggiori, F., P. Boya, D. da Costa, Z. Elazar, E. Eskelinen, J. Farrés, S. Guettler, C. Kraft, H. Jungbluth, A. Martinez, E. Morel, O. Pless, T. Proikas-Cezanne and A. Simonsen (2022). *The mechanism of macroautophagy: The movie*. **Autophagy Reports**. 1(1): p. 414-417.
10. Díaz-Beyá, M., M. García-Fortes, R. Valls, L. Artigas, M. T. Gómez-Casares, P. Montesinos, F. Sánchez-Guijo, M. Coma, M. Vendranes and J. Martínez-López (2022). *A Systems Biology- and Machine Learning-Based Study to Unravel Potential Therapeutic Mechanisms of Midostaurin as a Multitarget Therapy on FLT3-Mutated AML*. **BioMedInformatics**. 2(3): p. 375-397.

11. Bertran, L., A. Eigbefoh-Addeh, M. Portillo-Carrasquer, A. Barrientos-Riosalido, J. Binetti, C. Aguilar, J. Ugarte Chicote, H. Bartra, L. Artigas, M. Coma, C. Richart and T. Auguet (2022). *Identification of the Potential Molecular Mechanisms Linking RUNX1 Activity with Nonalcoholic Fatty Liver Disease, by Means of Systems Biology*. **Biomedicines** 10(6): p. 1315.
12. Simats, A., L. Ramiro, R. Valls, H. de Ramon, P. Garcia-Rodriguez, C. Orset, L. Artigas, T. Sardon, A. Rosell and J. Montaner (2022). *Ceruletide and Alpha-1 Antitrypsin as a Novel Combination Therapy for Ischemic Stroke*. **Neurotherapeutics**.
13. Duran, I., D. Castellano, J. Puente, L. Martin-Couce, E. Bello, U. Anido, J. M. Mas and L. Costa (2022). *Exploring the synergistic effects of cabozantinib and a programmed cell death protein 1 inhibitor in metastatic renal cell carcinoma with machine learning*. **Oncotarget** 13: p. 237-256.
14. Farres, J., J. L. Ruiz, J. M. Mas, L. Arias, M. R. Sarrias, C. Armengol, P. J. Cardona, J. A. Munoz-Moreno, M. Vilaplana, B. Arranz, J. Usall, A. Serrano-Blanco and C. Vilaplana (2021). *Identification of the most vulnerable populations in the psychosocial sphere: a cross-sectional study conducted in Catalonia during the strict lockdown imposed against the COVID-19 pandemic*. **BMJ Open** 11(11): p. e052140.
15. Iborra-Egea, O., C. Galvez-Monton, C. Prat-Vidal, S. Roura, C. Soler-Botija, E. Revuelta-Lopez, G. Ferrer-Curriu, C. Segu-Verges, A. Mellado-Bergillos, P. Gomez-Puchades, P. Gastelurrutia and A. Bayes-Genis (2021). *Deep Learning Analyses to Delineate the Molecular Remodeling Process after Myocardial Infarction*. **Cells** 10(12).
16. Gutiérrez-Casares, JR., J. Quintero, G. Jorba, V. Junet, V. Martínez, T. Pozo-Rubio, B. Oliva, X. Daura, JM. Mas and C. Montoto (2021). *Methods to Develop an in silico Clinical Trial: Computational Head-to-Head Comparison of Lisdexamfetamine and Methylphenidate*. **Frontiers in Psychiatry**. 12(1902).
17. Kocak, M., S. Ezazi Erdi, G. Jorba, I. Maestro, J. Farres, V. Kirkin, A. Martinez and O. Pless (2021). *Targeting autophagy in disease: established and new strategies*. **Autophagy**, p. 1-23.
18. Junet, V. and X. Daura (2021). *CNN-PepPred: An open-source tool to create convolutional NN models for the discovery of patterns in peptide sets. Application to peptide-MHC class II binding prediction*. **Bioinformatics**.
19. Lozano, M. L., C. Segu-Verges, M. Coma, M. T. Alvarez-Roman, J. R. Gonzalez-Porras, L. Gutierrez, D. Valcarcel and N. Butta (2021). *Elucidating the Mechanism of Action of the Attributed Immunomodulatory Role of Eltrombopag in Primary Immune Thrombocytopenia: An in Silico Approach*. **Int J Mol Sci** 22, no. 13.
20. Matorras, R., R. Valls, M. Azkargorta, J. Burgos, A. Rabanal, F. Elortza, J. M. Mas and T. Sardon (2021). *Proteomics based drug repositioning applied to improve in vitro fertilization implantation: an artificial intelligence model*. **Syst Biol Reprod Med**, p. 1-17.
21. Segu-Verges, C., M. Coma, C. Kessel, S. Smeets, D. Foell and A. Aldea (2021). *Application of systems biology-based in silico tools to optimize treatment strategy identification in Still's disease*. **Arthritis Res Ther**, 23(1): p. 126.
22. Carcereny, E., A. Fernandez-Nistal, A. Lopez, C. Montoto, A. Naves, C. Segu-Verges, M. Coma, G. Jorba, B. Oliva and J. M. Mas (2021). *Head to head evaluation of second generation ALK inhibitors brigatinib and alectinib as first-line treatment for ALK+ NSCLC using an in silico systems biology-based approach*. **Oncotarget**, 12(4): p. 316-332.
23. Junet, V., J. Farres, J. M. Mas and X. Daura (2021). *CuBlock: a cross-platform normalization method for gene-expression microarrays*. **Bioinformatics**. btab105. doi: 10.1093/bioinformatics/btab105.

