PERSONAL INFORMATION

Luisa Bernardinelli

University of Pavia, Department of Brain and Behavioural Sciences. Full Professor of Medical Statistics

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Sex F | Date of birth 15/02/1955 | Nationality Italy

WORK EXPERIENCE

2011 – today
Head of Medical and Genomic Statistics Unit
Dep of Brain and Behavioral Sciences– University of Pavia

2003 – today
Full Professor of Medical Statistics
Faculty of Medicine and Surgery – University of Pavia

2001 – 2003
Associate Professor of Medical Statistics
Faculty of Medicine and Surgery – University of Pavia

1993 – 2000
Associate Professor of Medical Statistics
Faculty of Medicine and Surgery – University of Pavia

1988 – 1993
Associate Professor of Medical Statistics
Faculty of Medicine and Surgery – University of Sassari

EDUCATION AND TRAINING

1983
Diploma in Medical Statistics
University of Pavia

1978
Degree in Biological Sciences
University of Pavia

Honorary positions

- 2001-2007: visiting professor at the MRC Biostatistics Unit, Cambridge, UK
- 2007-today: visiting professor at the Statistical Laboratory of the Centre of Mathematical Sciences, University of Cambridge, UK
- 2013-today: honorary professor of Biostatistics, University of Manchester, UK
- 2014-today: Member of Scuola di Alta Formazione Dottorale (SAFD), University of Pavia
- 2014-today: visiting professor at the Centre of Biostatistics. Institute of Population Health. Manchester, UK

Collaborations with international consortium

- MolPAGE, Molecular Phenotyping to Accelerate Genomic Epidemiology
- IMSGC, International Multiple Sclerosis Genetic Consortium
- TAG, Tobacco and Genetics Consortium
- MIGC, Myocardial Infarction Genetics Consortium
- MIMOmics, Methods for Integrated analysis of Multiple Omics datasets

International research collaborations

- Department of Statistics, University of Oxford, Oxford, UK
- Department of Clinical Neurosciences, University of Cambridge
- School of Biological Science, University of East Anglia
- Carver College of Medicine, University of Iowa, USA
- Ghent University, Department of Applied Mathematics and Computer Science, Belgium
- LUMC, Leiden, NL
- KTH Royal Institute of Technology Stoccolma, SE
- Human Genetics, The Wellcome Trust SANGER Institute, Hinxton, UK
- European Bioinformatics Institute, The Wellcome Trust SANGER Institute, Hinxton KBioscience, UK
- University of Miami, Hussman Institute for Human Genomics, US Institute of Population Health, University of Manchester

Bibliometric indicators

- Papers published as articles in Scopus: n. 40. H-Index 18 - (accessed on March 31, 2016)
- Papers published as articles in Web of Science: n. 40. H-Index 20 - (accessed on March 31, 2016)
- Consortium related articles: n. 12. Total Impact Factor 256.645

Research interests

- **Statistical Methodology**. Bayesian analysis of the geographical variation of the disease risk in space and time; Monte Carlo methods; graphical models; Bayesian estimates and their use in descriptive epidemiology; measurement errors in the covariates in ecological studies; development and application of statistical methods in genetic epidemiology: analysis of the association in presence of measurement error, incomplete data both in familiar studies and in case-control studies. Analysis of microarray, methylation and proteomic data. Analysis of pedigree data. Causal inference, joint analysis of genetic and gene expression data to identify genes causally related to Multiple Sclerosis. Analysis of next generation sequencing data. Identification of biomarkers in plasma of Multiple Sclerosis patients.
- **Epidemiological Investigation**. Cancer epidemiology in Sardinia; epidemiology of mellitus insulin-dependent diabetes in Sardinia; epidemiology of multiple sclerosis in Sardinia; epidemiology of enuresis in schoolchildren. Geographical distribution of HLA using records of bone marrow donors in Lombardy; evaluation of social and welfare needs in patients suffering from multiple sclerosis. Association studies between candidate polymorphisms and type 2 diabetes and early myocardial infarction. Cancer genetics. Genetic epidemiology of Inflammatory Bowel Disease. The causal direct effect of FTO on susceptibility to myocardial infarction. Identification of susceptibility genes of multiple sclerosis in the Nuoro province. Investigation of the biological function of ACCN1 and multiple sclerosis. Identification of causal biomarkers in multiple sclerosis via a Mendelian randomization approach. The experience and interest in causal inference emerges from the organization of Workshops and Courses on causal inference to being one of the editor of the book “CAUSALITY: STATISTICAL PERSPECTIVES AND APPLICATIONS. Wiley, 2011”. Her scientific interest to mindfulness-based meditation approach has led to the organization of the workshop “Scienza e meditazione” held in Pavia, 9-10 October 2016. The workshop illustrated the evidence, the scientific methods and the different interpretations of meditation, plus practical sessions conducted by an expert meditator.

