europass Curriculum vitae

PERSONAL INFORMATION

Isabella Barbiero

Via Giuseppe Verdi 71, 21040 Carnago (Va) (Italy)

(+39)3297485563

i.barbiero@uninsubria.it

Sex Female | Date of birth 17/03/1986 | Nationality Italian

EDUCATION AND TRAINING

Oct 2012–Oct 2015

Phd in Neurobiology

University of Insubria, Faculty of Mathematical, Physical and Natural Sciences. Advisor: Prof. Daniela Parolaro; Tutor: Charlotte-Kilstrup Nielsen, Varese (Italy)

Project: "A novel role of CDKL5 in the regulation of mitotic spindle assembly and microtubule organization"

Jul 2012

M.Sc. in Biology Applied to Biomedical Research.

University of Insubria, Faculty of Mathematical, Physical and Natural Sciences. Supervisor: Prof. Nicoletta Landsberger, Varese (Italy)

Thesis: "Cdkl5 and Mecp2: two genes and a partially common neuronal pathology. Molecular mechanisms involved.

-Final mark: 110/110 summa cum laude

Feb 2009

B.Sc. in Molecular Biology

University of Insubria, Faculty of Mathematical, Physical and Natural Sciences. Supervisor: Prof. Charlotte Kilstrup-Nielsen, Varese (Italy)

Thesis: "Cdkl5: functional characteritation of Rett mutants"

-Final mark: 102/110

Jul 2005

High School degree

Liceo Scientifico Leonardo da Vinci, Gallarate (Va) (Italy)

WORK EXPERIENCE

Jan 2016–Present

Postdoctoral researcher

Dipartimento di Biotecnologie e Scienze della Vita. Laboratory of Molecular Neurobiology, Busto Arsizio (Va) (Italy)

Activities: application of molecular, cellular, animal and informatic skills for carrying out laboratory projects.

Contribution to grant applications.

Supervision of 1st level, 2nd level and PhD students.

Jan 2019–Feb 2019

Trinity College, Dublin, Ireland

Activities: acquisition and application of molecular techniques for the analysis of post-translational modifications of microtubules.

Oct 2012–Oct 2015

PhD student

Dipartimento di Biotecnologie e Scienze della Vita. Laboratory of Molecular Neurobiology, Busto Arsizio (Italy)

Activities: application of molecular, cellular, animal and computer skills for the realization of the doctoral project.

Supervision of 1st level and 2nd level students.

Sep 2015 **Laboratory instructor for the summer school "una settimana da Bio"**

University of Insubria, Busto Arsizio (Va) (Italy)

Help the Professor preparing the activities and assist students during experiments.

Sep 2014 **Laboratory instructor for the summer school "una settimana da Bio"**

University of Inusbria, Busto Arsizio (Va) (Italy)

Help the Professor preparing the activities and assist students during experiments.

Sep 2013 **Laboratory instructor for the summer school "una settimana da Bio"**

University of Insubria, Busto Arsizio (Va) (Italy)

Help the Professor preparing the activities and assist students during experiments.

Apr 2011–Jun 2012 **Internship**

University of Insubria, Busto Arsizio (Va) (Italy)

Activities: application of molecular, cellular and informatic skills for carrying out laboratory projects.

Sep 2008–Dec 2008 **Internship**

University of Insubria, Busto Arsizio (Va) (Italy)

Activities: application of molecular, cellular and informatic skills for carrying out laboratory projects.

PERSONAL SKILLS

Mother tongue(s): Italian

Foreign language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B1	C2	B2	B2	B2

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

Communication skills: Good communication skills acquired during my research experiences. Ability to communicate and share ideas with people in a team.

Organisational / managerial skills: Good organizational skills. Good experience in creating and managing projects. Contribution to the development and maintenance of collaborations with other research groups.

Job-related skills: **Technical skills:**

Molecular Biology skills: plasmid preparation, ligation, transformation, genomic DNA extraction, total RNA extraction, agarose gel electrophoresis, site-directed mutagenesis, PCR, qRT-PC, next generation sequencing (Illumina).

Protein and Cell Biology skills: cell cultures, primary neuronal cultures, transfection, transformation,

protein-interaction and purification assays, Western Blot, fluorescence microscopy, live cell imaging, immunofluorescence, lentivirus production.

Animal skills: familiarity with management of mice colonies and related procedures including determination of plugging in mated females to assess pregnancy status, tail docking, genotyping, brain dissection.

Digital skills

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem-solving
Proficient user	Independent user	Basic user		

Digital skills - Self-assessment grid

MS Office (Word, Excel, and Powerpoint), Adobe Photoshop, software for statistical analysis (Graphpad-Prism).

ADDITIONAL INFORMATION

Publications

Trovò L, Fuchs C, De Rosa R, Barbiero I, Tramarin M, Ciani E, Rusconi L, Kilstrup-Nielsen C. The green tea polyphenol epigallocatechin-3-gallate (EGCG) restores CDKL5-dependent synaptic defects in vitro and in vivo. (Neurobiol Dis. 2020).