24. Gimenez, N., R. Tripathi, A. Giro, L. Rosich, M. Lopez-Guerra, I. Lopez-Oreja, H. Playa-Albinyana, F. Arenas, J. M. Mas, P. Perez-Galan, J. Delgado, E. Campo, J. Farres and D. Colomer (2020). *Systems biology drug screening identifies statins as enhancers of current therapies in chronic lymphocytic leukemia*. **Sci Rep**, 10(1): p. 22153.
25. Royo, F., M. Azkargorta, J. L. Lavin, M. Clos-Garcia, A. R. Cortazar, M. Gonzalez-Lopez, L. Barcena, H. A. Del Portillo, M. Yanez-Mo, A. Marcilla, F. E. Borrás, H. Peinado, I. Guerrero, M. Vales-Gomez, U. Cereijo, T. Sardon, A. M. Aransay, F. Elortza and J. M. Falcon-Perez (2020). *Extracellular Vesicles From Liver Progenitor Cells Downregulates Fibroblast Metabolic Activity and Increase the Expression of Immune-Response Related Molecules*. **Front Cell Dev Biol**, 8: p. 613583.
26. Artigas, L., M. Coma, P. Matos-Filipe, J. Aguirre-Plans, J. Farres, R. Valls, N. Fernandez-Fuentes, J. de la Haba-Rodriguez, A. Olvera, J. Barbera, R. Morales, B. Oliva and J. M. Mas (2020). *In-silico drug repurposing study predicts the combination of pirfenidone and melatonin as a promising candidate therapy to reduce SARS-CoV-2 infection progression and respiratory distress caused by cytokine storm*. **PLoS One** 15(10): e0240149.
27. Moncunill, G., A. Scholzen, M. Mpina, A. Nhabomba, A. B. Hounkpatin, L. Osaba, R. Valls, J. J. Campo, H. Sanz, C. Jairoce, N. A. Williams, E. M. Pasini, D. Arteta, J. Maynou, L. Palacios, M. Duran-Frigola, J. J. Aponte, C. H. M. Kocken, S. T. Agnandji, J. M. Mas, B. Mordmuller, C. Daubenberger, R. Sauerwein and C. Dobano (2020). *Antigen-stimulated PBMC transcriptional protective signatures for malaria immunization*. **Sci Transl Med** 12(543).
28. Villalba, A., S. Rodriguez-Fernandez, D. Perna-Barrull, R. M. Ampudia, L. Gomez-Munoz, I. Pujol-Autonell, E. Aguilera, M. Coma, M. Cano-Sarabia, F. Vazquez, J. Verdaguer and M. Vives-Pi (2020). *Repurposed Analog of GLP-1 Ameliorates Hyperglycemia in Type 1 Diabetic Mice Through Pancreatic Cell Reprogramming*. **Front Endocrinol (Lausanne)** 11: 258.
29. Jorba G, Aguirre-Plans J, Junet V, Segú-Vergés C, Ruiz JL, Pujol A, Fernández-Fuentes N, Mas JM, Oliva B. (2020) *In-silico simulated prototype-patients using TPMS technology to study a potential adverse effect of sacubitril and valsartan* **PLoS One**. Feb 13;15(2):e0228926
30. Giménez N, Schulz R, Higashi M, Aymerich M, Villamor N, Delgado J, Juan M, López-Guerra M, Campo E, Rosich L, Seiffert M, Colomer D. (2020). *Targeting IRAK4 disrupts inflammatory pathways and delays tumor development in chronic lymphocytic leukemia*. **Leukemia**. 2020 Jan;34(1):100-114. doi: 10.1038/s41375-019-0507-8. Epub 2019 Jun 13.
31. Martín-Segura, A., Á. Casadomé-Perales, P. Fazzari, J. M. Mas, L. Artigas, R. Valls, A. R. Nebreda and C. G. Dotti (2019). *Aging Increases Hippocampal DUSP2 by a Membrane Cholesterol Loss-Mediated RTK/p38MAPK Activation Mechanism*. **Frontiers in Neurology** 10(675).
32. Arokiaraj, M. C., E. Mennesson, U. Cereijo, S. Perera and J. M. Mas (2019) *A Novel Method for Prevention of Hypoxic Cardiomyocyte Injury*. **Cardiology in Belarus** 11(1): 15.
33. Sole, C., E. Sola, P. Huelin, M. Carol, R. Moreira, U. Cereijo, J. M. Mas, I. Graupera, E. Pose, L. Napoleone, G. dePrada, A. Juanola, N. Fabrellas, F. Torres, M. Morales-Ruiz, J. Farres, W. Jimenez and P. Gines (2019). *Characterization of inflammatory response in hepatorenal syndrome: Relationship with kidney outcome and survival*. **Liver Int** 1-10.
34. Kraft, C., P. Boya, P. Codogno, Z. Elazar, E.-L. Eskelinen, J. Farrés, V. Kirkin, H. Jungbluth, A. Martinez, O. Pless, C. Primard, T. Proikas-Cezanne, A. Simonsen and F. Reggiori (2018). *"Driving next-generation*

autophagy researchers towards translation (DRIVE), an international PhD training program on autophagy. **Autophagy**: 1-5

