



HELMHOLTZ PIONEER CAMPUS  
transforming discovery

## Celia P. Martinez-Jimenez, PhD

Helmholtz Zentrum München  
Ingolstädter Landstr. 1  
85764 Neuherberg, Munich, Germany

+49 89 3187 49863

h-index: 13; Citations 1729

[Celia.Martinez@helmholtz-muenchen.de](mailto:Celia.Martinez@helmholtz-muenchen.de)

### EMPLOYMENT AND RESEARCH EXPERIENCE

- 2020 - now **TUM fellow status (equivalent to Assistant Professor level).** The Technical University of Munich
- 2018 - now **Group leader at Helmholtz Pioneer Campus.** Helmholtz Zentrum München (Munich, DE).
- 2018-2018 **Senior Research Associate. University of Cambridge (Cancer Research UK)**
- 2015-2018 **Inaugural Career Re-entry Janet Thornton Fellow at Wellcome Trust Sanger Institute and Cancer Research UK Cambridge Institute.** University of Cambridge (UK). *Supervisor:* Dr. DT. Odom. *Summary:* Single-cell genomics and regulatory system biology during aging.
- 2013-2014 **Head of the International Grant Office at the Health Research Institute Hospital La Fe.** *Summary:* Leading international cooperation, grant writing and project management. Instituto de Investigación Sanitaria Hospital La Fe (Valencia, Spain). Part-time.
- 2012-2014 **Business Development Manager in the spin-off Applicell Biotech, S.L.** *Summary:* Providing scientific advice in the selection of customized cellular models and *in vitro* tests for drug metabolism and toxicity assays. Instituto de Investigación Sanitaria Hospital La Fe (Valencia, Spain). Full and part-time.
- 2010-2011 **Post-doctoral Researcher, FEBS fellowship.** Biomedical Research Centre Príncipe Felipe, Valencia (Spain). *Supervisor:* Dr. M. Pamblanco. *Summary:* Proteomic and functional studies of transcriptional regulation complexes using yeast as cellular model.
- 2008-2010 **Scientific Researcher.** Institute of Molecular Biology and Genetics. B.S.R.C. Alexander Fleming, Vari (Greece). *Supervisor:* Dr. I. Talianidis.
- 2006-2008 **Post-doctoral Marie Curie Researcher (ITN).** Institute of Molecular Biology & Biotechnology. Foundation for Research and Technology-Hellas (FORTH). Crete (Greece). *Supervisor:* Dr. I. Talianidis. *Summary:* Transcriptional regulatory networks in liver development and liver metabolic function using mice as animal model.
- 2000-2006 **Pre-doctoral Researcher.** Experimental Hepatology Unit. Research Centre. University Hospital La Fe. Valencia. (Spain). *Summary:* Study of hepatic phenotype and cytochrome P450 functions in human liver and cells lines. Development of a hepatic differentiated human cell model. *Supervisor:* Dr. MJ Gomez-Lechon.

### EDUCATION

- 2001-2006 **European Ph.D. in Biochemistry.** University of Valencia (Spain). *Grade:* Summa Cum Laude. *Supervisor:* Dr. MJ Gomez-Lechon. *Dissertation:* "Control of hepatic phenotype and cytochrome P450 regulation by C/EBP $\beta$  and HNF4a transcription factors. Application to the development of a hepatic differentiated human cell model."
- 2001-2004 **Diploma of Advanced Studies in Biochemistry applied to Clinics, Medicine and Immunology.** University of Valencia (Spain).
- 2000-2003 **M.Sc. in Biochemistry.** University of Valencia (Spain).
- 1995-2000 **M.Sc. in Biology.** University of Valencia (Spain).

### MANAGERIAL EDUCATION



---

2016	<b>EMBO Management Course for postdocs.</b> EMBO, Leimen, Germany.
2013	<b>Professional Development Course.</b> OTTO Walter International. Valencia. Spain
2012	<b>Master of Business Administration (MBA Executive).</b> University San Pablo CEU. Business School. Valencia. Spain.

