

LUCA FERRETTI – Curriculum Vitae

Born in Bergamo, Italy, 22/11/1957

DEGREES

- Bachelor in Biological Sciences in 1980 at the University of Pavia, with honors.
- Specialization in Genetics in 1982 at the University of Pavia, with honors
- PhD in Genetic Sciences in 1987 at the University of Pavia.

PROFESSIONAL EXPERIENCE AND ACADEMIC POSITION

- 1983 – 1984. Post Doctoral Associate in the laboratory of H.G. Khorana at MIT, Cambridge, USA.
- 1985 – 1998. Research Scientist of the Italian National Council of Research (CNR) at the Institute for the Defense and Management of Animal Germplasm (IDVGA), Milano, Italy.
- in 1986. Visiting scientist at ICRF, Dept Medical Oncology, Londra.
- in 1987. Visiting scientist at DKFZ, Institute of Experimental Pathology, Heidelberg.
- 1998 – 2010. Associate Professor of Genetics at the Faculty of Sciences, University of Pavia.
- December 2010 – current. Full Professor of Genetics at the Faculty of Sciences, University of Pavia

RESEARCH MANAGEMENT, APPOINTMENTS, REFERRALS

- Reviewer of papers for: Gene, Mammalian Genome, Genetics Selection and Evolution, Animal Genetics, Journal of Virology, LiveStock Science, Cytogenetic and Genome Research, BMC Genetics, BMC Genomics, PLOS One.
- 1991 - 1998. Member of the Scientific Board of the CNR IDVGA, Milano, Italy
- 1998 – 2004. Referee of project proposals on behalf of the Israel Science Foundation (N.153/98-17.2) and DEFRA (Department for Environment, Food & Rural Affairs) UK (N. ZK0409)
- 1998 – current. Member of the PhD Programme in Genetics, Molecular and Cellular Biology
- 2003 - 2010. Member of the board of experts of the Italian Ministry for Research and University for PRIN and FIRB grants reviewing
- 2004 – 2007. Member of the Scientific and Technical Board of the Intedipartimental Center for Computing, Faculty of Science, University of Pavia.
- 2004 – current. Member and of the Board later Director (2008) of the Laboratory of Experimental Biology, University of Pavia
- 2013 – 2017. Member of the board of SAFD, the Higher Education School for Doctoral Formation of the University of Pavia.
- 2013 – 2019. Coordinator of the Bachelor Programme in Biotechnology, University of Pavia
- From 2019. Erasmus delegate for students mobility of Biology and Biotechnology, University of Pavia.

TEACHING

UNIVERSITY OF MILAN (as research scientist of CNR)

- 1990 - 1991 & 1991 – 1992. Appointed by the Faculty of Veterinary Sciences to teach a course on “Molecular Biology and Genetic Engineering applied to animal Production”
- 1992 – 1996. Appointed by the Faculty of Veterinary Sciences to teach in the Doctorate Programme “Biotechnology applied to Veterinary Sciences and Zootechny”

UNIVERSITY OF PAVIA (as Professor of Genetics)

- 1998-1999. Cytogenetics, module of the Genetics course for first year graduates of the Biological Sciences Programme.
- 1999-2003. Genetic Engineering, for the master students of Applied Genetics. Genetic Engineering, module of Structural Biology, for graduate students of the Biotechnology Programme.
- 2001 - 2009 Genetics I, for graduate students of the Biotechnology Programme.
- 2002 - 2009 Biomolecular and Genetic Technologies, for the graduate students of the Biological Science Programme, Biomolecular and Genetic curriculum
- 2003 - 2009 Genetic Technologies and Molecular Biotechnology, for the graduate students of the Biotechnology programme. Genetic Engineering, for students of the Master in Experimental and Applied Biology.
- 2009 - 2017 Recombinant DNA and Biotechnology, for students of the Master in Experimental and Applied Biology.
- 2018 - current Genetic Engineering, for graduate students of the Biotechnology Programme
- 2001 - current. Genetics, for graduate students of the Bachelor in Biotechnology.

GRANTS AND PROJECTS PARTECIPATIONS

- CNR Finalized Project R.A.I.S.A. between 1990 - 1995.
- UE Bovine Genome Mapping Project, BOVMAP (BI02 CT92 0359).
- UE biodiversity project "Analysis of genetic diversity in cattle to preserve future breeding options" (AIR3 CT94-2066).
- "Study on marker genes affecting growth traits of beef cattle" in collaboration with the Institute of Animal Sciences (CAAS), Beijing, under a cooperation treaty between the Italian Committee for Agricultural Sciences and the Chinese CAAS.
- UE programme MASSES, FAIR5 CT97-3311
- UE project COMRAD, BIO4-98-0277
- CNR Strategic Project “Bovine Spongiform Encephalopathy” (grant N. 00.00252.ST74).
- PRIN 2000 project (national coordinator) contract MM07225558.
- PRIN 2001 (national coordinator), contract 2001077349.
- “Genetic, pathogenetic and biochemical factors affecting EST resistance and suscepibility”, TSE special project of the Italian Ministry of Health, 2001.
- “Genome sequencing of Wolbachia, symbiont of the parasite nematode *Dirofilaria immitis*”, MIUR 2002, RBAU01TA3W.
- PRIN 2003 (national coordinator), contract 2003052953.
- PRIN 2005 (national coordinator), contract 2005075801.
- PRIN 2007, contract 2007XRBAEN.
- “Reproduction and mitochondrial DNA”, MIPAAF) project SELMOL (2008 – 2010).

- “Genetic history (and prehistory) of Italy and its regions: a reconstruction based on DNA data from modern human and cattle populations”, Alma Mater Ticinensis Foundation, Pavia (2009 – 2011).
- PRIN 2017 (project code 2017CWHLHY) "Phylogeography, genomics and genome-wide association studies to investigate the origin and biology of an iconic model species: the barn swallow (*Hirundo rustica*).

SCIENTIFIC SOCIETIES

Italian Genetics Society (AGI), International Society of Animal Genetics (ISAG), Italian Society of Agricultural Genetics (SIGA) (1995-2008)

RESEARCH ACTIVITY

As a CNR research scientist of CNR and up to recent years my activity has dealt with the genetics of domestic animals, mainly livestock. I was the first to uncover in 1990 the genomic structure of the bovine casein genes locus, using a PFGE approach. For the following years I took part to an international effort to generate a physical-genetic map of the bovine genome, contributing with original contributions based on the FISH mapping of cosmid and BAC clones containing microsatellites. Later on I studied thoroughly the genetics of BSE, uncovering the novel PRND gene in the bovine and ovine, and the first known prion like gene in the bovine (SPRN).

In the last few years I got involved in the phylogenetics of domestic animals (principally, but not solely cattle) and of the human species, investigated with uniparental markers, i.e. mitochondrial DNA (mtDNA) and Y-chromosome (MSY). The aim of this ongoing study is to reconstruct the evolutionary history and demographic events that have involved present and past human populations (at both micro and macro-geographic levels) and some animals, especially domestic animals and those living in close contact with our species, like the very recent project on the iconic barn swallow.