35. Herreros-Villanueva, M., R. Pérez-Palacios, S. Castillo, C. Segú, T. Sardón, J. M. Más, A. C. Martín and R. Arroyo (2018). *Biological Relationships between miRNAs used for Colorectal Cancer Screening*. **Journal of Molecular Biomarkers & Diagnosis** 9: 398.
36. Giménez, N., A. Martínez-Trillos, A. Montraveta, M. Lopez-Guerra, L. Rosich, F. Nadeu, J. G. Valero, M. Aymerich, L. Magnano, M. Rozman, E. Matutes, J. Delgado, T. Bauman, E. Gine, M. González, M. Alcoceba, M. J. Terol, B. Navarro, E. Colado, A. R. Payer, X. S. Puente, C. López-Otín, A. Lopez-Guillermo, E. Campo, D. Colomer and N. Villamor (2018). *Mutations in RAS-BRAF-MAPK-ERK pathway define a specific subgroup of patients with adverse clinical features and provide new therapeutic options in chronic lymphocytic leukemia*. **Haematologica** 103.
37. Romeo-Guitart, D., J. Fores, M. Herrando-Grabulosa, R. Valls, T. Leiva-Rodriguez, E. Galea, F. Gonzalez-Perez, X. Navarro, V. Petegnief, A. Bosch, M. Coma, J. M. Mas and C. Casas (2018). *Neuroprotective Drug for Nerve Trauma Revealed Using Artificial Intelligence*. **Sci Rep** 8(1): 1879.
38. Perea-Gil, I., C. Galvez-Monton, C. Prat-Vidal, I. Jorba, C. Segu-Verges, S. Roura, C. Soler-Botija, O. Iborra-Egea, E. Revuelta-Lopez, M. A. Fernandez, R. Farre, D. Navajas and A. Bayes-Genis (2018). *Head-to-head comparison of two engineered cardiac grafts for myocardial repair: From scaffold characterization to pre-clinical testing*. **Sci Rep** 8(1): 6708.
39. Guillén-Gómez, E., B. Bardají-de-Quixano, S. Ferrer, C. Brotons, M. A. Knepper, M. Carrascal, J. Abian, J. M. Mas, F. Calero, J. A. Ballarín and P. Fernández-Llama (2018). *Urinary Proteome Analysis Identified Nephrilysin and VCAM as Proteins Involved in Diabetic Nephropathy*. **Journal of Diabetes Research** 2018: 12.
40. Morales, R., R. Serrano, T. Sardón, C. Román-Ortiz, S. González-Santiago, R. Mulet and J. M. Mas (2017). *Functional, structural and contextual analysis of a variant of uncertain clinical significance in BRCA1: c.5434c->g (p.pro1812ala)*. **Journal of Cancer Genetics And Biomarkers** 1(2).
41. Pardo, I., G. Santiago, P. Gentili, F. Lucas, E. Monza, F. J. Medrano, C. Galli, A. T. Martinez, V. Guallar and S. Camarero (2016). *Re-designing the substrate binding pocket of laccase for enhanced oxidation of sinapic acid*. **Catalysis Science & Technology**.
42. Molina-Espeja, P., M. Cañellas, F. J. Plou, M. Hofrichter, F. Lucas, V. Guallar and M. Alcalde (2016). *Synthesis of 1-Naphthol by a Natural Peroxygenase Engineered by Directed Evolution*. **ChemBioChem** 17: 1-10.
43. Lucas, F., E. D. Babot, M. Cañellas, J. C. del Río, L. Kalum, R. Ullrich, M. Hofrichter, V. Guallar, A. T. Martínez and A. Gutiérrez (2016). *Molecular determinants for selective C25-hydroxylation of vitamins D2 and D3 by fungal peroxigenases*. **Catal. Sci. Technol.** 6: 288-295.
44. Herrando-Grabulosa, M., R. Mulet, A. Pujol, J. M. Mas, X. Navarro, P. Aloy, M. Coma and C. Casas (2016). *Novel Neuroprotective Multicomponent Therapy for Amyotrophic Lateral Sclerosis Designed by Networked Systems*. **PLoS One** 11(1): e0147626.
45. Acebes, S., E. Fernandez-Fueyo, E. Monza, M. F. Lucas, D. Almendral, F. J. Ruiz-Dueñas, H. Lund, A. T. Martinez and V. Guallar (2016). *Rational Enzyme Engineering Through Biophysical and Biochemical Modeling*. **ACS Catalysis**: 1624-1629.
46. Linde, D., R. Pogni, M. Canellas, F. Lucas, V. Guallar, M. C. Baratto, A. Sinicropi, V. Saez-Jimenez, C. Coscolin, A. Romero, F. J. Medrano, F. J. Ruiz-Duenas and A. T. Martinez (2015). *Catalytic surface radical in dye-*

- decolorizing peroxidase: a computational, spectroscopic and site-directed mutagenesis study.* **Biochem J** 466(2): 253-262.
47. Kotelnikova, E., M. Bernardo-Faura, G. Silberberg, N. A. Kiani, D. Messinis, I. N. Melas, L. Artigas, E. Schwartz, I. Mazo, M. Masso, L. G. Alexopoulos, J. M. Mas, T. Olsson, J. Tegner, R. Martin, A. Zamora, F. Paul, J. Saez-Rodriguez and P. Villoslada (2015). *Signaling networks in MS: A systems-based approach to developing new pharmacological therapies.* **Mult Scler** 21(2): 138-146.
48. Babot, E. D., J. C. del Río, M. Cañellas, F. Sancho, F. Lucas, V. Guallar, L. Kalum, H. Lund, G. Gröbe, K. Scheibner, R. Ullrich, M. Hofrichter, A. T. Martínez and A. Gutiérrez (2015). *Steroid hydroxylation by basidiomycete peroxygenases: A combined experimental and computational study.* **Applied and Environmental Microbiology**.
49. Perera, S., L. Artigas, R. Mulet, J. M. Mas and T. Sardón (2014). *Systems biology applied to non-alcoholic fatty liver disease (NAFLD): treatment selection based on the mechanism of action of nutraceuticals.* **Nutrafoods** 13(2): 61-68
50. Coma, M., R. Valls, J. M. Mas, A. Pujol, M. A. Herranz, V. Alonso and J. Naval (2014). *Methods for diagnosing perceived age on the basis of an ensemble of phenotypic features.* **Clinical, Cosmetic and Investigational Dermatology** 7: 133-137.
51. Badiola, N., V. Alcalde, A. Pujol, L.-M. Münter, G. Multhaup, A. Lleó, M. Coma, M. Soler-López and P. Aloy (2013). *The Proton-Pump Inhibitor Lansoprazole Enhances Amyloid Beta Production.* **PLoS ONE** 8(3).
52. Pujol, A., R. Mosca, J. Farres and P. Aloy (2010). *Unveiling the role of network and systems biology in drug discovery.* **Trends Pharmacol Sci** 31(3): 115-123.
53. Naval, J. and J. Farrés (2010). *Systems Biology footprint On the nutraceuticals and cosmetics arena.* **NutraFoods** 9((3)): 4.
54. Farrés, J., A. Pujol, M. Coma, J. L. Ruiz, J. Naval, J. M. Mas, A. Molins, J. Fondevila and P. Aloy (2010). *Revealing the molecular relationship between type 2 diabetes and the metabolic changes induced by a very-low-carbohydrate low-fat ketogenic diet.* **Nutr Metab (Lond)** 7: 88.
55. Pache, R. A., A. Zanzoni, J. Naval, J. M. Mas and P. Aloy (2008). *Towards a molecular characterisation of pathological pathways.* **FEBS Lett** 582(8): 1259-1265.

