

# Francesca Massenzio

Date of birth 14/04/1989, Italian.

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## WORK EXPERIENCES

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July 2019

### **POSTDOC RESEARCH FELLOW**

Physiology and Psychology Section  
Department of Neurosciences, Biomedicine and Movement Sciences  
University of Verona  
Istituti Biologici, Blocco A  
Strada Le Grazie, 8, 37134, Verona – Italy  
Prof. Mario Buffelli Laboratory

June 2017 - March 2019

### **POSTDOCTORAL RESEARCH ASSOCIATE**

(Psychiatry Research Trust fellowship June 2018-February 2019)  
Department of Basic and Clinical Neuroscience  
King's College London  
Maurice Wohl Clinical Neuroscience Institute  
5 Cutcombe Road, Brixton, SE5 9RT, London, UK  
Dott. Jemeen Sreedharan Laboratory

March 2017 - May 2017

### **POSTDOC RESEARCH SCIENTIST**

(MNDa motor neurone disease association fellowship)  
The Babraham Institute, Building 540,  
Babraham Research Campus, Cambridge, UK  
Signalling ISP Laboratory  
Dott. Jemeen Sreedharan /Dott. Michael Coleman Laboratory

## EDUCATION

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**January 2014 – April 2017**

**PhD in Cellular and Molecular Biology (Physiology)**

**Doctor Europaeus Academic Title**

**Academic Recruitment Field: 05/D1**

**Academic Discipline: BIO/09 Physiology**

Department of Pharmacy and Biotechnology

University of Bologna, Italy.

Neurobiology Laboratory

Supervisor: Prof.ssa Barbara Monti.

Thesis: Physiopathological protein release by glial cells: focus on Purine Nucleoside Phosphorylase (PNP), Superoxide Dismutase 1 (SOD1) and  $\alpha$ -synuclein ( $\alpha$ -syn).

February 2016  
August 2016

Visiting PhD Student (Marco Polo fellowship)  
The Babraham Institute, Building 540, Babraham  
Research Campus, Cambridge, UK  
Signalling ISP Laboratory  
Supervisor: Dott. Jemeen Sreedharan

**October 2011 – July 2013**

**Master's Degree in Molecular and Cellular Biology (LM-6) 110/110 cum laude (first-class honours)**  
University of Bologna. Neurobiology Laboratory  
Supervisor: Prof.ssa Barbara Monti.  
Thesis: Modulation of Apolipoprotein E release by microglial cells in physiopathological conditions *in vitro*.  
Final grade: 110/110 cum laude

**October 2008-October 2011**

**Bachelor's Degree in Biology (L-13) 110/110 cum laude (first-class honours)**  
University of Urbino.  
Supervisor: Dott. Stefano Sartini  
Thesis: Synaptic plasticity induced by the Brain-Derived Neurotrophic Factor (BDNF).  
Final grade: 110/110 cum laude

## FELLOWSHIP

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- **Marco Polo Fellowship**
  - February 2016- July 2016. PhD Visiting Student  
The Babraham Institute, Building 540, Babraham Research Campus, Cambridge, UK.
- **Psychiatry Research Trust fellowship, King's College London**
  - June 2018- February 2019
- **Postdoctoral Fellowship Fondazione Umberto Veronesi, FUV 2020**
  - January 2020

## PUBLICATIONS

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1. Petralla, S., Peña-Altamira, L.E., Poeta, E., **Massenzio, F.**, Virgili, M., Barile, S.N., Sbrano, L., Profilo, E., Corricelli, M., Danese, A., Giorgi, C., Ostan, R., Capri, M., Pinton, P., Palmieri, F., Lasorsa, F.M., Monti, B. (2019) Deficiency of Mitochondrial Aspartate-Glutamate Carrier 1 Leads to Oligodendrocyte Precursor Cell Proliferation Defects Both In Vitro and In Vivo. *Int J Mol Sci.* 20(18).