### TEACHING EXPERIENCE

---

2013-2014	<b>Assistant professor.</b> <i>Subject: "Methodology in Biomedical Research"</i> . Hospital University and Polytechnic La Fe, Valencia. Spain.
2012-2013	<b>Associate Professor in Proteomics.</b> Faculty of Biotechnology. Catholic University of Valencia (UCV). Spain.
2011	<b>Accredited as University Professor</b> by the State National Agency of Quality Control and Accreditation (ANECA). Spain.
2001-2005	<b>Assistant professor in Practices of Immunology and, Practices of Biochemistry and Molecular Biology.</b> Faculty of Medicine and Faculty of Biology. University of Valencia. Spain
2001	<b>Pedagogical training course</b> for high school teacher (Geology and Biology). University of Valencia (Spain)

### OUTREACH TRAINING AND ACTIVITIES

---

2020	Erasmus+ EU project. Participant institute
2017	Rising Starts Public Engagement Training. University of Cambridge, UK.
2013	Workshop for hospitalized children. University Hospital and Polytechnic La Fe. Valencia, Spain.

### LEADERSHIP, COMUNITY AND PEER REVIEWS

---

Member of the EASL The home of Hepatology association  
The Society of Spanish scientists in the Federal Republic of Germany (CERFA)  
Cambridge Institute Scientists Society (CIS Soc); Chair of the Career Pathways Talks (CRUK CI)  
Senior Fellow at the Darwin College (Cambridge)  
Spanish Association of Scientists Entrepreneur (AEEC)  
Federation of the Societies of Biochemistry and Molecular Biology (FEBS)  
Society of Transplants of the Community of Valencia (STCV)  
*Ad-hoc* Peer reviews at Molecular Cell, Cell Reports, Ageing, Molecular Metabolism and Einstein Foundation Berlin  
Expert evaluator for the European Commission (ITN program).

### THREE SELECTED PUBLICATIONS

---

- Richter M.L.\* , Deligiannis I.K. \* , Danese A., Lleshi E., Coupland P., Vallejos C.A., Colome-Tatche M.†, **Martinez-Jimenez C.P.**†. Single-nucleus RNA-seq2 reveals a functional crosstalk between liver zonation and ploidy. *Invited revisions in Nature Communications (2020)*
- **Martinez-Jimenez C.P.**\* Eling N.\* , Vallejos C.A., Kolodziejczyk A.A., Chen H.C., Connor F., Stojic L., Rayner T.F., Stubbington M.J.T., Teichmann S.A., de la Roche M., Marioni J.C., Odom D.T. "Aging increases cell-to-cell transcriptional variability upon immune stimulation". *Science (2017)* 1433
- **Martinez-Jimenez C.P.**, Kyrmizi I., Cardot P., Gonzalez F.J, Talianidis I. "HNF-4α coordinates the transcription factor network regulating hepatic fatty acid metabolism. *Molecular Cell Biology (2010)* 565



### PUBLIC-PRIVATE PARTNERSHIP (PPP)

2020-2021 Three-way collaboration: Takara/Clontech, SPT Labtech and Martinez-Jimenez Lab.

### RESEARCH FUNDING, AWARDS AND PRIZES

2020-2021 **The Interstellar Initiative: Healthy longevity.** Award from the Japan Agency for Medical Research and Development and the New York Academy of Sciences

2020-2021 **Grant Funding. Aging and Metabolic Programming.** Helmholtz Association (DE)

2015-2018 **Inaugural Career re-entry Janet Thornton Fellowship** by the Wellcome Trust Sanger Institute. Wellcome Trust Sanger Institute and Cancer Research UK Cambridge Institute. Cambridge, UK.

2012 **Inaugural CEU Entrepreneurship Award.** University San Pablo CEU. Business School. Spain.

2010-2012 **Postdoctoral Long-Term FEBS fellowship** by Federation of European Biochemical Societies (FEBS). Research Centre Príncipe Felipe. Valencia, Spain.

2006-2008 **Postdoctoral Marie Curie Fellowship** (MTKD-CT-2005-029610) by ITN Marie Curie Program. Institute of Molecular Biology and Genetics. B.S.R.C. Alexander Fleming. Vari-Athens, Greece, and Institute of Molecular Biology & Biotechnology, FORTH. Crete, Greece.

2007 **National Ph.D. Award.** University of Valencia. Spain

2005-2006 **Predoctoral fellowship by Foundation ALIVE.** Experimental Hepatology Unit. Research Centre. University Hospital La Fe. Valencia, Spain.

2004 **Fellowship for short stays abroad** by the Spanish Central Government. Institute of Molecular Biology & Biotechnology, FORTH. Crete, Greece (2.5 months) (Beca de Estancia en el Extranjero. Ministerio de Educación y Cultura).