INDEXED RESEARCH PUBLICATIONS (FEATURING ANAXOMICS)

56. Quintero, J., J.R. Gutierrez-Casares, and C. Alamo (2022). *Molecular Characterisation of the Mechanism of Action of Stimulant Drugs Lisdexamfetamine and Methylphenidate on ADHD Neurobiology: A Review.* **Neurol Ther.** 11(4): p. 1489-1517.
57. Garcia-Consuegra, I., S. Asensio-Pena, R. Garrido-Moraga, T. Pinos, C. Dominguez-Gonzalez, A. Santalla, G. Nogales-Gadea, P. Serrano-Lorenzo, A. L. Andreu, J. Arenas, J. L. Zugaza, A. Lucia and M. A. Martin (2022). *Identification of Potential Muscle Biomarkers in McArdle Disease: Insights from Muscle Proteome Analysis.* **Int J Mol Sci.** 23(9).
58. Gamez-Valero, A., J. Campdelacreu, D. Vilas, L. Ispuerto, J. Gascon-Bayarri, R. Rene, R. Alvarez, M. P. Armengol, F. E. Borrás and K. Beyer (2021). *Platelet miRNA Biosignature Discriminates between Dementia with Lewy Bodies and Alzheimer's Disease.* **Biomedicines.** 9(9).

59. Bayes-Genis, A., O. Iborra-Egea, G. Spitaleri, M. Domingo, E. Revuelta-Lopez, P. Codina, G. Cediell, E. Santiago-Vacas, A. Cserkoova, D. Pascual-Figal, J. Nunez and J. Lupon (2021). *Decoding empagliflozin's molecular mechanism of action in heart failure with preserved ejection fraction using artificial intelligence.* **Sci Rep**, 11(1): p. 12025.
60. Gallizioli, M., F. Miro-Mur, A. Otxoa-de-Amezaga, R. Cugota, A. Salas-Perdomo, C. Justicia, V. H. Brait, F. Ruiz-Jaen, M. Arbaizar-Roviroso, J. Pedragosa, E. Bonfill-Teixidor, M. Gelderblom, T. Magnus, E. Cano, C. Del Fresno, D. Sancho and A. M. Planas (2020). *Dendritic Cells and Microglia Have Non-redundant Functions in the Inflamed Brain with Protective Effects of Type 1 cDCs.* **Cell Rep** 33(3): 108291.
61. Santos-Lozano, A., P. L. Valenzuela, F. Llaverro, S. Lista, P. Carrera-Bastos, H. Hampel, H. Pareja-Galeano, B. G. Galvez, J. A. Lopez, J. Vazquez, E. Emanuele, J. L. Zugaza and A. Lucia (2020). "Successful aging: insights from proteome analyses of healthy centenarians." **Aging** (Albany NY) 12(4): 3502-3515.
62. Gamez-Valero, A., J. Campdelacreu, D. Vilas, L. Ispierto, R. Rene, R. Alvarez, M. P. Armengol, F. E. Borrás and K. Beyer (2019). *Exploratory study on microRNA profiles from plasma-derived extracellular vesicles in Alzheimer's disease and dementia with Lewy bodies.* **Transl Neurodegener.** 8: p. 31.
63. Carrasco-Rozas, A., E. Fernandez-Simon, M. C. Lleixa, I. Belmonte, I. Pedrosa-Hernandez, E. Montiel-Morillo, C. Nunez-Peralta, J. Llauger Rossello, S. Segovia, N. De Luna, X. Suarez-Calvet, I. Illa, g. Pompe Spanish Study, J. Diaz-Manera and E. Gallardo (2019). "Identification of serum microRNAs as potential biomarkers in Pompe disease." **Ann Clin Transl Neurol** 6(7): 1214-1224.
64. Gns, H. S., S. Gr, M. Murahari and M. Krishnamurthy (2019). "An update on Drug Repurposing: Re-written saga of the drug's fate." **Biomed Pharmacother** 110: 700-716.
65. Iborra-Egea, O., E. Santiago-Vacas, S. R. Yurista, J. Lupón, M. Packer, S. Heymans, F. Zannad, J. Butler, D. Pascual-Figal, A. Lax, J. Núñez, R. A. de Boer and A. Bayés-Genís (2019). *Unraveling the Molecular Mechanism of Action of Empagliflozin in Heart Failure With Reduced Ejection Fraction With or Without Diabetes.* **JACC: Basic to Translational Science** 4(7): 831-840.
66. Navarro-Barriuso, J., et al. (2019). *MAP7 and MUCL1 Are Biomarkers of Vitamin D3-Induced Tolerogenic Dendritic Cells in Multiple Sclerosis Patients.* **Front Immunol** 10: 1251.
67. Santos-Lozano, A., C. Fiuza-Luces, D. Fernandez-Moreno, F. Llaverro, J. Arenas, J. A. Lopez, J. Vazquez, P. Escribano-Subias, J. L. Zugaza and A. Lucia (2019) *Exercise Benefits in Pulmonary Hypertension.* **J Am Coll Cardiol** 73(22): 2906-2907.
68. Loren, V., A. Garcia-Jaraquemada, J. E. Naves, X. Carmona, M. Manosa, A. M. Aransay, J. L. Lavin, I. Sanchez, E. Cabre, J. Manye and E. Domenech (2019). *ANP32E, a protein involved in steroid-refractoriness in ulcerative colitis, identified by a systems biology approach.* **J Crohns Colitis.**
69. Navarro-Barriuso, J., et al. (2018). *Comparative transcriptomic profile of tolerogenic dendritic cells differentiated with vitamin D3, dexamethasone and rapamycin.* **Sci Rep** 8(1): 14985.
70. Azkargorta, M., I. Escobes, I. Iloro, N. Osinalde, B. Corral, J. Ibanez-Perez, A. Exposito, B. Prieto, F. Elortza and R. Matorras (2018) *Differential proteomic analysis of endometrial fluid suggests increased inflammation and impaired glucose metabolism in non-implantative IVF cycles and pinpoints PYGB as a putative implantation marker.* **Hum Reprod**, doi:10.1093/humrep/dey274.
71. Fiuza-Luces, C., A. Santos-Lozano, F. Llaverro, R. Campo, G. Nogales-Gadea, J. Diez-Bermejo, C. Baladron, A. Gonzalez-Murillo, J. Arenas, M. A. Martin, A. L. Andreu, T. Pinos, B. G. Galvez, J. A. Lopez, J. Vazquez, J. L.

