Biographical Sketch

NAME:	POSITION TITLE:
MAGRI, CHIARA	ASSOCIATED PROFESSOR IN APPLIED BIOLOGY

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE	YEAR(S)	FIELD OF STUDY
University of Pavia, Pavia, Italy	M.S.	09/00	Human Genetics
University of Pavia, Pavia, Italy	PhD	01/04	Human Genetics
University of Milano, Milano, Italy	Specialization diploma	05/15	Medical Genetics

PERSONAL STATEMENT

I'm an Associated Professor in Applied Biology at the Department of Molecular and Translational Medicine, University of Brescia (Italy). Since 1998, I've worked in the field of the human genetics. At the Department of Genetics and Microbiology of Pavia University, during my Master degree and my Ph.D., I was involved in the study of human Y chromosome and mitochondrial DNA (mtDNA) haplotypes with the aim of better defining origins, evolution and patterns of dispersal of modern humans and better defining the role played by the "normal" and "pathological" mtDNA variation in diseases / phenotypes.

Since 2004, at the Department of Molecular and Translational Medicine, I've transferred my knowledge on phylogenetic and haplogroup analysis at the field of medical genetics of complex diseases. My research over the last nine years has been focused on identifying allelic variants involved in the etiopathogenesis of complex psychiatric diseases such as schizophrenia, major depression and bipolar disorders in order to better understand the biology and molecular basis of their etiology. The principal approach used was that of case-control association study on candidate genes. This approach was applied to the analysis of the AMPA glutamatergic receptor genes, to the study of genes involved in synapse plasticity and to mtDNA. Traditional association studies were then integrated with genome-wide association studies as well as fine mapping linkage analyses and sequencing of entire human mitochondrial DNAs of schizophrenia patients. Recently, I was also involved in the characterization, with SNP array, of medically relevant cryptic alterations and the identification and characterization of cryptic alterations in children with idiopathic mental retardation and apparently normal karyotype and their parents.

From 08/2009 to 03/2010 and from 08/2011 to 06/2012 my career was disrupted due to maternity leave. In 2012, after returning from maternity leave, my scientific interests extended to the study of the genetic basis of personality traits such as extroversion, neuroticism and anxiety. In particular, we highlighted how neuroticism and anxiety have a genetic background that is partially overlapping with that of major depression. As member of the "Genetics of Personality Consortium", I contribute to one of the first major GWAS conducted on healthy subjects that led to the identification of a new locus associated with neuroticism.

Currently, I am working on the sequencing of the genome and exome of patients suffering from schizophrenia and the functional study of the rare variants identified using cell models of neuronal derivation.

POSITIONS AND HONORS

Positions

2004 Fellow, Department of Biological Science and Biotechnology, Brescia University, Italy
2005-2018 Assistant Professor in Applied Biology, Department of Molecular and Translational Medicine, University of Brescia, Italy.
2018-present Associated Professor in Applied Biology, Department of Molecular and Translational Medicine, University of Brescia, Italy

Honors

2003 Award for the best poster presented at "The Third European-American School in Forensic Genetics and Mayo Clinic in Advanced Molecular and Cellular Medicine". Zagreb, Croatia.
2001/2003Award (I.U.S.S. of Pavia) by Advanced School of Integrated Formation (S.A.F.I.), Pavia, Italy

GRANTS

PROGETTO H&W 2015 UNIVERSITÀ DEGLI STUDI DI BRESCIA (Operative Unit): "Sviluppo di una piattaforma NGS e di pannelli genici per il miglioramento della diagnosi, della salute e del benessere di pazienti affetti da malattie mendeliane: applicazione alle connettivopatie ereditarie".
NARSAD Young Investigator Grant 2013 (PI): Whole Genome Sequencing Study of Schizophrenia Patients with High Levels of Autozygosity.
ACCORDO PER LO SVILUPPO DEL CAPITALE UMANO NEL SISTEMA UNIVERSITARIO LOMBARDO (2009) (Operative Unit): "Personal Genomics" Sviluppo e applicazione di tecnologie avanzate per la medicina personalizzata in campo oncologico e neurologico.
PRIN 2005 (Operative Unit): Disturbi d'ansia e legati allo stress: nuovi meccanismi e bersagli farmacologici. .
FONDI LOCALI (EX 60%) 2005 - present

PUBLICATIONS IN THE PAST FIVE YEARS

Magri, C., Giacopuzzi, E., Sacco, C., Bocchio-Chiavetto, L., Minelli, A., Gennarelli, M. Alterations observed in the interferon α and β signaling pathway in MDD patients are marginally influenced by cis-acting alleles (2021) Scientific Reports, 11 (1), art. no. 727. DOI: 10.1038/s41598-020-80374-2

Magri, C., Vitali, E., Cocco, S., Giacopuzzi, E., Rinaudo, M., Martini, P., Barbon, A., Grassi, C., Gennarelli, M. Whole blood transcriptome characterization of 3xTg-AD mouse and its modulation by transcranial direct current stimulation (TDCs) (2021) International Journal of Molecular Sciences, 22 (14), art. no. 7629. DOI: 10.3390/ijms22147629

Shoaib, M., Giacopuzzi, E., Pain, O., Fabbri, C., **Magri, C.,** Minelli, A., Lewis, C.M., Gennarelli, M. Investigating an in silico approach for prioritizing antidepressant drug prescription based on drug-induced expression profiles and predicted gene expression (2021) Pharmacogenomics Journal, 21 (1), pp. 85-93. DOI: 10.1038/s41397-020-00186-5

