PERSONAL INFORMATION

Marina Cardano

[redacted]

WORK EXPERIENCE

September 2016-Present

Facility Manager

Department CIBIO, Università degli Studi di Trento, Trento (Italy)

Improve the understanding of life science through advanced cell technologies (genome editing, cellular reprogramming, organoid development), finalized to the generation of *in vitro* tools able to model diseases and pathologies.

19/05/2014–August 2016

Post-doc

Centre for Integrative Biology CIBIO, Università degli Studi di Trento, Trento (Italy)

Analysis of the principal mechanisms regulating stem cells self-renewal, fate decision and maturation; study of the Moya Moya disease, by generating patient-specific induced pluripotent stem cell (iPSC). Evaluation of Epsin contribution in physiological and pathological stem cell biology, using embryonic stem cells and glioma stem cells as specific tool.
Project Coordinator: Professor Luciano Conti.

01/06/2012–30/04/2014

Post-doc

Università Vita-Salute San Raffaele, Milano (Italy)

Characterization of Epsin transgenic mice, analyzing Epsin role in Notch signaling and development.
Project Coordinator: Professor Ottavio Cremona

2010- June 2012

Participation in the Training Project "Training of highly qualified researchers in the field of banking of biological material for research, diagnosis and therapy" (DM28994)

Biorep srl, Milano (Italy)

The training course allowed to learn and improve the principal issues in stem cells, induced pluripotent stem cells, molecular cytogenetic, proteomics, molecular biology, mass spectrometry, DHPLC, forensic techniques, bioethics, bioinformatics, control and quality management, GMP processes, informed consent, medical writing, patenting, technology transfer in highly innovative industries, guidelines for the certification and the accreditation of biobanks, project management, managing interpersonal relationships, presentation techniques. The main activities performed during the training course concern the culture of human and mouse neural stem cells, quality controls on pluripotency, differentiation and microbiological status. In this period, a scientific counseling was offered for two European projects ("Neuroscreen", EU-FP6 and "NeuroStemCell", EU-FP7).

2008–2009

Researcher

Integrated System Engineering, Milano (Italy)

Development and implementation of the Tissue Micro Array (TMA) and Cell Micro Array (CMA) technologies, two powerful techniques to perform high-throughput immunophenotypical analysis. These studies have been performed within the Grant "Metadistretto-PISTA", funded by "Regione Lombardia".

EDUCATION AND TRAINING

2009–February 2012

PhD Molecular Medicine

Università degli Studi di Milano, Milano (Italy)

Thesis title: "mSEL-1L: the molecular clock of neural differentiation".

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During my thesis I have investigated the role of SEL-1L gene during development and differentiation of the central nervous system. I have successfully analysed the principal mechanisms of SEL-1L regulation by a specific microRNA, showing the cross-talk between SEL-1L and Notch signaling.

2005–2007

Master Degree in Industrial Biotechnology

Università degli Studi Milano-Bicocca, Milano (Italy)

Voting: Full marks and honors.
Experimental thesis at the National Research Council (Segrate, Milano).
Thesis title: "SEL-1L role in the endoplasmic reticulum stress".
The principal aim of the thesis was to analyse the effects of the endoplasmic reticulum stress on tumor cells. In particular, the expression of SEL-1L gene and its principal isoforms was evaluated in response to the treatment with specific chemicals agents that perturb the cellular homeostasis

2002-2005

Bachelor in Biotechnology, Industrial curriculum

Università degli Studi Milano-Bicocca, Milano (Italy)

Voting: Full marks and honours
Experimental thesis in the laboratory of cellular biochemistry, Università degli Studi Milan-Bicocca
Thesis title: "Combretastatins as new growth inhibitors in *S. cerevisiae* yeast"
During my thesis, the effects of different chemical compounds, called "combretastatins", were investigated using the yeast *S. cerevisiae* as biological model. Particularly, morphology, proliferation and cell cycle aberrations were analyzed.