- Zugaza and A. Lucia (2018) *Muscle molecular adaptations to endurance exercise training are conditioned by glycogen availability: a proteomics-based analysis in the McArdle mouse model*. **J Physiol**.
72. Riffo-Campos, A. L., A. Fuentes-Trillo, W. Y. Tang, Z. Soriano, G. De Marco, P. Rentero-Garrido, V. Adam-Felici, V. Lendinez-Tortajada, K. Francesconi, W. Goessler, C. Ladd-Acosta, M. Leon-Latre, J. A. Casasnovas, F. J. Chaves, A. Navas-Acien, E. Guallar and M. Tellez-Plaza (2018). *In silico epigenetics of metal exposure and subclinical atherosclerosis in middle aged men: pilot results from the Aragon Workers Health Study*. **Phil. Trans. R. Soc.** 373(20170084).
73. Iborra-Egea, O., C. Gálvez-Montón, S. Roura, I. Perea-Gil, C. Prat-Vidal, C. Soler-Botija and A. Bayes-Genis (2017) *Mechanisms of action of sacubitril/valsartan on cardiac remodeling: a systems biology approach*. **npj Systems Biology and Applications** 3(12).
74. Gomez-Serrano, M., E. Camafeita, E. Garcia-Santos, J. A. Lopez, M. A. Rubio, A. Sanchez-Pernaute, A. Torres, J. Vazquez and B. Peral (2016) *Proteome-wide alterations on adipose tissue from obese patients as age-, diabetes- and gender-specific hallmarks*. **Sci Rep** 6: 25756.
75. Alyass, A., M. Turcotte and D. Meyre (2015) *From big data analysis to personalized medicine for all: challenges and opportunities*. **BMC Med Genomics** 8: 33.
76. Barratt, M. J. and D. E. Frail (2012). *Drug Repositioning: Bringing New Life to Shelved Assets and Existing Drugs*, Wiley.
77. Loging, W., R. Rodriguez-Esteban, J. Hill, T. Freeman and J. Miglietta (2011) *Cheminformatic/bioinformatic analysis of large corporate databases: Application to drug repurposing*. **Drug Discovery Today: Therapeutic Strategies** 8(3-4).
78. Russell, R. B. and P. Aloy (2008) *Targeting and tinkering with interaction networks*. **Nat Chem Biol** 4(11): 666-673.

OTHER PUBLICATIONS AS CO-AUTHORS

79. Matos-Filipe, P., J.M. García-Illarramendi, G. Jorba, B. Oliva, J. Farrés and J.M. Mas (2022). *The usage of transcriptomics datasets as sources of Real-World Data for clinical trialling*. **bioRxiv**: p. 2022.11.10.515995.
80. Haya Guaita, S., Catarino, C., Coma Camprodon, M., Jiménez Yuste, V., López Fernández, M.F., Marco Vera, P. (2020). *Mecanismos inmunomoduladores de rFVIII_{FC}*. ISBN: 978-84-17844-73-8. Accessible through: <https://www.seth.es/images/auspicios-seth/2020/Mecanismos-inmunomoduladores-de-rFVIII_{FC}.pdf>
81. Mas, J. M. and J. Farres (2015) *Same Drug: New Purpose*. **European Biopharmaceutical Review** 12(236): 50-53.
82. Sardón, T., C. Segú and J. M. Mas (2013) *Systems biology solutions to microarray nightmare*. **Innovations in Pharmaceutical Technology** June: 44-47.
83. Pujol, A., R. Valls, V. Radovanovic, E. Guney, J. Garcia-Garcia, V. C. Domenech, L. C. Gonzalez, J. M. Mas and B. Oliva (2013) *Virtual-organism toy-model as a tool to develop bioinformatics approaches of Systems Biology for medical-target discovery*. **ArXiv e-prints** 1301.2528.
84. Mas, J. M. and A. Pujol (2013) *All Systems Go*. **European Biopharmaceutical Review** July: 36-39.
85. Naval, J. and J. M. Mas (2012) *Old Drug, New Tricks*. **European Biopharmaceutical Review**(April 2012): 21-22.

86. Naval, J. and J. Bigorra (2011) *The New Science of Predictive Safety Testing*. **Innovations in Pharmaceutical Technology**: 57-58.
87. Farrés, J., J. Bigorra and J. Naval (2011) *Systems Biology and Drug Regulation*. **Pharmacovigilance Review** 5(4): 11-13.
88. Coma, M., J. M. Mas, A. Molins, I. Sajoux, J. Fondevila and J. Farrés (2011) *Biología de sistemas y nutrición. Efectos positivos de una dieta cetogénica rica en proteínas en pacientes con diabetes tipo II, de la evidencia clínica a la base molecular*. **ALIMENTACION, NUTRICION Y SALUD** 18(2): 7.
89. Coma, M. and J. Naval (2010) *Systems biology upends drug reprofiling*. **Genetic Engineering and Biotechnology News** 30(18).

CONGRESSES

- Carcereny, E., L. Artigas, A. Martínez-Cardús, A. Lopez, and M. Coma (2023). *Unveiling the likely pharmacological mechanisms of brigatinib on brain metastasis in ALK+ patients with non-small cell lung cancer: a systems biology and artificial intelligence-based approach*. Poster presented at the **European Lung Cancer Congress 2023**, Copenhagen, Denmark.
- Agathangelidis, A., C. Galigalidou, A. Iatrou, L. Zaragoza-Infante, L. Scarfò, M. C. Maniou, P. Ranghetti, N. Pechlivanis, V. Junet, A. Skafason, M. Tsagiopoulou, F. Psomopoulos, R. Rosenquist, P. Ghia, A. Chatzidimitriou and K. Stamatopoulos (2022). *P593: Multidimensional analysis of the B cell receptor offers insight into the ontogenetic relationship of monoclonal B-cell lymphocytosis with chronic lymphocytic leukemia*. **HemaSphere**. 6: p. 492-493.
- Sopegno, C., B. Oliva, J.M. Mas, J. Farrés (2022). *An automated machine learning pipeline for uncovering molecular biomarkers of drug response from multi-omics datasets*. Poster presented at **Women in Data Science**, Barcelona.
- Matos-Filipe, P., B. Oliva, J. Farrés, J.M. Mas (2022). *Integration of multi-source datasets for the assessment of high-grade Prostate Cancer biomarkers*. Poster presented at the **Norwegian Cancer Symposium 2022**, Oslo.
- Matos-Filipe, P., J.M. García-Illarramendi., B. Oliva, J. Farrés, J.M. Mas (2022). *Building virtual cohorts via the integration of public data*. Presented at the **2022 European Congress on Alternatives to Animal Testing**, Linz, Austria.
- Regí, B., I. Tagarro, A. Lagarda, T. Letosa, J. Aparicio, M. Coma, C. Montoto, J. Manye, E. Domenech (2022). *Understanding the impact of previous *tnf-α* inhibitors on vedolizumab response in patients with ulcerative colitis and crohn's disease using systematic review and gene expression data*. Presented at the **UEG week. 2022**. Vienna: UEG journal.
- Regí, B., I. Tagarro, A. Lagarda, T. Letosa, J. Aparicio, M. Coma, C. Montoto, J. Manye, E. Domenech (2022). *Linking location specific gene expression patterns to potential vedolizumab outcomes in crohn's disease patients*. Presented at the **UEG week. 2022**. Vienna: UEG journal.
- Gutiérrez Casares, J. R., J. Quintero, P. Rodríguez, C. Montoto, T. Pozo-Rubio, C. Segú-Vergés and M. Coma (2022). *Evaluation of the role of lisdexamfetamine on attention-deficit/hyperactivity disorder common psychiatric comorbidities: mechanistic insights on binge eating disorder and depression*. Presented at the **30th European congress of psychiatry**.