2003 **Fellowship for short stays abroad** by the Spanish Central Government. Biocentrum der Universität Basel. Basel, Switzerland (1 month). (Beca de Estancia en el Extranjero. Ministerio de Educación y Cultura).

2001-2005 **Predoctoral fellowship.** by the Spanish Regional Government. Experimental Hepatology Unit. Research Centre. University Hospital La Fe. Valencia, Spain. (Beca predoctoral de Formación de Personal Investigador. Consellería de Cultura y Educación)

2000-2001 **Predoctoral fellowship.** Foundation ALIVE. Experimental Hepatology Unit. Research Centre. University Hospital La Fe. Valencia, Spain.

1999-2000 **Undergraduate Research Fellowship** by the Spanish Central Government. Department of Microbiology and Ecology. University of Valencia. Valencia, Spain. (Beca de Colaboración del Ministerio de Educación y Cultura)

### CAREER BREAKS

Nov – 2018 2 months. Maternity leave. My daughter was born on 7<sup>th</sup> of November 2018.

Jan – 2012 35 months. After my first postdoctoral stay in Greece (2010), I moved back to Spain and remain in Valencia due to personal reasons. I returned with a long-term FEBS fellowship and after two years I moved to the private sector (Jan 2012). In January 2015, I re-engaged in research with the inaugural Janet Thornton Fellowship at the Sanger Institute (Cambridge, UK).

## SCIENTIFIC PRODUCTION (COMPLETE LIST)

\* Co-first, † Corresponding

1. Richter M.L.\*, Deligiannis I.K. \*, Danese A., Lleshi E., Coupland P., Vallejos C.A., Colome-Tatche M.†, **Martinez-Jimenez C.P.**†. Single-nucleus RNA-seq2 reveals a functional crosstalk between liver zonation and ploidy. **Invited revisions in *Nature Communications* (2020)** <https://doi.org/10.1101/2020.07.11.193458>
2. Kamies, R and **Martinez-Jimenez, C. P.**†. Advances of single-cell-genomics and epigenomics in human disease: where are we now? (Review) ***Mammalian Genome* (2020)**
3. Chen H-C., Eling N.\*, **Martinez-Jimenez C.P.** \*, O'Brien L.M., Marioni J.C., Odom D.T., and de la Roche M. Altered composition of the  $\gamma\delta$  T cell pool in lymph nodes during ageing enhances tumour growth. ***EMBO Reports* (2019)** 20: e47379 – [OA].
4. Ernst C.\*, Eling N.\*, Martinez-Jimenez C.P., Marioni J.C, Odom D.T. “Staged developmental mapping and X chromosome transcriptional dynamics during mouse spermatogenesis”. ***Nature Communications* (2019)** 10, 1251.– [OA].
5. **Martinez-Jimenez C.P.**\* Eling N.\*, Vallejos C.A., Kolodziejczyk A.A., Chen H.C., Connor F., Stojic L., Rayner T.F., Stubbington M.J.T., Teichmann S.A., Roche M., Marioni J.C., Odom D.T. (\*equal contribution) “Aging increases cell-to-cell transcriptional variability upon immune stimulation”. ***Science* (2017)** 1433-1436 – [OA].
6. Le Guevel, R.\* , Oger, F.\* , **Martinez-Jimenez, C. P.**, Bizot, M., Gheeraert, C., Firmin, F., Ploton, M., Kretova, M., Palierne, Staels, B., Barath, P., Talianidis, I., Lefebvre, P., Eeckhoutte, J., Salbert, G. (\*equal contribution) “Inactivation of the Nuclear Orphan Receptor COUP-TFII by Small Chemicals”. ***ACS Chem Biol* (2017)** 654-663. – [OA].
7. Calvo-Lerma, J., **Martinez-Jimenez, C. P.**, Lazaro-Ramos, J. P., Andres, A., Crespo-Escobar, P., Stav, E., Schaubert, C., Pannese, L., Hulst, J. M., Suarez, L., Colombo, C., Barreto, C., de Boeck, K., Ribes-Koninckx, C. “Innovative approach for self-management and social welfare of children with cystic fibrosis in Europe: development, validation and implementation of an mHealth tool (MyCyFAPP)”. ***BMJ Open* (2017)** – [OA]
8. **Martinez-Jimenez C.P.** and Odom D.T. “The mechanisms shaping the single-cell transcriptional landscape”. (Review) ***Current Opinion in Genetics & Development* (2016)** 27-35.
9. **Martinez-Jimenez C.P.**, and Sandoval-J. “Epigenetic crosstalk: a molecular language connecting transcription and metabolic disorders (Review)”. ***Frontiers in Bioscience* (2015)** 46-47.
10. Vicente-Muñoz S, Romero P, Magraner-Pardo L, **Martinez-Jimenez CP**, Tordera V, Pamblanco M. “Comprehensive analysis of interacting proteins and genome-wide location studies of the Sas3-dependent NuA3 histone acetyltransferase complex”. ***FEBS Open Bio* (2014)** 996-1006. – [OA].
11. Molina-Navarro MM\*, **Martinez-Jimenez C.P.\***, Rodriguez-Navarro S. (\*equal contribution). “Transcriptional elongation and mRNA export are co-regulated processes”. (Review) ***Genetics Research International* (2011)** 1-10. – [OA].
12. Schmidt D., Wilson M.D., Ballester B., Schwalie P.C., Gordon D. Brown G.D., Marshall A., Kutter C., Watt S., **Martinez-Jimenez C.P.**, MacKay S., Enright A. J., Talianidis I., Flicek P, Odom D. T. “Five vertebrate ChIP-seq reveals the genetic mechanisms of rapid transcription factor binding divergence”. ***Science* (2010)** 1036-40 – [OA].
13. **Martinez-Jimenez C.P.**, Kymizi I., Cardot P., Gonzalez F.J, Talianidis I. “HNF-4 $\alpha$  coordinates the transcription factor network regulating hepatic fatty acid metabolism”. ***Molecular Cell Biology* (2010)** 565-77 – [OA]
14. Tatarakis A., Thanasis M., **Martinez-Jimenez CP.**, Kouskouti A., MohanII WS., Haroniti A., Kafetzopoulos D., Tora L., Talianidis I. “Dominant and redundant functions of TFIID involved in the regulation of hepatic genes”. ***Molecular Cell* (2008)** 531-43. – [OA]
15. **Martinez-Jimenez CP**, Jover R, Donato MT, Castell JV, Gómez-Lechón MJ. “Transcriptional regulation and expression of CYP3A4 in hepatocytes”. ***Curr. Drug Metab.* (2007)** 185-94
16. **Martinez-Jimenez, C.P.**, Castell, J.V., Gómez-Lechón, M.J., Jover, R. “Transcriptional activation of CYP2C9, CYP1A1 and CYP1A2 by HNF4 $\alpha$  requires coactivators PGC1 $\alpha$  and SRC1. ***Molecular Pharmacology* (2006)** 1681-1692. – [OA]
17. **Martinez-Jimenez, C.P.**, Gómez-Lechón, M.J., Castell, J.V., Jover, R. “Under-expressed coactivators PGC1 $\alpha$  and SRC1 impair HNF4 $\alpha$  function and cause dedifferentiation in human hepatoma cells”. ***The Journal of Biological Chemistry* (2006)** 29840-29849. – [OA]

