

Luisa Minghetti

Born 21/07/1961, female, married,

Present Position: Head, Experimental Neurology Section
Department of Cell Biology and Neurosciences,
Istituto Superiore di Sanità, Rome, Italy

Education

1984: University of Bologna, Italy, Degree cum laude in Biological Sciences.

1985 - 1990: University of Bologna, Italy, Doctorate in Cellular Biology and Physiology.

1987 - 1988: Ludwig Institute for Cancer Research, London, UK; Visiting PhD student

Position and Employment

1990-92: Post Doctoral Fellow, Ludwig Institute for Cancer Research, London (UK).

1993-94: Post Doctoral Fellow, Istituto Superiore di Sanità, (Rome, Italy).

1995-2002: Research Fellow (staff member), Istituto Superiore di Sanità

1998-2003: Head, Neurobiology Unit, Istituto Superiore di Sanità.

2003- Senior Research Fellow (Primo Ricercatore), Istituto Superiore di Sanità

2008- Head, Experimental Neurology Unit, Istituto Superiore di Sanità.

Other experiences and Professional achievements

1993 Co-inventor and co-applicant, patent "The Glial Growth Factors: preparation and usage", Goodearl, A.D.J., Stroobant, P, Minghetti, L., Otsu, M., Marchionni, M., Sun, M., Gwynne, D., Waterfield, M. D.

1998 Visiting Scientist, University of Oxford, Department of Pharmacology

1999 Visiting Scientist, University of Southampton, Southampton Neuroscience Group

Honors

1998 Human Frontier Science Program (Short Term Fellowship)

1998 The Wellcome Trust (Short Term Travelling Research Fellowship).

1999 British Council (Short Term Travelling Research Fellowship)

Editorial Boards:

Journal of Neuropathology and Experimental Neurology (until 2006), Glia, Oxidative Medicine and Cellular Longevity; executive editor for Current Pharmaceutical Design.

Scientific Societies:

International Society for Neurochemistry (ISN), Italian Society of Neuroscience (SINS), European College of Neuropsychopharmacology (ECNP)

Current interests and activities

The research activity of Dr. Minghetti is devoted to the study of the roles of the "non-neuronal" component of the brain, namely glial cells, in the pathogenesis of degenerative and inflammatory diseases of the central nervous system. The activity of the unit is centered on the identification of molecular mechanisms underlying neurodegeneration, new diagnostic biomarkers and molecular targets, and their validation at pre-clinical stage. The role of inflammation in brain diseases and aging is one of the main aspect studied.

Dr. Minghetti acts as reviewer for several international journals and national and international Scientific organizations including Associazione Italiana Sclerosi Multipla; Agenzia Spaziale Italiana; Cofin-MURST, PRIN; The Wellcome Trust; UK Department of Health – Research and Development Division; Parkinson Association UK; Multiple Sclerosis Association UK; Ministero de la Culture, de L'enseignement superieur et de la Recherche, Grand-Duche de Luxemburg; USA-Israel Binational Program; Spanish Ministry of Health and Consumer's Affair; Singapore National Medical Research Council.

International collaborations: Hugh Perry, University Southampton, UK Olle Lindvall and Zaal Kokaia, Wallenberg Neuroscience Center, Lund, Sweden; A. David Smith University of Oxford , UK; Luc Bué and David Blum, Université Lille2, Lille, France; Thierry Durand, University of Montpellier, France; Andrew Gow,

Rutgers University, USA; Lydia Gimenez-Llort, Barcellona, Spain.