- Giraldo, P., J. Gomez , G. Ronzoni-Blázquez, J. Gervas-Arruga and C. Montoto (2022). *Machine learning-driven biomarker discovery for bone complications in type 1 Gaucher disease patients*. Presented at the **SSIEM 2022**. Journal of inherited metabolic disease. Abstract accessible from <https://onlinelibrary.wiley.com/doi/epdf/10.1002/jimd.12536>
- Gómez, J., L. Artigas, R. Valls and J. Gervas-Arruga (2022). *Application of artificial intelligence to predict protein biomarker candidates for the assessment of prognosis in patients with metachromatic leukodystrophy*. Presented at the **WORLDSymposium 2022**. Elsevier.
- Zaragoza-Infante, L., A. Agathangelidis, V. Junet, N. Pechlivanis, T. Koletsa, A. Brusca, Z. Davis, S. Markantonatou, V. Spina, A. Verney, A. Iatrou, F. Psomopoulos, D. Oscier, A. Traverse-Glehen, M. Papaioannou, D. Rossi, A. Chatzidimitriou and K. Stamatopoulos (2021). *Distinct Modes of Ongoing Antigen Interactions Shape Intraclonal Dynamics in Splenic Marginal Zone Lymphoma*. **Blood**. 138(Supplement 1): p. 1330-1330.
- Gutiérrez-Casares, JR., J. Quintero, M. Coma, G. Jorba, V. Junet, T. Pozo-Rubio, P. Rodriguez, S. Martín-Benito, C. Montoto and V. Martínez (2021). *Ensayo clínico in silico: comparación entre lisdexanfetamina y metilfenidato como tratamiento en primera línea de TDAH en niños y adolescentes*. Presented at the **Congreso nacional AEPNYA**. Cadiz: Revista de psiquiatría Infanto-Juvenil.
- Coma, M., C. Segu-Verges, C. Kessel, S. Smeets, D. Foell and A. Aldea (2021). *Application of systems biology-based in silico tools to optimize treatment strategy in Still's disease*. Oral presentation at the **International Society of Systemic Auto-Inflammatory Diseases Congress**.
- Gutiérrez, JR., J. Quintero, P. Rodriguez, S. Martin-Benito, T. Pozo-Rubio, C. Montoto, J. M. Mas and V. Martinez (2021). *Eficacia y Seguridad de lisdexanfetamina vs. metilfenidato en el Trastorno del Déficit de Atención/Hiperactividad: revisión sistemática cuantitativa*. Poster presented at the **Congreso nacional de psiquiatría**. Valencia. Poster accessible from <https://congresonacionaldepsiquiatria.es/cnps/expoposters-2021/index.php>
- Gutiérrez, JR., J. Quintero, M. Coma, G. Jorba, V. Junet, T. Pozo-Rubio, P. Rodriguez, S. Martin-Benito, C. Montoto and V. Martinez (2021). *Ensayo clínico in-silico: comparación entre lisdexanfetamina y metilfenidato como tratamiento en primera línea de TDAH en adultos*. Poster presented at the **Congreso nacional de psiquiatría**. Valencia. Poster accessible from <https://congresonacionaldepsiquiatria.es/cnps/expoposters-2021/index.php>
- Costa, L., D. Castellano, J. Puente, L. Martin, U. Anido, J. Gómez and I. Duran (2021) *Exploring the synergistic effects of cabozantinib (cabo) and a programmed cell death protein 1 (PD1) inhibitor in metastatic renal cell carcinoma (mRCC) with artificial intelligence (AI)*. Oral presentation at the **Genitourinary Cancers Symposium: American Society of Clinical Oncology**.
- Coma, M., Segu-Verges, C., Kessel, C., Smeets, S., Foell, D. , and Aldea, A. (2020) *Application of systems biology-based in silico tools to optimize treatment strategy in Still's disease*. Paper presented at the **PREs 2020 Congress**. Pediatric Rheumatology.
- Coma, M., Segu-Verges, C., Kessel, C., Smeets, S., Foell, D. , and Aldea, A. (2020). *Application of systems biology-based in silico tools to optimize treatment strategy in Still's disease*. Paper presented at the **EULAR 2020 E-Congress**.