TEACHING EXPERIENCE

2015-2017

Trento
Teaching activity for young students belonging to different secondary schools located in Trento, for the "Trentino Young Scientist Challenge 2015"

2015-2017

Centre for Integrative Biology CIBIO, Università degli Studi di Trento, Trento (Italy)
Teaching assistant for the Molecular Biology course (Bachelor of Science in Biomolecular Sciences and Technology)

2015-2016

Centre for Integrative Biology CIBIO, Università degli Studi di Trento, Trento (Italy)
Teaching assistant for the Genetic course (Bachelor of Science in Biomolecular Sciences and Technology)

2014-2015

Centre for Integrative Biology CIBIO, Università degli Studi di Trento, Trento (Italy)
I was the co-supervisor of three students, helping them in the preparation of their master thesis.

2012-2014

Università Vita e Salute San Raffaele, Milano
I was the co-supervisor of two students, helping them in the preparation of their master thesis.

25-5-2012

Novotel, Milano
Invited speaker at the scientific event "Interactive tissue array practical course",
Presentation title: "Tissue Microarrays: A Cross-Over Validation Tool for Research"

2008-2012

Laboratory of Functional Biology, Biorep-Integrated System Engineering, Milano
Alongside my post-graduated research, I have supervised 2 undergraduate students, teaching the principal techniques required and offering help in the experimental design of the project.

18-1-2008

Biorep, Milano
Invited speaker at the scientific event "Sample storage and biobanking",
Presentation title: "Automated extraction of DNA and RNA".

ACADEMIC AWARDS

October 2014

Centre for Integrative Biology CIBIO, Università degli Studi di Trento, Trento (Italy)

"The interplay of Epsins and Notch as a new mechanism for regulating neural stem cell function", Project funded by UNITN internal call "STARTING GRANT YOUNG RESEARCHERS 2014". Principal Investigator: Marina Cardano.

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27-5-2011 Cover image for Journal of Biological Chemistry.

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	C1	B2	B2	C1

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
Common European Framework of Reference for Languages

Organizational / managerial skills Great sense of organization; strong multitasking skills; excellent teamwork, collaboration and communication abilities; good competence in working under pressure, guarantying both efficiency and quality.

Job-related skills Good skills in carrying out complex research projects independently. The main scientific techniques that I am able to develop autonomously are:

· principal biochemical, cellular and bio-molecular analysis;

· genome editing;

· manipulation and maintenance in culture of different cell lines, in particular stem cells of different origin and primary cell line derivation;

· somatic cell reprogramming in order to derive hiPSCs, their maintenance and differentiation;

· immunohistochemical and immunocytochemical analysis (one of my immunofluorescence pictures was selected for the cover image for Journal of Biological Chemistry. J Biol Chem, 2011, Vol 286, no 21);

· manipulation of mice and mouse embryos.

Computer skills Good command of Microsoft Office™ tools (Word™, Excel™ and PowerPoint™), very good knowledge of graphic design applications (PhotoShop™) and good Knowledge of several bioinformatical tools.

ABSTRACTS AND POSTERS

- Epsin and Notch interplay in stemness maintenance. M. Cardano, J. Zasso, O. Cremona, L. Conti. Poster presented at the "Notch Meeting IX". Athens, October 2016
- Epsin in stemness maintenance. M. Cardano, J. Zasso, O. Cremona, L. Conti. Poster presented at the "ABCD (Association of Cell biology and Differentiation) Congress". Bologna, September 2016.
- The interplay of Epsins and Notch in Glioblastoma. M. Cardano, J. Zasso, L. Conti. Poster presented at the "II International Symposium on Clinical and Basic Investigation in Glioblastoma". Toledo, September 2016
- Epsin role in stemness maintenance. M. Cardano, G. Di Giacomo, L. Ruggiero, L. Conti, O. Cremona. Oral communication at the "16th AIBG (Italian Association of Biology and Genetics) congress". Naples, 26-9-2014.
- The contribution of Epsin proteins in stemness maintenance. M. Cardano, G. Di Giacomo, L. Ruggiero, L. Conti, O. Cremona. Oral communication at the "60th GEI (Italian Group of Embryology) Congress". Trento, 16-6-2014.
- Epsins in Notch signaling activation. E. Sala, L. Ruggiero, M. Cardano, G. Di Giacomo, O. Cremona. Submitted to the "Notch and Trafficking meeting". Athens, October 2012.
- SEL-1L in pancreas development and ß-cell function. G. Diaferia, M. Cardano, M. Cattaneo, P. DeBlasio, V. Cirulli, I. Biunno. Submitted to the "European Summer School on Stem Cells & Regenerative Medicine". Hydra, September 2011
- SEL-1L influences self-renewal in Neural Stem Cells. M. Cardano, G.R. Diaferia, M. Cattaneo, S.S. Dessì, Q. Long, L. Conti, P. DeBlasio, E. Cattaneo, I. Biunno. Presented at the "23rd ISN- ESN Biennial Meeting". Athens, August 2011.

