

CURRICULUM VITAE

Name: Bongiani Matilde

Date Prepared: 27/12/2016

Date and Place of Birth: 14/06/1983 La Spezia (SP), Italy

Citizenship: Italian

Present Address: 13, Piazza G. Matteotti, La Spezia(SP), 19124, Italy

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Education

Jen 2010- Apr 2013: Ph.D in Molecular, industrial and environmental Biotechnologies

Title of thesis: "Detection of pathological prion protein by RT-QuIC analysis of cerebrospinal fluid and olfactory neuroepithelium of patients with sporadic Creutzfeldt-Jakob disease".

Location: University of Verona, 10, L.A. Scuro, 37134, Verona, Italy.

Nov 2006 - Oct 2008: Second level degree in Sanitary Biology (master degree)

Final grade: 110/110 cum laude (excellent)

Title of thesis: "Evaluation of sensitivity to antibiotics of bacteria isolated from urinary infections using the Uro-Quick assay".

Location: University of Genova, 5, via Balbi, 16126 Genova, Italy.

Oct 2002 - Nov 2006: First level degree in "Bioanalytical Methods" (bachelor degree)

Title of thesis: "Effect of high frequency alternating current-generated ozone on distinct microorganisms".

Location: University of Genova, 5, via Balbi, 16126 Genova, Italy.

Education aboard

Feb 2006 - Jul 2006: Erasmus project, Universidad de Sevilla, Spagna.

Brief Chronology of Employment

Feb 2013- Today: Postdoctoral fellow in Laboratory of Neuropathology, Department of Neurological and Movement Sciences, Section of Clinical Neurology, University of Verona, 10, P.le L. A. Scuro, 37134 – Verona, Italy. Supervisor: Dr. Gianluigi Zanusso, Ph.D, MD.

Title of the project : "Detection of pathological prion protein by RT-QuIC analysis of cerebrospinal fluid and olfactory neuroepithelium of patients with neurological diseases".

Apr 2013- Dic 2013: Special Volunteer in Laboratories (NIH / NIAID), Laboratory of Persistent Viral Diseases, TSE/Prion Biochemistry Section National Institutes of Health (NIH), Rocky Mountain . Hamilton, MT, USA. Supervisor: Dr Byron Caughey, Ph.D.

Jan 2010 – Apr 2013: PhD student in Laboratory of Neuropathology, Department of Neurological and Movement Sciences, Section of Clinical Neurology, University of Verona , 10, P.le L. A. Scuro, 37134 – Verona, Italy. Supervisor: Prof. Salvatore Monaco, MD.

Jun 2012 - Dic 2012: Guest researcher in Laboratories (NIH / NIAID), Laboratory of Persistent Viral Diseases, TSE/Prion Biochemistry Section National Institutes of Health (NIH), Rocky Mountain . Hamilton, MT, USA. Supervisor: Dr Byron Caughey, Ph.D.

Feb 2009 - Jun 2009: Predoctoral research stage at the Institut de Génétique et de Biologie Moléculaire et Cellulaire (IGBMC), 1 Laurent Fries 67404 Illkirch, CU de Strasbourg, France.

Title of the project: “ *Analysis of gene expression in the Drosophila brain*”. Supervisor: Dr. Angela Giangrande, Ph.D.

Jan 2005 - Oct 2008: Master research stage at the Department of Clinical Microbiology (DISCMIT), 8, Largo R. Benzi, 16132 Genova (GE), Italy. Supervisor: Prof. Eugenio Debbia, MD.

Collaborations

Laboratory of Persistent Viral Diseases, TSE/Prion Biochemistry Section National Institutes of Health (NIH) Rocky Mountain Laboratories (NIH/NIAID), Hamilton, MT, USA.

Research Interests

I'm focusing on evaluation of body fluids and tissues biomarkers in neurodegenerative and neuroinflammatory diseases. The goal of my survey is to identify and validate new markers, and to investigate the role of these biomarkers as predictor of diseases conversion, using proteomics and cellular biology approaches.

I acquired the following proteomics and cellular biology skills: immunohistochemistry on dissect tissues, in situ hybridization, SDS-PAGE and immunoblot, immunoprecipitations techniques, enzymatic assay, 2D-PAGE, pathogenic prion protein (PrP^{Sc}) in vitro amplification using Real Time QuIC (quaking-induced conversion).

Article in a Periodical

Groveman BR, Orrù CD, Hughson AG, **Bongianni M**, Fiorini M, Imperiale D, Ladogana A, Pocchiari M, Zanusso G, Caughey B. *Extended and direct evaluation of RT-QuIC assays for Creutzfeldt Jakob disease diagnosis*. Annals of clinical and Translation Neurology. (In press).

Bongianni M, Orrù C, Groveman BR, Sacchetto L, Fiorini M, Tonoli G, Triva G, Capaldi S, Testi S, Ferrari S, Cagnin A, Ladogana A, Poleggi A, Colaizzo E, Tiple D, Vaianella L, Castriciano S, Marchioni D, Hughson AG, Imperiale D, Cattaruzza T, Fabrizi GM, Pocchiari M, Monaco S, Caughey B, Zanusso G. *Diagnosis of Human Prion Disease Using Real-Time Quaking-Induced Conversion Testing of Olfactory Mucosa and Cerebrospinal Fluid Samples*. JAMA Neurol. 2016 Dec 12.

Zanusso G, Camporese G, Ferrari S, Santelli L, **Bongianni M**, Fiorini M, Monaco S, Manara R, Cagnin A. *Long-term preclinical magnetic resonance imaging alterations in sporadic Creutzfeldt-Jakob disease*. Ann Neurol. 2016 Oct;80(4):629-32.

