Dott.Raffaella Mariotti

Education and training

1991−1994 Undergraduate student at the Institute of Pharmacology, at the University of Genoa (Supervisor: Prof. Maurizio Raiteri). 09/1994−12/1994 Research assistant at the Laboratory of Cell Biology, Section of Neuroanatomy, National Institute of Mental Health, Bethesda, MD (Supervisor: Dr Charles R. Gerfen). 02/1995−06/1997 Research assistant at the Department of Morphological and Biomedical Science, Section of Anatomy and Histology, University of Verona, Italy (Supervisor: Prof. Marina Bentivoglio). 01/1997−01/2000 Ph.D. student in Neuroscience at the Department of Morphological and Biomedical Science, Section. of Anatomy and Histology, of the University of Verona, Italy (Supervisor: Prof. Marina Bentivoglio).In this period I learned the histochemical and immunohistochemical techniques used for the study of the central nervous system and applied them to light microscopy. I also acquired experience in molecular biology techniques and cell culture. During this time I also spent a period at the Institute of Anatomy of the University of Freiburg Switzerland (Supervisor: Prof. Marco Celio). Ph.D.degree awarded on 09/02/2001. 1999−2000 Was awarded the annual scholarship from the Kemali Foundation to undertake a year of study at the Karolinska Institute, Stockholm, Sweden (Supervisor: Prof. K. Kristensson). 09/02/2001−30/09/2001 Post−Doc fellow at the Department of Morphological and Biomedical Science, Section of Anatomy and Histology, University of Verona, Italy (Supervisor: Prof. Marina Bentivoglio). 01/10/2001− Awarded research fellowship by the medical faculty of the University of Verona to continue studies in the Department of Biomedical Sciences, Section of Anatomy and Histology. 2002−2003 Research fellowship by the medical faculty of the University of Verona Department of Biomedical Sciences, Section of Anatomy and Histology. 2003−2005 Research fellowship by the motor science faculty, University of Verona. Since 2006: Research fellow at the Department of Morphological and Biomedical Sciences, University of Verona. 2007 Tenure track position (researcher) at the Department of Neurology, Neuropsychology, Morphology and Motor Science, University of Verona.

Employment and research experience

I have extensive experience in neurological and biological research, gained with both Prof. Kristensson at the Karolinska Institute Stockholm and Prof. Bentivoglio in Verona.

During my first degree in Biology at the University of Genoa under the supervision of Prof. Maurizio Raiteri, I was involved on a project regarding the role of serotoninergic presynaptic receptors on glutamate release from cerebellar mossy fiber terminals. I was then successful in obtaining a scholarship to work at the National Institute of Mental Health, Bethesda, under the supervision of Dr. Charles Gerfen. During my stay there, I worked on neuropharmacological studies on dopaminergic (D1 and D2) receptors in the rat striatum. It was there that I met Prof. Bentivoglio, who invited me to visit her laboratory in Verona and proposed a collaboration on a Telethon project on motoneurons. After obtaining a scholarship to study for a PhD degree in neuroscience, I worked on a project on the molecular and cellular correlates of motoneuron damage, related to nitric oxide induction and glial activation. Furthermore, I was fortunate enough to have the opportunity to spend some time during my PhD studies at the Karolinska Institute in Sweden. During this period I applied molecular biology and cell culture techniques to the study of spinal motoneurons. In particular, I concentrated on investigating molecular correlates of the commitment of motoneurons to regressive or protective response to injury. In addition, I studied the role of gene expression in motoneurons and signal exchange with glial cells. For many years, I have worked on a study on the reaction of motoneurons to axonal damage in mice expressing the G93A mutation of human Cu,Zn superoxide dismutase (SOD1), which provide a model for familial amyotrophic lateral sclerosis.

Publications

1.−**Mariotti R**., Bentivoglio M.
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2.−**Mariotti R**., Peng Z.C., Kristensson K., Bentivoglio M.
Age−dependent induction of nitric oxide synthase activity in facial motoneurons after axotomy
Exp. Neurol, 145, 361−370 (1997).

3.−**Mariotti R**.
Induction of nitric oxide synthase activity and motoneuronal cell damage
Eur. J. Anat, 2, 55−61 (1998).

4.−**Mariotti R**., Bentivoglio M.
Activation and response to axotomy of microglia in the facial motor nuclei of G93A superoxide dismutase transgenic mice
Neurosci. Lett, 285, 87−90 (2000).

5.−**Mariotti R**., Tongiorgi E., Bressan C., Armellin M., Kristensson K., Bentivoglio M.
Retrograde response of the rat facial motor nucleus to muscle inflammation elicited by phytohemagglutinin
Eur. J. Neurosci.13, 1329−1338 (2001).

6.−**Mariotti R**., Tongiorgi E.,Bressan C., Boscolo S., Kristensson K., Bentivoglio M.
Priming by muscle inflammation alters the response and vulnerability to axonal−induced damage of the rat facial motornucleus
Exp. Neurol. 176, 133−142 (2002).

7.−**Mariotti R**., CristinoL., Bressan C., Boscolo S., Bentivoglio M.
Altered reaction of facial motoneurons to axonal damage in the presymptomatic phase of murine model of familial amyotrophic lateral sclerosis
Neurosci. 115, 331−335 (2002)

8.−Backstrom E., Chambers B.J., Ho E, Naidenko O.V., **Mariotti R**., Fremont D.H., Yokoama M.Y., Kristensson K., Ljunggren H−G.
Natural killer cell−mediated lysis of dorsal root ganglia neurons via RAE1/NKG2D interactions
Eur. J. Immunol. 33, 92−100 (2003).

9.−Kassa RM., Bentivoglio M.,**Mariotti R**.
Changes in the expression of P2X1 and P2X2 purinergic receptors in facial motoneuron after nerve lesions in rodents and correlation with motoneuron degeneration
Neurobiology of Disease 25, 121−133 (2007).

10.-Zancanaro C., **Mariotti R**., Perdoni F., Nicolato E.,Malatesta M.
Physical training is associated with changes in nuclear magnetic resonance and morphological parameters of the skeletal muscle in senescent mice.
Eur. J. Hist. 51, 305−310 (2007).

11.-Fabene PF., **Mariotti R**., Navarro Mora G., Chakir A., Zancanaro C.
Forced mild physical training-induced effects on cognitive and locomotory behaviour in old mice.
J Nutr Health Aging. 12, 88-390 (2008).

12.-Kassa RM., **Mariotti R**., Bonaconsa M., Bertini G., Bentivoglio M.
Gene, cell and axon changes in the FALS mouse sensorimotor cortex
J.Neurophatol. and Exp. Neurol. 68, 59-72 (2008).

13.-Minciacchi D, Kassa RM, Del Tongo C, **Mariotti R**, Bentivoglio M.
Voronoi-based spatial analysis reveals selective interneuron changes in the cortex of FALS mice.
Exp Neurol. 215, 77-86 (2009).

14.-Malatesta M., Furlan S., **Mariotti R**., Zancanaro C., Nobile C.
Distribution of the epilepsy-related Lg1 protein in rat cortical neurons.
Histochem. Cell Biol. 132, 505-13 (2009).