ANTONELLA NAI
CURRICULUM VITAE

STUDI

Da gennaio 2009: studente di dottorato in Medicina e Terapia Sperimentale, Indirizzo in Farmacologia e Terapia Sperimentale e Clinica, Università di Torino, Italia
Luglio 2007: Laurea di secondo livello in Biotecnologie Molecolari, 110 lode /110 e menzione speciale, Università di Torino, Italia
Luglio 2005: Laurea di primo livello in Biotecnologie Biomolecolari, 110 lode /110, Università di Torino, Italia

Esperienza

November 2007-Present: "Dysregulation mechanisms of the Hemojuvelin-Hepcidin pathway in hemochromatosis and in Thalassaemic mouse models", research fellowship at University Vita-Salute San Raffaele, Milan, Italy

ESPERIENZA LAVORATIVE

Da novembre 2007 ad oggi:
Assegno di ricerca dal titolo "Meccanismi di sregolazione della via emogiuvelina-epcidina nell'emocromatosi e in modelli murini di talassemia" presso la facoltà di Medicina e Chirurgia dell'Università Vita-Salute San Raffaele di Milano
Functional and biochemical analysis of the role of Hemojuvelin, Neogenin and Transferrin Receptor 2 in Hereditary Hemochromatosis.
Functional and biochemical analysis of the role of Matriptase 2 in Iron Refractory Iron Deficient Anaemia (IRIDA).
Regulation of iron metabolism Unit, Dept. of Genetics and Cell Biology, San Raffaele Scientific Institute, Milan, Italy.
Supervisor: Prof. Clara Camaschella.

September 2004- July 2007:
"Modulation of neuropeptide Y and Y_1 receptor expression in the amygdala by fluctuations in the brain content of neuroactive steroids during ethanol drinking discontinuation in *Y_1R/LacZ* transgenic mice. Effect of GHB treatment."
In vivo study of ethanol consumption effect on NPY-Y_1R neurotransmission in the amygdala of *Y_1R/LacZ* transgenic mice.
Analysis of the behavioural effects of ethanol consumption and discontinuation.
Analysis of the *in vivo* effect of GHB treatment during ethanol withdrawal.
Department of Anatomy, Pharmacology and Legal Medicine, University of Turin, Turin, Italy.
Supervisor: Prof. Carola Eva.

PUBLICATIONS

Research Papers- Peer-Reviewed

A. Research Papers- Peer-Reviewed

1. **Nai A.,** Pagani A., Silvestri L., Campostrini N., Corbella M., Girelli D., Traglia M., Toniolo D. and Camaschella C. TMPRSS6 rs855791 modulates hepcidin transcription in vitro and serum hepcidin levels in normal individuals. *Blood*. 118(16):4459-62 (2011)

2. Pagani A., **Nai A.,** Corna G., Bosurgi L., Rovere-Querini P., Camaschella C. and Silvestri L., Low hepcidin accounts for the proinflammatory status associated with iron deficiency. *Blood.* 118(3):736-46 (2011)

3. Poli M., Girelli D., Campostrini N., Maccarinelli F., Finazzi D., Luscieti S., **Nai A.** and Arosio P., Heparin: a potent inhibitor of hepcidin expression in vitro and in vivo. *Blood*. 117(3):997-1004 (2011)

4. **Nai A.,** Pagani A., Silvestri L. and Camaschella C., Increased susceptibility to iron deficiency of Tmprss6-haploinsufficient mice. *Blood*. 116(5):851-2 (2010)

5. De Falco L., Totaro F., **Nai A.,** Pagani A., Girelli D., Silvestri L., Piscopo C., Campostrini N., Dufour C., Al Manjomi F., Minkov M., Van Vuurden DG, Feliu A., Kattamis A., Camaschella C. and Iolascon A. Novel TMPRSS6 mutations associated with iron-refractory iron deficiency anemia (IRIDA). *Hum Mutat.* 31(5):E1390-405 (2010)

6. Camaschella C., **Nai A.**, Pagani A., Silvestri L. Matriptase-2, a novel suppressor of hepcidin. American Socierty of Hematology 2009, Program Book.

7. Silvestri L., Guillem F., Pagani A., **Nai A.,** Oudin C., Silva M., Toutain F., Kannengiesser C., Beaumont C., Camaschella C. and Grandchamp B. Molecular mechanisms of the defective hepcidin inhibition in TMPRSS6 mutations associated with iron-refractory iron deficiency anemia. *Blood*, 113 (22): 5605-08 (2009).

8. Silvestri L., Pagani A., **Nai A.**, De Domenico I., Kaplan J. and Camaschella C. The serine protease matriptase-2 (TMPRSS6) inhibits hepcidin activation by cleaving membrane hemojuvelin. *Cell Met.*, 8 (6): 502-11 (2008).