Cupaioli, F.A., Mosca, E., **Magri, C.,** Gennarelli, M., Moscatelli, M., Raggi, M.E., Landini, M., Galluccio, N., Villa, L., Bonfanti, A., Renieri, A., Fallerini, C., Minelli, A., Marabotti, A., Milanesi, L., Fasano, A., Mezzelani, A. Assessment of haptoglobin alleles in autism spectrum disorders (2020) Scientific Reports, 10 (1), art. no. 7758. DOI: 10.1038/s41598-020-64679-w

Maffioletti, E., Valsecchi, P., Minelli, A., **Magri, C.,** Bonvicini, C., Barlati, S., Sacchetti, E., Vita, A., Gennarelli, M. Association study between HTR2A rs6313 polymorphism and early response to risperidone and olanzapine in schizophrenia patients (2020) Drug Development Research, 81 (6), pp. 754-761. DOI: 10.1002/ddr.21686

Barbon, A., Magri, C. Rna editing and modifications in mood disorders
(2020) Genes, 11 (8), art. no. 872, pp. 1-17. DOI: 10.3390/genes11080872

Maffioletti, E., Gennarelli, M., **Magri, C**., Bocchio-Chiavetto, L., Bortolomasi, M., Bonvicini, C., Abate, M., Trabucchi, L., Ulivi, S., Minelli, A. Genetic determinants of circulating VEGF levels in major depressive disorder and electroconvulsive therapy response (2020) Drug Development Research, 81 (5), pp. 593-599. DOI: 10.1002/ddr.21658

Giacopuzzi, E., Gennarelli, M., Sacco, C., Filippini, A., Mingardi, J., **Magri, C.,** Barbon, A. Genome-wide analysis of consistently RNA edited sites in human blood reveals interactions with mRNA processing genes and suggests correlations with cell types and biological variables
(2018) BMC Genomics, 19 (1), art. no. 963 DOI: 10.1186/s12864-018-5364-8

Magri, C., Giacopuzzi, E., La Via, L., Bonini, D., Ravasio, V., Elhussiny, M.E.A., Orizio, F., Gangemi, F., Valsecchi, P., Bresciani, R., Barbon, A., Vita, A., Gennarelli, M. A novel homozygous mutation in GAD1 gene described in a schizophrenic patient impairs activity and dimerization of GAD67 enzyme
(2018) Scientific Reports, 8 (1), art. no. 15470 DOI: 10.1038/s41598-018-33924-8

Minelli, A., **Magri, C.,** Giacopuzzi, E., Gennarelli, M. The effect of childhood trauma on blood transcriptome expression in major depressive disorder (2018) Journal of Psychiatric Research, 104, pp. 50-54. DOI: 10.1016/j.jpsychires.2018.06.014

Gardella, R., Sacchetti, E., Legati, A., **Magri, C.,** Traversa, M., Gennarelli, M. Compound heterozygosity for a hemizygous rare missense variant (rs141999351) and a large CNV deletion affecting the FSTL5 gene in a patient with schizophrenia (2017) Psychiatry Research, 258, pp. 598-599. DOI: 10.1016/j.psychres.2016.10.057

Giacopuzzi, E., Gennarelli, M., Minelli, A., Gardella, R., Valsecchi, P., Traversa, M., Bonvicini, C., Vita, A., Sacchetti, E., **Magri, C.** Exome sequencing in schizophrenic patients with high levels of homozygosity identifies novel and extremely rare mutations in the GABA/glutamatergic pathways (2017) PLoS ONE, 12 (8), art. no. e0182778 DOI: 10.1371/journal.pone.0182778

Sacchetti, E., **Magri, C.,** Minelli, A., Valsecchi, P., Traversa, M., Calza, S., Vita, A., Gennarelli, M. The GRM7 gene, early response to risperidone, and schizophrenia: A genome-wide association study and a confirmatory pharmacogenetic analysis (2017) Pharmacogenomics Journal, 17 (2), pp. 146-154. DOI: 10.1038/tpj.2015.90

COURSES A.A 2020-2021

- **From 2016.** Reference Member of the PhD Board of the Program in Molecular Genetics, Biotechnologies and Experimental Medicine of the Università degli Studi di Brescia
- CdL Medicina – CI Biologia e Genetica – **Modulo di Genetica Generale** (BIO/13) (20 ore)
- CdL Biotecnologie – C.I Genetica e Genomica – **Modulo di Genetica Generale ed El. Di Genetica Umana (BIO/13)** (30 ore)
- CdL Infermieristica- C.I. Biochimica Biologia applicata e Genetica Medica- **Modulo di Biologia (sede di Cremona) (BIO/13)** (15 ore)
- CdL Fisioterapia- C.I. Biologia Genetica e Microbiologia- **Modulo di Biologia e Genetica (sede di Cremona) (BIO/13)** (12 ore)
- CdL Tecnica della riabilitazione Psichiatrica- C.I. Biologia, Biochimica e Genetica- **Modulo di Biologia (BIO/13)** (12 ore)
- CdL Educazione Professionale – C.I. Scienze Biomediche di base- **Modulo di Biologia (sede di Mantova) (BIO/13)** (12 ore)
- CdL Assistenza Sanitaria- C.I. Scienze Biomediche- **Modulo di Biologia (sede di Cremona) (BIO/13)** (12 ore)