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- Genetic stability and cryopreservation of banked neural stem cells. C.C. Spinelli, S.S. Dessì, G.R. Diaferia, M. Cardano, P. DeBlasio, I. Biunno. Presented at the "Third NeuroStemcell annual meeting". Bellagio (CO), April 2011.
- iPS cells: quality controls and validation to become a cell product. M. Cardano, S.S. Dessì, C.C. Spinelli, G.R. Diaferia, I. Biunno, P. DeBlasio. Presented to the "European conference on human iPS stem cell reprogramming". Paris, April 2011.
- Murine SEL-1L, a gene implicated in the ERAD pathway, is expressed in mouse embryo stem cells and is controlled by mmu-miR-183 during neural stem cell differentiation. M. Cardano, G.R. Diaferia, S.S. Dessì, C.C. Spinelli, L. Conti, E. Cattaneo, P. DeBlasio, I. Biunno. Presented at the "Second NeuroStemell annual meeting". Bellagio (CO), April 2010.
- Tissue Microarrays: A Cross-Over Validation Tool for Research. M. Cardano, G. Riccardo Diaferia, M. Maffè, M. Falavigna, I. Biunno, P. DeBlasio. Submitted at the "ISBER 2010 Annual Meeting & Exhibits", Rotterdam, February 2010.
- Managing of a Stem Cell Biorepository. G.R Diaferia, I. Biunno, P. De Blasio, M. Girardi, V. D'Orazio, S.S. Dessì, M. Cardano, A.J. Mathew. Submitted to the "ISBER 2010 Annual Meeting & Exhibits", Rotterdam, February 2010.
- Neural Stem Cell Repository. G.R. Diaferia, I. Biunno, P. DeBlasio, M. Girardi, V. D'Orazio, S.S. Dessì, M.Cardano, A. Mathew, M. Rice. Submitted to the "CHDI meeting", Palm Spring. January 2010.
- Is Stem Cell Chromosomal stability affected by cryopreservation conditions? G.R. Diaferia, M. Cardano, S.S. Dessì, P. De Blasio, L. Conti, E. Cattaneo, I. Biunno. Presented at the "First NeuroStemcell annual meeting", Bellagio (CO), April 2009.
- Screening for germline TP53 and BRCA1 mutations in central sudanese breast cancer patients diagnosed before 45 years of age. G. Aceto, M. Cardano, S. Veschi, C. Spinelli, A. Elhaj, S. Othman Massaad, K. Dafaalla Awadelkarim, F. Verginelli, A. Abdalla Mohamedani, P. Battista, M. Di Gioacchino, P. De Blasio, N. Eldin Elwali, I. Biunno, R. Mariani-Costantini. Submitted to the "6th Meeting of the African Society of Human Genetics in conjunction with the 1st Annual Meeting of the Cameroonian Society of Human Genetics". Yaounde (Cameroon), March 2009.