Selected publications

- Hadjixenofontos A, Gourraud PA, Bakthavachalam V, Foco L, Ticca A, Bitti P, Pastorino R, Bernardinelli L, McCauley JL. Enrichment for Northern European-derived multiple sclerosis risk alleles in Sardinia. Mult Scler. 2015; 21 (11): 1396-403
- Price MP, Gong H, Parsons MG, Kundert JR, Reznikov LR, Bernardinelli L, Chaloner K, Buchanan GF, Wemmie JA, Richerson GB, Cassell MD, Welsh MJ. Localization and behaviors in null mice suggest that ASIC1 and ASIC2 modulate responses to aversive stimuli. Genes Brain Behav. 2014;13(2):179-94.
- Berzuini C, Vansteelandt S, Foco L, Pastorino R, Bernardinelli L. Direct genetic effects and their estimation from matched case-control data. Genet Epidemiol. 2012; 36(6):652-62.
- Menni C, Lowell WE, Bentzen J, Bergamaschi R, Martinelli Boneschi F, Martinelli V, Bernardinelli L, Stenager E, Davis GE Jr, Foco L. Short and long term variation in ultraviolet radiation and multiple sclerosis. Int J Environ Res Public Health. 2012; 9(3):685-97.
- Ferrante G, Corrada E, Belli G, Zavalloni D, Scatturin M, Mennuni M, Gasparini GL, Bernardinelli L, Cianci D, Pastorino R, Rossi ML, Pagnotta P, Presbitero P. Impact of female sex on long-term outcomes in patients with ST-elevation myocardial infarction treated by primary percutaneous coronary intervention. Can J Cardiol. 2011; 27(6):749-55.

- Ardissino D, Berzuini C, Merlini PA, Mannuccio Mannucci P, Surti A, Burtt N, Voight B, Tubaro M, Peyvandi F, Spreafico M, Celli P, Lina D, Notarangelo MF, Ferrario M, Fetiveau R, Casari G, Galli M, Ribichini F, Rossi ML, Bernardi F, Marziliano N, Zonzin P, Mauri F, Piazza A, Foco L, Bernardinelli L, Altshuler D, Kathiresan S; Italian Atherosclerosis, Thrombosis and Vascular Biology Investigators. Influence of 9p21.3 genetic variants on clinical and angiographic outcomes in early-onset myocardial infarction. J Am Coll Cardiol. 2011; 58(4):426-34.
- De Caterina R, Talmud PJ, Merlini PA, Foco L, Pastorino R, Altshuler D, Mauri F, Peyvandi F, Lina D, Kathiresan S, Bernardinelli L, Ardissino D; on behalf of the Gruppo Italiano Aterosclerosi. Strong association of the APOA5-1131T>C gene variant and early-onset acute myocardial infarction. Atherosclerosis. 2011; 214(2):397-403.
- Cipriani V, Mannucci PM, Ardissino D, Ferrario M, Corsini G, Merlini PA, Notarangelo F, Lina D, Bernardinelli L. Familial aggregation of early-onset myocardial infarction. Eur J Intern Med. 2010; 21(6):511-5.
- Pastorino R, Menni C, Barca M, Foco L, Saddi V, Gazzaniga G, Ferrai R, Mascaretti L, Dudbridge F, Berzuini C, Murgia SB, Piras ML, Ticca A, Bitti PP, Bernardinelli L. Association between protective and deleterious HLA alleles with multiple sclerosis in Central East Sardinia. PLoS One. 2009;4(8):e6526.
- Meroni PL, Peyvandi F, Foco L, Bernardinelli L, Fetiveau R, Mannucci PM, Tincani A. Anti-beta 2 glycoprotein I antibodies and the risk of myocardial infarction in young premenopausal women. J Thromb Haemost. 2007; 5(12):2421-8.
- Bernardinelli L, Murgia SB, Bitti PP, Foco L, Ferrai R, Musu L, Prokopenko I, Pastorino R, Saddi V, Ticca A, Piras ML, Cox DR, Berzuini C.Association between the ACCN1 gene and multiple sclerosis in Central East and multiple sclerosis in Central East and multiple sclerosis in Central East Sardinia. PLoS One. 2007; 2(5):e480.
- Zwicker JI, Peyvandi F, Palla R, Lombardi R, Canciani MT, Cairo A, Ardissino D, Bernardinelli L, Bauer KA, Lawler J, Mannucci P. The thrombospondin-1 N700S polymorphism is associated with early myocardial infarction without altering von Willebrand factor multimer size. Blood. 2006; 108(4):1280-3.
- Mannucci PM, Bernardinelli L, Foco L, Galli M, Ribichini F, Tubaro M, Peyvandi F. Tissue plasminogen activator antigen is strongly associated with myocardial infarction in young women. J Thromb Haemost. 2005; 3(2):280-6.
- Casu A, Pascutto C, Bernardinelli L, Songini M; Sardinian Conscript Type 1 Diabetes Registry. Bayesian approach to study the temporal trend and the geographical variation inthe risk of type 1 diabetes. The Sardinian Conscript Type 1 Diabetes Registry. Pediatr Diabetes. 2004; 5(1):32-8.
- Bernardinelli L, Berzuini C, Seaman S, Holmans P. Bayesian trio models for association in the presence of genotyping errors. Genet Epidemiol. 2004; 26(1):70-80.
- Prokopenko I, Montomoli C, Ferrai R, Musu L, Piras ML, Ticca A, Murgia BS, Bernardinelli L. Risk for relatives of patients with multiple sclerosis in central Sardinia, Italy. Neuroepidemiology. 2003;22(5):290-6.