2. Soares Romeiro, L.A., da Costa Nunes, J.L., de Oliveira Miranda, C., Simões Heyn Roth Cardoso, G., de Oliveira, A.S., Gandini, A., Kobrlova, T. Soukup, O., Rossi, M., Senger, J., Jung, M., Gervasoni, S., Vistoli, G., Petralla, S., **Massenzio, F.**, Monti, B., Bolognesi, M.L. (2019) Novel Sustainable-by-Design HDAC Inhibitors for the Treatment of Alzheimer's Disease, *ACS Med Chem Lett.* 10(4):671-676.
3. Uliassi, E., Peña-Altamira, L. E., Morales, A. V., **Massenzio, F.**, Petralla, S., Rossi, M., Roberti, M., Martinez Gonzalez, L., Martinez, A., Monti, B., and Bolognesi, M. L. (2019) A Focused Library of Psychotropic Analogues with Neuroprotective and Neuroregenerative Potential, *ACS Chem Neurosci.* 10(1):279-294.
4. **Massenzio, F.**, Peña-Altamira, E., Petralla, S., Virgili, M., Zuccheri, G., Miti, A., Polazzi, E., Mengoni, I., Piffaretti, D., and Monti, B. (2018) Microglial overexpression of fALS-linked mutant SOD1 induces SOD1 processing impairment, activation and neurotoxicity and is counteracted by the autophagy inducer trehalose, *Biochim Biophys Acta Mol Basis Dis* 1864, 3771-3785.
5. White, M. A., Kim, E., Duffy, A., Adalbert, R., Phillips, B. U., Peters, O. M., Stephenson, J., Yang, S., **Massenzio, F.**, Lin, Z., Andrews, S., Segonds-Pichon, A., Metterville, J., Saksida, L. M., Mead, R., Ribchester, R. R., Barhomi, Y., Serre, T., Coleman, M. P., Fallon, J. R., Bussey, T. J., Brown, R. H., Jr., and Sreedharan, J. (2018) TDP-43 gains function due to perturbed autoregulation in a Tardbp knock-in mouse model of ALS-FTD, *Nat Neurosci* 21, 552-563.
6. Peña-Altamira, L. E., Polazzi, E., Giuliani, P., Beraudi, A., **Massenzio, F.**, Mengoni, I., Poli, A., Zuccarini, M., Ciccarelli, R., Di Iorio, P., Virgili, M., Monti, B., and Caciagli, F. (2018) Release of soluble and vesicular purine nucleoside phosphorylase from rat astrocytes and microglia induced by pro-inflammatory stimulation with extracellular ATP via P2X7 receptors, *Neurochem Int* 115, 37-49.
7. Profilo, E., Peña-Altamira, L. E., Corricelli, M., Castegna, A., Danese, A., Agrimi, G., Petralla, S., Giannuzzi, G., Porcelli, V., Sbano, L., Viscomi, C., **Massenzio, F.**, Palmieri, E. M., Giorgi, C., Fiermonte, G., Virgili, M., Palmieri, L., Zeviani, M., Pinton, P., Monti, B., Palmieri, F., and Lasorsa, F. M. (2017) Down-regulation of the mitochondrial aspartate-glutamate carrier isoform 1 AGC1 inhibits proliferation and N-acetylaspartate synthesis in Neuro2A cells, *Biochim Biophys Acta Mol Basis Dis* 1863, 1422-1435.
8. Peña-Altamira, E., Petralla, S., **Massenzio, F.**, Virgili, M., Bolognesi, M. L., and Monti, B. (2017) Nutritional and Pharmacological Strategies to Regulate Microglial Polarization in Cognitive Aging and Alzheimer's Disease, *Front Aging Neurosci* 9, 175.
9. Peña-Altamira, E., Prati, F., **Massenzio, F.**, Virgili, M., Contestabile, A., Bolognesi, M. L., and Monti, B. (2016) Changing paradigm to target microglia in neurodegenerative diseases: from anti-inflammatory strategy to active immunomodulation, *Expert Opin Ther Targets* 20, 627-640.
10. Prati, F., De Simone, A., Bisignano, P., Armirotti, A., Summa, M., Pizzirani, D., Scarpelli, R., Perez, D. I., Andrisano, V., Perez-Castillo, A., Monti, B., **Massenzio, F.**, Polito, L., Racchi, M., Favia, A. D., Bottegoni, G., Martinez, A., Bolognesi, M. L., and Cavalli, A. (2015) Multitarget drug discovery for Alzheimer's disease: triazinones as BACE-1 and GSK-3beta inhibitors, *Angew Chem Int Ed Engl* 54, 1578-1582.
11. Prati, F., De Simone, A., Armirotti, A., Summa, M., Pizzirani, D., Scarpelli, R., Bertozzi, S. M., Perez, D. I., Andrisano, V., Perez-Castillo, A., Monti, B., **Massenzio, F.**, Polito, L., Racchi, M., Sabatino, P., Bottegoni, G., Martinez, A., Cavalli, A., and Bolognesi, M. L. (2015) 3,4-Dihydro-1,3,5-triazin-2(1H)-ones as the First Dual BACE-1/GSK-3beta Fragment Hits against Alzheimer's Disease, *ACS Chem Neurosci* 6, 1665-1682.
12. Polazzi, E., Mengoni, I., Peña-Altamira, E., **Massenzio, F.**, Virgili, M., Petralla, S., and Monti, B. (2015) Neuronal Regulation of Neuroprotective Microglial Apolipoprotein E