PUBLICATIONS

- Modeling medulloblastoma in vivo and with human cerebellar organoids. C. Ballabio, M. Anderle, M. Gianesello, C. Lago, E. Miele, M. Cardano, G. Aiello, S. Piazza, D. Caron, F. Gianno, A. Ciolfi, L. Pedace, A. Mastronuzzi, M. Tartaglia, F. Locatelli, E. Ferretti, F. Giangaspero, L. Tiberi. Nat Commun., 2020, 11(1):583.
- Epsins Regulate Mouse Embryonic Stem Cell Exit from Pluripotency and Neural Commitment by Controlling Notch Activation. M. Cardano, J. Zasso, L. Ruggiero, G. Di Giacomo, M. Marcatili, O. Cremona, L. Conti. Stem Cells Int, 2019:4084351.
- Generation and characterization of a human iPSC line from an ALS patient carrying the Q66K-MATR3 mutation. D. Pollini, R. Loffredo, M. Cardano, L. Conti, S. Lattante, A. Notarangelo, M. Sabatelli, A. Provenzani. Stem Cell Res., 2018, Vol 33, pp 146-150.
- mSEL-1L deficiency affects vasculogenesis and neural stem cell lineage commitment. M. Cardano, GR Diaferia, L Conti, S Baronchelli, A Sessa, V Broccoli, A Barbieri, P De Blasio, I Biunno. J Cell Physiol., 2017, Vol 233(4), pp 3152-3163.
- Establishment of induced pluripotent stem cell (iPSC) line from an 8-year old female patient with ischemic Moyamoya disease. M. Cardano, F. Marsoner, J. Zasso, M. Marcatili, T. Karnavas, L.A. Lanterna, L. Conti. Stem Cell Res., 2016, Vol 17(3), pp 619-622.
- Establishment of induced pluripotent stem cell (iPSC) line from 55-year old male patient with hemorrhagic Moyamoya disease. M. Cardano, F. Marsoner, M. Marcatili, T. Karnavas, J. Zasso, L.A. Lanterna, L. Conti. Stem Cell Res., 2016, Vol17(3), pp 623-626.
- Human pluripotent stem cells as tools for neurodegenerative and neurodevelopmental disease modeling and drug discovery. S. Corti, I. Faravelli, M. Cardano, L. Conti. Expert Opin Drug Discov, 2015, Vol 10(6), pp 615-629.
- Cell and Tissue Micro Array technologies for protein and nucleic acid expression profiling. M. Cardano, G.R. Diaferia, M. Falavigna, C.C. Spinelli, F. Sessa, P. DeBlasio, I. Biunno. Journal of Histochemistry & Cytochemistry, 2013, Vol 61, no 2, pp 116-124.
- The science of stem cell biobanking: Investing in the future. G.R. Diaferia, M. Cardano, M. Cattaneo, C.C. Spinelli, S.S. Dessì, P. DeBlasio, I. Biunno. J Cell Physiol, 2012, Vol 227, no 1, pp 14-19.
- Molecular chaperones as therapeutic targets to counteract proteostasis defects. M. Cattaneo, R. Dominici, M. Cardano, G.R. Diaferia, E. Rovida, I. Biunno. J Cell Physiol, 2012, Vol 227, no 3, pp 1226-1234.
- mSEL-1L (suppressor/enhancer LIN12 like) levels influence murine neural stem cell self-renewal and lineage commitment. M. Cardano, G.R. Diaferia, M. Cattaneo, S.S. Dessì, Q. Long, L. Conti, P. DeBlasio, E. Cattaneo, I. Biunno. J Biol Chem, 2011, Vol 286, no 21, pp 18708-18719.

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- Deficiency of Suppressor Enhancer Lin12 1 Like (SEL1L) in mice leads to systemic endoplasmic reticulum stress and embryonic lethality. A.B. Francisco, R. Singh, S. Li, A.K. Vani, L. Yang, R. J. Munroe, G. Diaferia, M. Cardano, I. Biunno, L. Qi, J.C. Schimenti, Q. Long. J Biol Chem, 2010, Vol 285, no 18, pp 13694-13703.
- Functional characterization of two secreted SEL1L isoforms capable of exporting unassembled substrate. M. Cattaneo, L.V. Lotti, S. Martino, M. Cardano, R. Orlandi, R. Mariani Costantini, I. Biunno. J Biol Chem, 2009, Vol 284, no 17, pp 11405-11415.

I authorize the use of personal information contained in my curriculum vitae in compliance with D.Lgs. 196/03. Under my own responsibility and according to the articles 46/47/76 DPR 445/2000, I declare that all the information previously provided, reflect the reality.
Trento, 08-06-2020

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