9. Pagani A., Silvestri L., **Nai A.**, Camaschella C. Hemojuvelin N-terminal mutants reach the plasma membrane but do not activate the hepcidin response. *Haematologica*, 93 (10): 1466-72 (2008).

10. Eva C., Mele P., Collura D., **Nai A.**, Pisu MG., Serra M. and Biggio G. Modulation of neuropeptide Y and Y1 receptor expression in the amygdala by fluctuations in the brain content of neuroactive steroids during ethanol drinking discontinuation in *Y1R/LacZ* transgenic mice. *J. Neurochem.*, 104(4):1043-54 (2008).

B. Research Papers- Peer-Reviewed (In Press)

C. Research Papers- Peer-Reviewed (In preparation/Submitted)

1. Nai A., Pagani A., Mandelli G., Lidonnici MR., Silvestri L., Ferrari G. and Camaschella C. Deletion of Tmprss6 attenuates the phenotype in a mouse model of β-thalassemia. *Blood.* Under revision.

Abstracts

1. **Nai A.,** Pagani A., Lidonnici MR., Mandelli G., Silvestri L., Ferrari G. and Camaschella C *Tmprss6* haploinsufficiency ameliorates the phenotype of β-thalassemic *Hbb*$^{th3/+}$ mouse model. European Iron Club. Louvain-la-Neuve, Belgium, September 8-10, 2011

2. **Nai A.,** Pagani A., Silvestri L. and Camaschella C. Tmprss6 haploinsufficient mice have an increased susceptibility to develop iron deficiency. Selected for oral communication. European Iron Club, Njimegen, Nedherland, September 15-17, 2010

3. Silvestri L., Guillem F., Pagani A., **Nai A**., De Falco L., Iolascon A., Beaumont C., Grandchamp B. and Camaschella C. Mechanisms of hepcidin inhibition by novel TMPRSS6 (Matriptase-2) mutations associated with IRIDA. Selected for oral communication. International Bioiron Society Meeting, Porto, Portugal, June 7-11, 2009

4. Silvestri L., Pagani A., **Nai A.**, Guillem F., De Falco G., Iolascon A., Beaument C., Grandchamp B. and Camaschella C. Molecular mechanisms of genetic Iron Refractory Iron Deficiency Anemia (IRIDA). Selected for oral communication. European Association for Red Cell Research, Triuggio (MI), Italy, 24-27 April, 2009

5. Silvestri L., Pagani A., **Nai A.**, De Domenico I., Kaplan J. and Camaschella C. Hemochromatosis: from genes to clinics and back. Best poster award, Telethon Scientific Convention, Riva del Garda (TN), Italy, March 9-11, 2009.

6. Silvestri L., Pagani A., **Nai A.**, De Domenico I., Kaplan J. and Camaschella C. Mechanisms of hepcidin inhibition by wild type and mutants TMPRSS6/MT2. Workshop on iron overload, Annapolis, MD, October 27-28, 2008

7. **Nai A**., Pagani A., Camaschella C. and Silvestri L., Neogenin regulates soluble hemojuvelin production through modulation of furin. Best poster award, European Iron Club meeting 2008, St. Gallen, Switzerland, September 17-19, 2008

8. Pagani A., Silvestri L., **Nai A.**, Camaschella C. N-terminal hemojuvelin mutants do not activate hepcidin response and are delayed in plasma membrane export. European Iron Club, St. Gallen, Switzerland, September 17-19, 2008

9. Silvestri L., Pagani A., **Nai A.**, De Domeico I., Kaplan J. and Camaschella C. Matriptase-2 (TMPRSS6) inhibits hepcidin by cleaving membrane hemojuvelin. Oral communication. European Iron Club, St. Gallen, Switzerland, September 17-19, 2008

10. Mele P., **Nai A.**, Collura D., Serra M., Pisu M.G., Eva C. and Biggio G., Role of neurosteroids in the modulation of NPY/Y_1R neurotransmission during ethanol and GHB withdrawal. ECNP Workshop on Neuropsycopharmacology for Young Scientists in Europe, Nice, France, March 6-9, 2008.

AWARDS

- Winner of a bursary of the International Bioiron Society (IBIS) for the partecipation to the IBIS Meeting 2009 in Porto, Portugal
- Winner of a bursary of the European Iron Club for the partecipation to the EIC Meeting 2008 in St. Gallen, Switzerland
- Winner of the “Premio Optime 2008” of the Industrial Union of Turin for the best thesis of the academic year 2006/2007

Milan, January 2010 ANTONELLA NAI