18. Castell, J.V., Jover, R., **Martinez-Jimenez, C.P.**, Gómez-Lechón, M.J. “Hepatocyte cell lines: Their use, scope and limitations in drug metabolism studies”. ***Expert Opin. Drug Metab. Toxicol.*** (2006) 183-212.
19. **Martinez-Jimenez, C.P.**, Gómez-Lechón, M.J., Castell, J.V., Jover, R. “Engineering human hepatoma cells with key transcription factors to generate metabolically competent hepatic models”. ***ALTEX*** (2005) 435-440.
20. **Martinez-Jimenez, C.P.**, Gómez-Lechón, M.J., Castell, J.V., Jover, R. “Transcriptional regulation of the human hepatic CYP3A4: Identification of a new distal enhancer module in the human hepatic CYP3A4 responsive to CCAAT/enhancer binding protein beta isoforms (LAP and LIP)”. ***Molecular Pharmacology*** (2005) 2088-210. – [OA]
21. Handschin, C., Gnerre, C., Fraser, D., **Martinez-Jimenez, C.P.**, Jover, R., Meyer, U.A. “Species-specific mechanisms for cholesterol 7 $\alpha$ -hydroxylase (CYP7A1) regulation by drugs and bile acids”. ***Archives of Biochemistry and Biophysics*** (2005) 75-85.
22. **Martinez-Jimenez, C.P.**, Jover, R., Gómez-Lechón, M.J., Castell, J.V. “Can hepatoma cell lines be re-differentiated to be used in drug metabolism studies?” ***ATLA*** (2004) 65-74. .