- Segu-Verges, C., Coma, M., Kessel, C., Smeets, S., Foell, D. , and Aldea, A. (2019). *Application of Systems Biology-Based In Silico Tools for Optimal Treatment Strategy Identification in Still's Disease*. Paper presented at the **2019 ACR/ARP Annual Meeting**, Atlanta, GA.
- Ibarra, A., B. Vega, M. Armas, D. Gonzalez, R. Valls, R. Horres, C. Valverde Tercedor, J. C. Wiebe and A. M. Wagner (2019). *Micro-ARN placentarios en la diabetes pregestacional: correlaciones clnicas*. *Endocrinol Diabetes Nutr.* 66(Espec Cong 2): 23. Oral presentation at the **60 Congreso Nacional de la Sociedad Espaola de Endocrinologa y Nutrici3n**.
- Simats, A., L. Ramiro, R. Valls, T. Sardon, A. Rosell, T. Garca-Berrocoso and J. Montaner (2019). *Identification of novel neuroprotective drug combinations for the treatment of ischemic stroke through a systems biology-based drug repositioning approach*. Poster presentation at the **29th International Symposium on Cerebral Blood Flow, Metabolism and Function (BRAIN 2019)**, Japan.
- Villalba, A. , Rodriguez-Fernandez, S. , Perna-Barrull, D. , Ampudia, R. , Pujol-Autonell, I. , Erhenberg, C., Aguilera, E., Coma, M., Maspoch, D., Vazquez, F., Vives-Pi, M. (2018). *Combined therapy for type 1 diabetes based on drug-repurposing. Immunotherapy and regenerative strategies*. Paper presented at the **XII Congr3s de la Societat d'Immunologia**.
- Ibarra, A., B. Vega, M. Armas, D. Gonzalez, S. Perera, R. Horres, R. Valls, J. C. Wiebe and A. M. Wagner (2018). *Placental miRNA Expression Patterns in Pregestational Diabetes and Identification of Specific Potential Biomarkers*. Oral presentation at the **EASD Virtual Meeting**, Berlin. Oral Presentation #169.
- Loren, V., A. Garcia-Jarquemade, J. Naves, E. Cabre, C. Segu, M. Coma, J. L. Lavin, A. M. Aransay, E. Domenech and J. Manye (2018). *El miR 218-Sp circulant prediu la corticorefractarietat a la colitis ulcerosa, sol o amb combinaci3*. *Estudi mitjancant estratgies computacionals basades en Biologia de Sistemes*. Oral presentation at the **XXVII Congr3s de la Societat Catalana de Digestologia**, Girona.
- Wagg, J., O. Krieter, C. Ooi, S. Croset, M. Leddin, R. Valls, JM. Mas and C. Boetsch (2017). *Effect of molecular mechanisms mediating bevacizumab (BEV) and vanucizumab (VAN) on gastrointestinal perforation: Use of artificial neural networks for integrated data analysis*. **ASCO Annual Meeting: American Society of Clinical Oncology**.
- Perera, S. (2017) *Qu3 sabemos de la medicina de precisi3n?* Mesa redonda. in **III Congreso ComunicaBiotec** (Asociaci3n de Comunicadores de Biotecnologa), Barcelona.
- Perera, S., L. Artigas, R. Valls, T. Sard3n, R. Morales and J. M. Mas (2017). *Functional, Structural and Contextual Analysis of a Variant of Uncertain Clinical Significance in BRCA1: c.5434C->G (p.Pro1812Ala) in cancer by means of Systems Biology*. Poster presentation at the **B•Debate Women's Cancer**, Barcelona.
- Perera, S., L. Artigas, C. Seg3, R. Mulet, R. Valls, T. Sard3n, R. Morales and J. M. Mas (2017). *Functional, Structural and Contextual Analysis of a Variant of Uncertain Clinical Significance in BRCA1: c.5434C->G (p.Pro1812Ala) in cancer by means of Systems Biology*. Poster presentation at the **V Jornada De Bioinformtica I Gen3mica**, Barcelona.
- Tejchman, A., E. Mennesson, I. Fixe, A. Foucher, S. Perera, L. Artigas, J. M. Mas, C. Grillon, M. Ugorski, N. Normand and C. Kieda (2017). *miRNome analyses reveal that activity of CAF expressed podoplanin in the tumour microenvironment is modulated by exosome miRNAs involved in PTEN/PI3K/AKT/mTOR signalling*. Poster presentation at the **AACR (American Association for Cancer Research) Annual Meeting** Washington, D.C., USA.

- Mennesson, E., J. M. Mas, L. Artigas, I. Fixe, A. Foucher, F. Carpentier, S. Perera and N. Normand (2016). *Enrichment analysis for biomarker pathways*. Poster presentation at the **Cosmetic 360**, Paris.
- Giménez, N., L. Rosich, A. Monraveta, M. López-Guerra, E. Campo and D. Colomer (2016). *Targeting chronic lymphocytic leukemia cells with selective interleukin-1 receptor-associated kinase 4 (IRAK-4) inhibitors*. Poster presentation at the **Young Investigators' Meeting (YIM) on CLL**, Köln, Germany.
- Coma, M. and J. Manyé (2016). *Biologia de sistemes en la recerca bàsica-translacional i en la medicina personalitzada. Aplicació en l'estudi de la malaltia inflamatòria intestinal. XXV Congrés de la Societat Catalana de Digestologia XXI curs de formació en digestologia*. Oral presentation and proceeding.
- Coma, M. (2016). *Repurposing analysis based on systems biology approach: Network-Centric Therapy for neurodegenerative diseases*. Oral presentation at the **B Debate: Drug Repurposing For Rare Diseases The Cure For The 21st Century**.
- Bardaji, B., E. Guillen-Gómez, S. Ferrer, C. Brotons, M. Knepper, M. Carrascal, J. Abian, J. Mas, F. Calero, J. Ballarín and P. Fernández-Llama (2016). *Urinary proteome analysis identified neprilysin and VCAM as key proteins in the development of diabetic nephropathy* **26th European Meeting on Hypertension and Cardiovascular Protection - ESH 2016**, Paris. Abstract.
- Wagg, J., G. Meneses-Lorente, B. Ribba, C. Meisel, A. Phipps, J.-E. Charoin, J. M. Mas, T. Sardon and G. Jaccard (2015). *A Quantitative Systems Pharmacology Approach for Computational Prediction of the Mechanisms of Drug Evoked Responses*. Poster presentation at the **Increasing Drug Development Success: Understanding Drug-Disease Interactions Through Quantitative Systems Pharmacology**, New York City, USA.
- Perera, S., R. Valls, G. Moncunill, T. Sardon, C. Dobaño and J. M. Mas (2014). *Increasing the generalization capability of high-throughput data derived biomarkers by means of systems biology: malaria vaccines case study*. Poster presentation at the **4th Munich Biomarker Conference**, Munich.
- Belbin, O., M. Coma, N. Badiola, L. Muñoz, M. Suarez-Calvet, M. Colom-Cadena, D. Alcolea, J. Clarimón, J. M. Mas, A. Lleó and P. Aloy (2012) *Systems biology technology identifies presenilin-1-interacting proteins and drug targets that are novel to the Alzheimer's disease field*. **Alzheimer's & Dementia: The Journal of the Alzheimer's Association** 8(4): 310-311. Abstract.
- Coma, M. (2010). *La hipótesis de la unidad neurovascular en la etiopatogenia del depósito de amiloide en la enfermedad de Alzheimer*. Oral presentation at the **Sociedad Española de Neurología (SEN)**.

