

PERSONAL DATA

Name: Massimo

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Birthdate: 27/02/1960

Place of birth: Vicenza

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EDUCATION AND TRAINING

November 1987: degree in Biological Sciences - Urbino University.

September 1995: PhD in Medical Genetics - University La Sapienza, Rome.

February 1999-present: Research Supervisor at IRCCS-Centre S.Giovanni di Dio, FBF, Brescia.

November 1st, 2002-present: Medical Genetics Professor - School of Medicine - University of Brescia.

2003-present: is consultant at IRCCS-Centre S.Giovanni di Dio, FBF, Brescia

2005-2017 is responsible of all preclinical studies of the "Ricerca Corrente"

1st January 2016: Full Professor in Medical Genetics-School of Medicine University of Brescia.

EMPLOYMENT AND RESEARCH EXPERIENCE

As Principal investigator:

-1998: progetto Telethon 1061 "Genotype/phenotype correlation in Myotonic Dystrophy: relationship between DMPK-DMAHP expression and disease progression" (Durata 24 mesi)

-2000: progetto Finalizzata del Ministero della Salute RF/2000 "Pharmacogenetics of typical and atypical antipsychotics" (Durata 24 mesi)

- 2001: progetto di Ricerca finanziato dalla Fondazione Cariplo "Ricerca di geni di suscettibilità per le psicosi maggiori e proposta di acquisto di uno strumento innovativo di analisi molecolare"(Durata 24 mesi)

-2001: progetto Finalizzata del Ministero della Salute RF2001 "New strategies for the research of susceptibility genes for mood disorder" (Durata 24 mesi)

- 2004: progetto Finalizzata del Ministero della Salute RF2004 “Potentiality of new agonists of the receptor NMDA glycine site in the therapy of schizophrenia” (Durata 24 mesi)
- 2004: Progetto Fondazione Cariplo “Susceptibility genes for endophenotypes associated to psychiatric disorders and dementia” (Durata 24 mesi)
- 2006: Progetto Fondazione Mariani “Attention deficit Hyperactivity Disorder: clinical and preclinical studies” (Durata 24 mesi)
- 2007: Progetto Ricerca Finalizzata del Ministero della Salute “Innovative strategies for depression treatment: new pharmacological targets and preclinical studies for personalization of therapy” (Durata 24 mesi)
- 2007: Progetto Strategico Ricerca Finalizzata del Ministero della Salute RF/2007 GET-UP sottoprogetto GUITAR “Genetic data Utilization and Implementation of Targeted drug Administration in the clinical Routine” (Durata 24 mesi)
- 2011: Progetto Regione Lombardia (ID: 17387 SAL-13) "Biomarkers for the personalization of treatment in mood disorders" (Durata 24 mesi)
- 2013 Progetto investimenti in conto capitale, attrezzature e strumenti per la ricerca sanitaria del Ministero della Salute, “Implementazione di una piattaforma tecnologica per il miglioramento della diagnosi e la personalizzazione delle cure nei pazienti affetti da patologie psichiatriche” (Durata 36 mesi)
- 2015 progetto H&W (Ateneo Unibs) REFRACT, (durata 36 mesi)
- 2017: Progetto Ricerca Finalizzata del Ministero della Salute RF2016 N.02361697 “Towards Precision Medicine in Psychiatry: Clinical Validation of a combinatorial pharmacogenomic approach” (durata 36 mesi)

Scientific society

From 1990 to 1997: he is associate to “Associazione Genetica Italiana, AGI”.

From 1991 to 1997: he is associate to “Associazione Italiana Genetica Medica, AIGM”.

From 1998-present: associate to “Società Italiana di Genetica Umana, SIGU”.

2010- present : he is coordinator of Pharmacogenomics Group inside the SIGU.

From 1997-present: he is member of MDA/AFM International Myotonic Dystrophy Consortium.

From 2001-present: he is member of “Società Italiana di Neuropsicofarmacologia, SINPF”

25 international publications document the Prof. Gennarellis research activity on Myotonic Dystrophy type 1 (MD1). The subjects of these studies were the analysis of the DM1 mutation, the genotype phenotype correlation, the evaluation of the somatic mosaicism, the definition of the biochemical defect, the preferential segregation of the mutated allele in the families at risk, the identification of novel isoforms of the gene DMPK, the confirmation of the Nord Euroasian origin of the DM mutation and the demonstration of the "meiotic drive". Moreover, an algorithm for the predictive DM diagnosis based on the genotype phenotype correlation has been developed.

Prof. Gennarelli's recent research activity has been dedicated to the fields of genetics, biochemistry and pharmacogenetics of psychiatric disorders. In recent years, he and his research group have conducted numerous studies on the identification of molecular (genetic and biochemical) markers associated with disorders diagnosis and treatment response. Specific areas of investigation have been: the role of immune system modulators and neurotrophic factors in the pathogenesis of schizophrenia, major depression, and dementia; and action mechanisms involved in pharmacological and non-pharmacological therapy for these disorders.

Moreover he has conducted several case-control association studies on candidate genes for susceptibility to Major Psychoses, in the endeavour to clarify the role of the genes linked to some neurotransmitter systems (glutamate, serotonin, and dopamine), cytokines, and neurotrophic factors. In particular, preferential associations have emerged between schizophrenia and bipolar disorder symptomatology and some functional polymorphisms for the genes TNF-alfa, IL-10, IL-1, GDNF, GRIK3, GSK3beta, and GRIA3.

He and his group have also investigated the polymorphic variants of genes encoding for cytokines and neurotrophic factors in patients suffering from the sporadic form of Alzheimer (AD) disease. These studies have yielded evidence of preferential associations between susceptibility to AD and functional polymorphisms of the BDNF (Brain Derived Neurotrophic Factor) and interleukin-10 genes.

Concerning the translational research activity, a first result is represented by the drawing up of the guide lines for genetic test for the Myotonic Dystrophies (MD1, MD2) (<http://sigu.univr.it/sigu/html/documenti>) that reports the ten year experience in molecular diagnosis of these pathologies. A second result comes from the recent task in the study of pharmacogenetics of antipsychotic, antidepressants and mood stabilizers in order to set up genetic test for optimization and personalization of the treatment to principal psychiatric pathologies (major depression, schizophrenia, bipolar disorder).

He is reviewer of the following journals: Clinical Neurophysiology, Molecular Psychiatry, Biological Psychiatry, American Journal Medicine Genetics B Neuropsychiatry Genetics, Journal of Psychiatric Research, The pharmacogenomics journal, BioMed Central Psychiatry; e delle Istituzioni: German Israeli Fondation for Scientific Research and Development (G.I.F.) e Health Research Board Ireland.

Prof. Gennarelli is currently the author of over 200 publications in peer-reviewed international journals.

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