Selected publications (of 104; official H index 39)

- De Simone R., Vissicchio F., Mingarelli C., De Nuccio C., Visentin S., Ajmone-Cat M. A., **Minghetti L.** Branched-chain amino acids influence the immune properties of microglial cells and their responsiveness to pro-inflammatory signals. *Biochim. Biophys Acta - Molecular Basis of Disease*, 2013 in press
- Ventura I, Russo MT, De Nuccio C, De Luca G, Degan P, Bernardo A, Visentin S, **Minghetti L**, Bignami M. hMTH1 expression protects mitochondria from Huntington's disease-like impairment. *Neurobiol Dis.* 2012; 49C:148-158.
- Fratini F, Principe S, Puopolo M, Ladogana A, Poleggi A, Piscopo P, Bruno G, Castrechini S, Pascone R, Confaloni A, **Minghetti L**, Cardone F, Pocchiari M, Crescenzi M. Increased levels of acute-phase inflammatory proteins in plasma of sporadic CJD patients. *Neurology*, 2012;79:1012-8. Epub 2012 Aug 1.
- Sbardella E, Greco A, Stromillo ML; Prosperini L, Puopolo M, Ausili Cefaro L, Pantano P, De Stefano N, **Minghetti L**, Pozzilli C. Isoprostanes in CIS and early Multiple Sclerosis as biomarkers of tissue damage and predictors of clinical course. *Miultiple Sclerosis J.*, 2012, in press
- Ajmone-Cat MA, Salvatori ML, De Simone R, Mancini M, Biagioni S, Bernardo A, Cacci E, **Minghetti L.** Docosahexaenoic acid modulates inflammatory and antineurogenic functions of activated microglial cells. *J Neurosci Res.* 2012 90:575-87.
- De Nuccio C, Bernardo A, De Simone R, Mancuso E, Magnaghi V, Visentin S, **Minghetti L.** Peroxisome proliferator-activated receptor γ agonists accelerate oligodendrocyte maturation and influence mitochondrial functions and oscillatory Ca^{2+} waves. *J Neuropathol Exp Neurol.* 2011, 70:900-12.
- Carnevale D, Mascio G, Ajmone-Cat MA, D'Andrea I, Cifelli G, Madonna M, Coccozza G, Frati A, Carullo P, Carnevale L, Alleva E, Branchi I, Lembo G, **Minghetti L.** Role of neuroinflammation in hypertension-induced brain amyloid pathology. *Neurobiol Aging.* 2012, 33:205.
- Ajmone-Cat MA, Cacci E, Ragazzoni Y, Minghetti L, Biagioni S. Pro-gliogenic effect of IL-1 α in the differentiation of embryonic neural precursor cells in vitro. *J Neurochem.* 2010, 113:1060-72.
- Bernardo A, Bianchi D, Magnaghi V, **Minghetti L.** Peroxisome proliferator-activated receptor-gamma agonists promote differentiation and antioxidant defenses of oligodendrocyte progenitor cells. *J Neuropathol Exp Neurol.* 2009, 68:797-808.
- Ajmone-Cat MA, Cacci E, **Minghetti L.** Non steroidal anti-inflammatory drugs and neurogenesis in the adult mammalian brain. *Curr Pharm Des.* 2008; 14:1435-42.
- Cacci E, Ajmone-Cat MA, Anelli T, Biagioni S, **Minghetti L.** In vitro neuronal and glial differentiation from embryonic or adult neural precursor cells are differently affected by chronic or acute activation of microglia. *Glia.* 2008, 56:412-25.
- Carnevale D., De Simone R., **Minghetti L.** Microglia-Neuron Interaction in Inflammatory and Degenerative Diseases: Role of Cholinergic and Noradrenergic Systems. *CNS & Neurological Disorders - Drug Targets*, 2007, 6: 388-397.
- De Simone R, Ambrosini E, Carnevale D, Ajmone-Cat MA, **Minghetti L.** NGF promotes microglial migration through the activation of its high affinity receptor: modulation by TGF-beta. *J Neuroimmunol.* 2007, 190:53-60.
- Minghetti L**, Greco A, Puopolo M, Combrinck M, Warden D, Smith AD. Peripheral reductive capacity is associated with cognitive performance and survival in Alzheimer's disease. *J Neuroinflammation.* 2006, 3:4
- Combrinck M, Williams J, De Berardinis MA, Warden D, Puopolo M, Smith AD, **Minghetti L.** Levels of CSF prostaglandin E2, cognitive decline, and survival in Alzheimer's disease. *J Neurol Neurosurg Psychiatry.* 2006, 77:85-8.
- Minghetti L.** Role of inflammation in neurodegenerative diseases. *Current Opinion in Neurology* 2005