GRANTS

- ANAXOMICS-Biotech (2020). PROTrEIN: Computational Proteomics Training European Innovative Network. H2020-MSCA-ITN-2020: No.956148
- ANAXOMICS-Biotech (2019). PROTEOBLOOD: A French-Spanish cooperative network for the analysis of proteinopathies and the development of individualized therapies in hematological cancers. POCTEFA: EFA360/19.
- ANAXOMICS-Biotech (2019). SMA-TB: *A novel Stratified Medicine Algorithm to predict treatment responses to host-directed therapy in TB patients.*, H2020-SC1-BHC-14-2019. No. 847762.

- ANAXOMICS-Biotech (2019). DISCOvERIE: *Development, diagnostic and prevention of gender-related Somatic and mental ComorbidiEs in iRritable bowel syndrome In Europe*, H2020-SC1-BHC-01-2019. No. 848228.
- ANAXOMICS-Biotech (2019). RECOGNISED: *Retinal and cognitive dysfunction in type 2 diabetes: unravelling the common pathways and identification of patients at risk of dementia*, H2020-SC1-BHC-01-2019. No. 847749
- ANAXOMICS-Biotech (2019). PROEVLIFECYCLE: *The life cycle of extracellular vesicles in prostate cancer: from biogenesis and homing, to functional relevance*. H2020-MSCA-ITN-2019. No. 860303
- ANAXOMICS-Biotech (2019). SECRET: *Exploitation of the SECRETory pathway for cancer therapy to address European research.*, H2020-MSCA-ITN-2019. No. 859962.
- ANAXOMICS-Biotech (2018). LEGACY: *CeLac and European consortium for a personalized medicine approach to Gastric Cancer*. H2020-SC1-BHC-18-2018 No. 825832.
- ANAXOMICS-Biotech (2018). HELICAL: *HEalth data Linkage for ClinicAL benefit*. H2020-MSCA-ITN-2018 No. 813545.
- ANAXOMICS-Biotech (2017) DRIVE - *Driving next generation autophagy researchers towards translation*. H2020-MSCA-ITN-2017 No. 765912.
- ANAXOMICS-Biotech (2017) COSMIC - *COmbatting disorders of adaptive immunity with Systems MediCine*. H2020-MSCA-ITN-2017 No. 765158.
- ANAXOMICS-Biotech (2016) LIVERHOPE - *Simvastatin and rifaximin as new therapy for patients with decompensated cirrhosis*. H2020-SC1-2016-RTD No: 731875.
- ANAXOMICS-Biotech (2016) DialCat - *La diabetis com accelerador de deteriorament cognitiu i malaltia d'alzheimer: abordatge i adherencia*. Catalonia's Research and Innovation Strategy for Smart Specialisation - RIS3CAT COMRDI15-1-0024.
- ANAXOMICS-Biotech (2016) MICROBIOTA - *Nous ingredients moduladors de la microbiota aplicant biotecnologia omiques i de big data*. Catalonia's Research and Innovation Strategy for Smart Specialisation - RIS3CAT COMRDI15-1-0029.
- ANAXOMICS-Biotech (2013) TRIGGER - *King of hearts, joints and lungs; periodontal pathogens as etiologic factor in RA, CVD and COPD and their impact on treatment strategies*. (FP7/2007-2013) HEALTH-F3-2012-306029.
- ANAXOMICS-Biotech (2013) SyStemAge - *Early warning signals of ageing in human stem cells and age-related disorders*. (FP7/2007-2013) FP7-HEALTH-2012-306240.
- ANAXOMICS-Biotech (2013) SysMalVac - *Identifying correlates of protection to accelerate vaccine trials: systems evaluation of two models of experimentally induced immunity to malaria* (FP7/2007-2013) FP7-HEALTH-F4-2012-305869.
- ANAXOMICS-Biotech (2013) CombiMS - *A novel drug discovery method based on Systems Biology: Combination therapy and biomarkers for multiple sclerosis*. (FP7/2007-2013) HEALTH-F4-2012-305397.
- ANAXOMICS-Biotech (2012) RAPID - *Rheumatoid Arthritis and Periodontal Inflammatory Disease*. (FP7/2007-2013) PITN-GA-2011-290246.
- ANAXOMICS-Biotech (2012) VISION - *Prolonged inhibition of semaphorine3a pathway via a bio-degradable implant towards a better therapy for visual sensory impairments*. (FP7/2007-2013) HEALTH-F2-2012-304884.

- ANAXOMICS-Biotech (2010) *GUMS&JOINTS - Protein citrullination as a link between periodontal diseases and rheumatoid arthritis (RA) and target for development of novel drugs to treat RA. (FP7/2007-2013) FP7-HEALTH-F2-2010-261460*
- ANAXOMICS-Biotech (2009) *AntiPathoGN - Identification and validation of novel drug targets in Gram-negative bacteria by global search: a trans-system (FP7/2007-2013) HEALTH-F3-2009-223101*

PATENT APPLICATIONS

- Coma, M., A. Pujol, J. Mas, D. Romeo-Guitart and C. Casas (2015) *New combination therapies for treating neurological damage. EP15382508.8;*
- Mas, J. M., A. Pujol, J. Naval, R. Valls, V. C. Alonso and M. A. Herranz (2013) *Methods for diagnosing perceived age based on an ensemble of phenotypic features. Patent Application Nº. 61/763,190;*
- Coma, M., P. Aloy, P. Pujol, J. M. Mas and J. Naval (2013) *Combination Therapies for Treating Ocular Disorders. Patent Application Nº. 61/750,267; PCT/EP2014/050170*
- Coma, M., P. Aloy, A. Pujol, J. M. Mas, C. Casas, X. Navarro and J. Naval (2013) *New combination therapies for treating nervous system diseases. Patent Application Nº. 61/754,186; PCT/EP2014/050907*
- Coma, M., P. Aloy, A. Pujol, X. Gomis-Ruth, B. Oliva, A. Lleó and J. M. Mas (2011) *Combination Therapies for Treating Neurological Disorders. Patent Application No. 13/660,205; PCT/US12/61908*
- Mas, J. M., A. Pujol, P. Aloy and J. Farrés (2009) *Methods and systems for identifying molecules or processes of biological interest by using knowledge discovery in biological data. Patent Application Nº. 12/912,535; PCT/IB2010/002873; WO/2011/051805 A1*