

CURRICULUM VITAE

Prof.ssa FIORELLA ALTRUDA

Full Professor of Molecular Genetics

Molecular Biotechnology Center

Department of Molecular Biotechnology and Health Science

University of Torino

Name: **Fiorella Altruda**

- Ph D in Biology , University of Turin, July 1975

-Full Professor of Molecular Genetics

ACADEMIC APPOINTMENTS

From 1987 to 1994: Associate Professor in Genetics

1994-at present: Full Professor in Molecular Genetics, University of Torino, School of Medicine

From 2004: Coordinator of the Doctorate Program in Molecular Biotechnology

From 2005: President of the School of Biotechnology, University of Turin

From 2010: Coordinator of the European Master Program in BioHealth Computing for the University of Torino

2006-2011 Member of the scientific committee of the Biotechnology Foundation

Scientific member of the Consorzio Interuniversitario Biotecnologie (CIB)

Director of the Center for in vivo functional Genomics, University of Turin, supported by Telethon

From 2009: University coordinator of the Polo di Innovazione- Biotecnologie (BioPmed), Regione Piemonte

From 2012: member of Centro Scienza Onlus

From 2012: member of the Medical Accademy of Torino

From 2013: Director of the Molecular Biotechnology Center, University of Torino

PAST RELEVANT RESEARCH EXPERIENCE IN FOREIGN INSTITUTION

November 1976-December 1977	Postdoctoral fellow- Dept. of Molecular Biophysics and Biochemistry, Yale University, USA
January-April 1981	Visiting fellow- Dept. of Animal Embryology, University of Geneva, Switzerland
January 1982-December 1982	Postdoctoral fellow, European Molecular Biology Laboratory, Heidelberg, Germany
October-December 1984	Visiting fellow- European Molecular Biology Laboratory, Heidelberg, Germany
July-September 1989	Visiting scientist, Scripps Clinic and Research Laboratory, La Jolla, USA

CURRENT RESEARCH INTEREST

One of the current research interests is to explore the potentiality of spermatogonial stem cells as a novel tool for cell therapy, with particular emphasis on liver metabolic diseases. Spermatogonial stem cells have been isolated from mice and are currently in culture in the laboratory. These stem cells have been found to convert spontaneously to pluripotent stem cells, termed germ cell-derived pluripotent stem cells or GPSCs. However, very little is known about the factors responsible for the conversion of spermatogonial stem cells to pluripotent stem cells. The Unit has developed a system for differentiating GPSCs into hepatocyte-like cells and renal cells and research on this aspects is presently under way. The main aims are to:-Develop culture conditions and identify factors responsible to differentiate GPSCs into hepatocytes as well as renal cells.-Employ a bioinformatics approach to identify genes that are enhancers of reprogramming.

Patents:

1) 19 December 2002 (WO2004056176)

“MELUSIN, A MUSCLE SPECIFIC PROTEIN, AS A DRUG TARGET FOR PREVENTION AND TREATMENT OF HEART FAILURE AND APPLICATIONS THEREOF”

Il brevetto è di proprietà dell'Università di Torino e gli inventori sono: Mara Brancaccio, Lorenzo Silengo, Fiorella Altruda, Giuseppe Lembo, Luigi Fratta, e Guido Tarone.

2) 17 Gennaio 2012 M.G. Faga, A. Bellosi, F. Altruda, S. Carossa, S. Coluccia, G. Martra, F. Mussano, E. Tolosano (2012). Impianto dentale od osseo, in particolare in nanocomposito allumina-zirconia. TO2012A000029, 50% Università degli Studi di Torino, 50% CNR

Fiorella Altruda- Relevant Publications 2009-2013

- 1) Morello N, Tonoli E, Logrand F, Fiorito V, Fagoonee S, Turco E, Silengo L, Vercelli A, Altruda F, Tolosano E.
Hemopexin affects iron distribution and ferritin expression in mouse brain.
J Cell Mol Med. 2009 Oct;13(10):4192-204.
- 2) Barberis L, Pasquali C, Bertschy-Meier D, Cuccurullo A, Costa C, Ambrogio C, Vilbois F, Chiarle R, Wymann M, Altruda F, Rommel C, Hirsch E.
Leukocyte transmigration is modulated by chemokine-mediated PI3Kgamma-dependent phosphorylation of vimentin.
Eur J Immunol. 2009 Apr;39(4):1136-46.
- 3) Li RC, Saleem S, Zhen G, Cao W, Zhuang H, Lee J, Smith A, Altruda F, Tolosano E, Doré S.
Heme-hemopexin complex attenuates neuronal cell death and stroke damage.
J Cereb Blood Flow Metab. 2009 May;29(5):953-64. Epub 2009 Mar 11.
- 4) Fagoonee S, Hobbs RM, De Chiara L, Cantarella D, Piro RM, Tolosano E, Medico E, Provero P, Pandolfi PP, Silengo L, Altruda F.
Generation of functional hepatocytes from mouse germ line cell-derived pluripotent stem cells in vitro.
Stem Cells Dev. 2010 Aug;19(8):1183-94.
- 5) Roetto A, Di Cunto F, Pellegrino RM, Hirsch E, Azzolino O, Bondi A, Defilippi I, Carturan S, Miniscalco B, Riondato F, Cilloni D, Silengo L, Altruda F, Camaschella C, Saglio G.
Comparison of 3 Tfr2-deficient murine models suggests distinct functions for Tfr2-alpha and Tfr2-beta isoforms in different tissues.
Blood. 2010 Apr 22;115(16):3382-9. Epub 2010 Feb 23.
- 6) Canavese M, Altruda F, Silengo L.
Therapeutic efficacy and immunological response of CCL5 antagonists in models of contact skin reaction.
PLoS One. 2010 Jan 15;5(1):e8725.
- 7) Ciraolo E, Morello F, Hobbs RM, Wolf F, Marone R, Iezzi M, Lu X, Mengozzi G, Altruda F, Sorba G, Guan K, Pandolfi PP, Wymann MP, Hirsch E.
Essential role of the p110beta subunit of phosphoinositide 3-OH kinase in male fertility.
Mol Biol Cell. 2010 Mar;21(5):704-11. Epub 2010 Jan 6.
- 8) Spiller F, Costa C, Souto FO, Vinchi F, Mestriner FL, Laure HJ, Alves-Filho JC, Freitas A, Rosa JC, Ferreira SH, Altruda F, Hirsch E, Greene LJ, Tolosano E, Cunha FQ.
Inhibition of Neutrophil Migration by Hemopexin Leads to Increased Mortality Due to Sepsis in Mice.
Am J Respir Crit Care Med. 2010 Oct 22.
- 9) Canavese M, Altruda F, Ruzicka T, Schaubert J.
Vascular endothelial growth factor (VEGF) in the pathogenesis of psoriasis--a possible target for novel therapies?
J Dermatol Sci. 2010 Jun;58(3):171-6. Epub 2010 Apr 9. Review.
- 10) Canavese M, Altruda F, Silengo L, Castiglioni V, Scanziani E, Radaelli E.
Clinical, pathological and immunological features of psoriatic-like lesions affecting keratin 14-vascular endothelial growth factor transgenic mice.
Histol Histopathol. 2011 Mar;26(3):285-296.
- 11) Ognibene M, Barbieri O, Vanni C, Mastracci L, Astigiano S, Emionite L, Salani B, Fedele M, Resaz R, Tenca C, Fais F, Sabatini F, De Santanna A, Altruda F, Varesio L, Hirsch E, Eva A.