Barbiero I, Peroni D, Siniscalchi P, Rusconi L, Tramarin M, De Rosa R, Motta P, Bianchi M, Kilstrup-Nielsen C. Pregnenolone and pregnenolone-methyl-ether rescue neuronal defects caused by dysfunctional CLIP170 in a neuronal model of CDKL5 Deficiency Disorder (Neuropharmacology, 2019)

Barbiero I, De Rosa R, Kilstrup-Nielsen C. Microtubules: A Key to Understand and Correct Neuronal Defects in CDKL5 Deficiency Disorder? (Int J Mol Sci. 2019)

Zamberletti E, Gabaglio M; Piscitelli F; Brodie JS; Woolley-Roberts M; Barbiero I; Tramarin M; Binelli G; Landsberger N; Kilstrup-Nielsen C; Rubino T; Di Marzo V; Parolaro D. Cannabidivarin completely rescues cognitive deficits and delays neurological and motor defects in male Mecp2 mutant mice. (Journal of Psychopharmacology, 2019).

Tramarin M, Rusconi L, Pizzamiglio L, Barbiero I, Peroni D, Scaramuzza L, Guilliams T, Cavalla D Antonucci F, Kilstrup-Nielsen C. The tianeptine antidepressant returns defects of synaptic AMPA receptors caused by CDKL5 deficiency. (Hum Mol Genet, 2018)

-

Barbiero I, Peroni D, Tramarin M, Chandola C, Rusconi L, Landsberger N, Kilstrup- Nielsen C. The neurosteroid pregnenolone reverts microtubule derangement induced by the loss of a functional CDKL5-IQGAP1 complex. (Hum Mol Genet. 2017)

Barbiero I, Valente D, Chandola C, Magi F, Bergo A, Monteonofrio L, Tramarin M, Fazzari M, Soddu S, Landsberger N, Rinaldo C, Kilstrup-Nielsen C. CDKL5 localizes at the centrosome and midbody and is required for faithful cell division. (Sci Rep. 2017)

Stefanelli G, Gandaglia A, Costa M, Cheema MS, Di Marino D, Barbiero I, Kilstrup- Nielsen C, Ausió J, Landsberger N. Brain phosphorylation of MeCP2 at serine 164 is developmentally regulated and globally alters its chromatin association. (Sci Rep. 2016) 4.259

La Montanara P, Rusconi L, Locarno A, Forti L, Barbiero I, Tramarin M, Chandola C, Kilstrup-Nielsen C, Landsberger N. Synaptic synthesis, dephosphorylation, and degradation: a novel paradigm for an

activity-dependent neuronal control of CDKL5. (J Biol Chem. 2015)

Bergo A, Strollo M, Gai M, Barbiero I, Stefanelli G, Sertic S, Cobolli Gigli C, Di Cunto F, Kilstrup-Nielsen C, Landsberger N. Methyl-CpG binding protein 2 (MeCP2) localizes at the centrosome and is required for proper mitotic spindle organization. (J Biol Chem. 2015)

Bellini E, Pavesi G, Barbiero I, Bergo A, Chandola C, Nawaz MS, Rusconi L, Stefanelli G, Strollo M, Valente MM, Kilstrup-Nielsen C, Landsberger N. MeCP2 post-translational modifications: a mechanism to control its involvement in synaptic plasticity and homeostasis? (Front Cell Neurosci. 2014)

Poster, abstract and oral presentations

-2019: Torino, Italy. Steroid and Nervous System 2019 (POSTER)
-2019: San Diego, USA. Society for neuroscience (ABSTRACT)
-2018: London, UK. CDKL5 forum (POSTER)
-2017: Washington, USA. Society for neuroscience (POSTER)
-2017: Milan, Italy. 6th EUROPEAN SYNAPSE MEETING (POSTER)
-2016: Torino, Italy. Focus on Cdkl5 (SPEAKER)
-2016: Heidelberg, Germany. Microtubules: From Atoms to Complex Systems. (POSTER)
-2014: Milan, Italy. 9th FENS Forum of Neuroscience.
-2014: Bologna, Italy. International meeting on CDKL5 rare disease.
-2013: Pavia, Italy. 9th SIBBM Seminar, Frontiers in Molecular Biology.
-2012: Bologna, Italy. First international meeting on CDKL5 rare disease.
-2012: Catania, Italy. XIV Congress of the Italian Society for Neuroscience. (ABSTRACT)
-2012: Roscoff, France. Mechanisms of Intellectual Disability: from genes to treatment. (ABSTRACT)

Courses

2014: Summer school. Neural Circuit Development and Plasticity. Organiser: Prof. Dr. Casper HoogenraadUtrecht, Netherlands.

Honours and awards

Selected candidate for “Cdkl5 forum junior award” (2018)

Selected candidate for “University of Insubria Senior Post doc grant” (2017)

Francesco de Luca international master thesis prize. Rotary club Sesto Calende Angera (2013)