Secretion in Rat In Vitro Models of Brain Pathophysiology, *J Neuropathol Exp Neurol* 74, 818-834.

## POSTERS

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- **Massenzio F.**, White M.A., Mead R.J., Coleman M.P., Barmada S., Sreedharan J.  
Glycogen Synthase Kinase-3 Inhibition ameliorates TDP-43 toxicity in motor and cortical neurons.  
*28th International Symposium on ALS/MND. 8-10 December 2017, Boston USA.*
- White M.A., Kim E., Duffy A., Adalbert R., Phillips B.U., Peters O.M., Stephenson J., Yang S., **Massenzio F.**, Lin Z., Andrews S., Segonds-Pichon A., Metterville J., Saksida L.M., Mead R., Ribchester R.R., Barhomi Y., Serre T., Coleman M.P., Fallon J., Bussey T.J., Brown R.H. Jr, Sreedharan J  
*Tardbp* knock-in mouse shows gain of TDP-43 function and yields modifiers of cognitive impairment.  
*1st International Postdoc retreat in Vimeiro. 18-20 October 2017, Vimeiro, Portugal.*
- Peña-Altamira L.E., Petralla S., **Massenzio F.**, Parenti C., Virgili M., Bentivogli M., Monti B.  
A nutritional approach to tackle Alzheimer's disease: a key role for immunomodulation.  
*XIII European Meeting on Glial Cells in Health and Disease, 8-11 July 2017, Edinburgh, Scotland.*
- Uliassi E.; Baldassarro V.A.; **Massenzio F.**; Petralla S.; Monti B.; Calzà L.; Bolognesi M.L.  
*Receptor chemistry: reality and vision. 33rd Camerino-Cyprus Symposium. 15-19 May 2016, Camerino, Italia.*
- **Massenzio F.**, Peña-Altamira L.E., Virgili M., Bentivogli M., Monti B.  
Functional differences between glial cells overexpressing wild-type or mutant superoxide dismutase 1 (SOD1).  
*ABCD National Congress 2015. 17-19 September 2015. Bologna, Italia.*

## MEMBERSHIP

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**ABCD Member, The Italian scientific community of cell and developmental biologists since September 2015.**