High frequency of development of B cell lymphoproliferation and diffuse large B cell lymphoma in Dbl knock-in mice.

J Mol Med. 2011 May;89(5):493-504.

12) Perino A, Ghigo A, Ferrero E, Morello F, Santulli G, Baillie GS, Damilano F, Dunlop AJ, Pawson C, Walser R, Levi R, Altruda F, Silengo L, Langeberg LK, Neubauer G, Heymans S, Lembo G, Wymann MP, Wetzker R, Houslay MD, Iaccarino G, Scott JD, Hirsch E.

Integrating Cardiac PIP(3) and cAMP Signaling through a PKA Anchoring Function of p110 γ .

Mol Cell. 2011 Apr 8;42(1):84-95.

13) Costa C, Germena G, Martin-Conte EL, Molineris I, Bosco E, Marengo S, Azzolino O, Altruda F, Ranieri VM, Hirsch E.

The RacGAP ArhGAP15 is a master negative regulator of neutrophil functions.

Blood. 2011 Jul 28;118(4):1099-108.

14) Noemi Morello, Federico Tommaso Bianchi¹, Paola Marmioli, Elisabetta Tonoli, Virginia Rodriguez Menendez, Lorenzo Silengo, Guido Cavaletti, Alessandro Vercelli, Fiorella Altruda, Emanuela Tolosano
A Role for Hemopexin in Oligodendrocyte Differentiation and Myelin Formation

PLoS One. 2011;6(5):e20173.

15) Fagoonee S, Pellicano R, Silengo L, Altruda F.

Potential applications of germline cell-derived pluripotent stem cells in organ regeneration.

Organogenesis. 2011 Apr 1;7(2):116-22. doi: 10.4161/org.7.2.16284.

16) Canavese M, Altruda F, Silengo L, Castiglioni V, Scanziani E, Radaelli E.

Clinical, pathological and immunological features of psoriatic-like lesions

affecting keratin 14-vascular endothelial growth factor transgenic mice.

Histol Histopathol. 2011 Mar;26(3):285-296.

17) Robin M. Hobbs, Sharmila Fagoonee, Antonella Papa, Kaitlyn Webster, Fiorella Altruda, Ryuichi Nishinakamura, Li Chai, Pier Paolo Pandolfi

Functional Antagonism between Sall4 and Plzf Defines Germline Progenitors

Cell Stem Cell, Volume 10, Issue 3, 284-298, 2 March 2012.

18) Lorenzo; Barberá; Domínguez; Hernández; Torres; Hernández; Gil; Ancizar; Garay; Reyes; Altruda; Silengo; Pa drón

Therapeutic effect of an altered peptide ligand derived from heat-shock protein 60 by suppressing of inflammatory cytokines secretion in two animal models of rheumatoid arthritis

Autoimmunity 2012 Sep;45(6):449-59. doi: 10.3109/08916934.2012.697592. Epub 2012 Jul 20

19) Giorgio Merlo, Fiorella Altruda, Valeria Poli (2012). Mice as experimental organisms.

CHICHESTER: JOHN WILEY & SONS, LTD., p. 1-11, 2012.

20) Chiabrando D, Marro S, Mercurio S, Giorgi C, Petrillo S, Vinchi F, Fiorito V, Fagoonee S, Camporeale A, Turco E, Merlo GR, Silengo L, Altruda F, Pinton P, Tolosano E.

The mitochondrial heme exporter FLVCR1b mediates erythroid differentiation.

J Clin Invest. 2012 Dec 3;122(12):4569-79. doi: 10.1172/JCI62422. Epub 2012 Nov 26

21) Chiabrando D, Fiorito V, Marro S, Silengo L, Altruda F, Tolosano E.

Cell-specific regulation of Ferroportin transcription following experimentally-induced acute anemia in mice.

Blood Cells Mol Dis. 2013 Jan;50(1):25-30. doi: 10.1016/j.bcmd.2012.08.002. Epub 2012 Aug 24