Zanusso G, **Bongianni M**, Caughey B. *A test for Creutzfeldt-Jakob disease using nasal brushings*. N Engl J Med. 2014 Nov 6;371(19):1842-3.

M. Bongianni, C. D. Orrù, G. Tonoli, S. Ferrari, A. G. Hughson, B. R. Groveman, M. Fiorini, M. Pocchiari, S. Monaco, B. Caughey, and G. Zanusso. *A Test for Creutzfeldt-Jakob Disease Using Nasal Brushings*. N Engl J Med. 2014 Aug 7;371(6):519-29.

A. Gajofatto, **M. Bongianni**, G. Zanusso, M.R. Bianchi, M. Turatti, M.D. Benedetti, S. Monaco. *Clinical and biomarker assessment of demyelinating events suggesting multiple sclerosis*. Acta Neurol Scand, 2013 .

A. Gajofatto, **M. Bongianni**, G. Zanusso, M.D. Benedetti, S. Monaco . *Are cerebrospinal fluid biomarkers useful in predicting the prognosis of multiple sclerosis patients?*. Int. J. Mol. Sci. 12(11):7960-70, 2011.

Conference:

M. Bongianni. *UPDATE ON INTRA-VITA DIAGNOSTIC TEST IN PRION AND PRION-LIKE DISORDERS.* Summer School on prion and prion-like neurodegenerative disorders, Set 2016, Carloforte, Italy. (oral presentation).

M. Bongianni, C. D. Orrú, G. Tonoli, B. R. Groveman, L. Sacchetto, A. G. Hughson, A. Cagnin, S. Capaldi, S. Ferrari, M. Fiorini, M. Pocchiari, S. Monaco, B. Caughey, G. Zanusso. *Improvements of nasal brushing procedure for Creutzfeldt-Jakob disease diagnosis.* 51 TH congress of the Italian association of Neuropathology and Clinical Neurobiology AINPeNC, June 2015, Verona, Italy. (oral presentation).

M. Bongianni, C. D. Orrú, G. Tonoli, A. G. Hughson, S. Ferrari, B. R. Groveman, L. Sacchetto, M. Fiorini, M. Pocchiari, S. Monaco, B. Caughey, and G. Zanusso. *Comparison of brushes and swabs for olfactory mucosa sampling and RT-QuIC analysis of patients with Creutzfeldt-Jakob disease.* XVIII International Congress of Neuropathology, September 2014 Rio De Janeiro, Brazil. (poster presentation).

M. Bongianni, C. D. Orrú, G. Tonoli, A. G. Hughson, S. Ferrari, B. R. Groveman, L. Sacchetto, M. Fiorini, M. Pocchiari, S. Monaco, B. Caughey, and G. Zanusso. *Comparison of brushes and swabs for olfactory mucosa sampling and RT-QuIC analysis of patients with Creutzfeldt-Jakob disease.* Prion Conference, May 2014 Trieste, Italy. (poster presentation).

M. Bongianni, C.D. Orrú, G. Tonoli, S. Ferrari, A.G. Hughson, B.R. Groveman, M. Fiorini, M. Pocchiari, G. Pasini, S. Monaco, B. Caughey, and G. Zanusso. *"RT-QuIC of olfactory neuroepithelium brushing as test for intravital diagnosis of Creutzfeldt-Jakob disease"*, IX Convegno Nazionale, March 2014 Firenze, Italy. (poster presentation).

C.Orrù, **M. Bongianni,** G. Tonoli, S. Ferrari, A. G. Hughson, B. R. Groveman, M. Fiorini, M. Pocchiari, S. Monaco, B. Caughey, G. Zanusso. *RT-QuIC of olfactory neuroepithelium brushings as a definitive intravital test for sporadic Creutzfeldt-Jakob disease diagnosis.* Prion Conference, May 2013 Banff, Canada. (poster presentation).

M. Bongianni, A. Gajofatto, G. Zanusso, M. Fiorini, M.D. Benedetti, and S. Monaco. *Relevance of a panel of cerebrospinal fluid biomarkers in patients with clinical isolated syndrome suggestive multiple sclerosis.* 48 TH congress of the Italian association of Neuropathology and Clinical Neurobiology AINPeNC, May 2012 Napoli, Italy. (oral presentation).

M. Fiorini, G. Zanusso, **M. Bongianni,** A. Gajofatto, S. Monaco. *Physicochemical properties of A β peptides in cerebrospinal fluid of Alzheimer disease patients.* International Symposium on "Biology and Translational Aspects of Neurodegeneration", March 2012 Venezia, Italy. (poster presentation).

Lecture

Set 2014: invited speaker at Federal University of Rio De Janeiro (UFRJ).

Title of the talk: *Comparison of brushes and swabs for olfactory mucosa sampling and RT-QuIC analysis of patients with Creutzfeldt-Jakob disease.*

Dic 2014: invited speaker at “Symposium on rapidly progressive dementia” (University of Verona);
Title of the talk: *“I nuovi test di amplificazione in vitro: “il Real Time-Quaking Induced Conversion”.*

Awards and Honor

2015: the study on "Improvements of nasal brushing procedure for Creutzfeldt-Jakob disease diagnosis" was selected by Dr. Anthony Fauci, director of NIH/NIAID, between the works with notable scientific impact made by NIAID laboratories and NIAID-funded researchers at domestic and international institutions during fiscal year 2014.

2013: First prize award Kinetics Foundation for “A paper judged to have the most-likely impact on our understanding of prion-like human neurodegenerative diseases”, Prion Conference 2013 (Banff, Canada).

2012: Winner of "CooperInt program" fellowship for six month of study abroad.