

Giorgio Bertorelle

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Born: in Bolzano (Italy), 14 September 1964

Nationality: Italian

Current Position: Associate Professor in Genetics

Speciality: Population genetics, conservation genetics, molecular ecology, evolutionary biology

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1. Education

- 1996 Ph.D. in Genetics, University of Ferrara, Italy. Thesis defended: *Two new methods for the analysis of molecular genetic variation and inferences on human populations*
- The thesis was awarded in 1997 with the first prize (ex-aequo) by the Italian Genetics Association
- 1989 Master degree ("laurea") in Biology, University of Padova, Italy. Grade: 110/110 Cum Laude. Thesis defended: *Tactics of female mate choice in Cottus gobio: a computer simulation*

2. Languages

- Italian Mother tongue
- English Fluent (oral and written)
- French Fluent (oral), Conversant (written)
- German Conversant (oral and written)

3. Academic Positions

Permanent Positions

- 2007 - present Associate Professor in Genetics, University of Ferrara, Italy
- 1999-2007 Assistant Professor in Genetics, University of Ferrara, Italy

Postdoctoral Appointments

- 1997 - 1999 Postdoctoral Research Fellow, University of California at Berkeley, U.S.A. Laboratory of Prof. Montgomery Slatkin
- 1996 - 1997 Postdoctoral Research Fellow, University of Padova, Italy. Laboratory of Prof. Guido Barbujani

Fellowships and Short Visits

- 2005 Visiting Research Fellow, University of Bern. Laboratory of Prof. Laurent Excoffier. Three months.
- 2002 Visiting Research Fellow. University of Alberta, Edmonton, Canada. Laboratory of Prof. Bruce Rannala. One month.
- 2001 Visiting Research Fellow, Cardiff University, Cardiff, UK. Laboratory of Prof. Mike Bruford. Two months.
- 1996 Research Assistant, University of Geneva, Geneva, Switzerland. Laboratory of Dr. Laurent Excoffier. Five months.
- 1994 Visiting Ph.D. Student, University of Montpellier II, Montpellier, France. Laboratory of

Professor Francois Bonhomme. Seven months.

1991 - 1992 Visiting Graduate Student, University of Oxford, UK. Laboratory of Prof. William D. Hamilton. One year.

4. Other Academic Activities

2010 BMC Genetics Associate Editor

2005 - present Member of the Scientific Council of the *Italian Society for Evolutionary Biology* (SIBE)

2005 - 2008 President of the *Italian Society for Evolutionary Biology* (SIBE)
Number of members in 2009: 210

2005 - 2007 Member of the Scientific Council of the *Italian Genetics Association* (AGI)

2006 Co-founder of the biotechnology company *NGB Genetics*

2005 Co-founder of the *Italian Society for Evolutionary Biology* (SIBE). Ferrara, 24-26 August (see *Science*, 2005, 309:2160)

2004 - 2005 Scientific supervisor of the project “*Gennifer, Genetics New Investigations in Ferrara*”, funded by the ESF (European Social Fund) and Region Emilia Romagna, Italy, with 42.000 Euros, and aimed at establishing a biotechnology company

5. Research Interests (summary)

Reconstruction of evolutionary processes that shaped current and past patterns of genetic variation in various species, using both modern and ancient DNA data. In particular:

- the analysis of genetic variation in animal species with implications for their conservation and management
- the development and analysis of statistical methods for understanding genetic variation
- the analysis of genetic variation in human populations

6. Grant funding

In collaborative projects, indicated by asterisks, the cited amount refers to the fraction of the grant assigned to Giorgio Bertorelle.

Internal funding

2000 – 2009 * University of Ferrara. 35,000 euros. General internal funding

2008 University of Ferrara. 45,000 Euros. Funding of the PhD scholarship to Andrea Benazzo. *The relative role of modern and ancient DNA in demographic inferences: a simulation study*

2008 University of Ferrara. 9,000 Euros. Co-Funding of the one-year Post Doctoral scholarship to Stefano Mona. *Approximate Bayesian Computations: applications to conservation genetics*

- 2006 University of Ferrara. 9,000 Euros. Co-Funding of the one-year Post Doctoral scholarship to Stefano Mona. *MHC genetic variation: comparing different chamois populations to identify the relative role of demographic and selective processes*
- 2006 University of Ferrara. 9,000 Euros. Co-Funding of the one-year Post Doctoral scholarship to Barbara Crestanello. *Genetic variation at neutral and MHC markers in the Alpine chamois*
- 2005 University of Ferrara. 45,000 Euros. Funding of the PhD scholarship to Davide Besaggio. *Hill Tribes in Thailand: a model for the study of migrations and socio-cultural factors on the basis of uniparentally inherited genetic markers*
- 2005 University of Ferrara. 9,000 Euros. Co-Funding of the one-year Post Doctoral scholarship to Stephanie Dronnet. *Analysis of genetic variation in conservation biology: identifying the most appropriate molecular and statistical approaches*
- 2002 University of Ferrara. 45,000 Euros. Funding of the PhD scholarship to Barbara Crestanello. *Genetic variation, divergence, and translocations in the chamois (*Rupicapra* spp.): implications for taxonomy and management*
- 2001 University of Ferrara. 30,000 Euros. Co-funding of the PhD scholarship to Elena Fabbri. *Colonization processes of the Italian wolf in the Western Alps: genetic analyses with non-invasive samples*

External funding

- 2009 * European Commission, FP7. 65,000 Euros. *CONGRESS: Conservation Genetic Resources for Effective Species Survival*
- 2006 – 2007 * MIUR, Italian Ministry of University and Research. 28,800 Euros. *MHC evolution and population genetics in a mammal model: the domestic pig and its wild ancestor, the wild boar*
- 2007 University of Turin, Italy. 5,000 Euros. *Co-funding of a Post Doctoral scholarship.*
- 2006 Autonomous Province of Trento, Italy. 10,000 Euros. *Co-funding of a Post Doctoral scholarship.*
- 2004 - 2005 Dolomiti Bellunesi National Park, Italy. 18,600 Euros. *The chamois (*Rupicapra* spp.) population genetics, with management implications*
- 2001, 2005 CNR, Italian Research Council. 6,500 Euros. Short Term Programs for Mobility.
- 2004 Province of Florence, Italy. 5,000 Euros. *The genetic structure of the wild boar in Tuscany*
- 2002 - 2004 Soptom, Association for the study and conservation of tortoises, France. 17,000 Euros. *The Herman's tortoise (*Testudo hermanni*) in Europe: a genetic analysis*
- 2002 – 2004 * Autonomous Province of Trento, Italy. 65,000 Euros. *FAUNAGEN. Wildlife conservation and management: a genetic approach*

7. Organization of Workshops, Symposia and Conferences

- 2009 Co-organizer of the plenary symposium *Evolution: 200 years since Darwin*. Meeting of FISV, Italian Life Sciences Federation. Riva del Garda, Italy
- 2008 Co-organizer of the third meeting of the Italian Society for Evolutionary Biology. Alghero, Italy
- 2007 Co-organizer of the international workshop *Population Genetics for Animal Conservation II*. Monte Bondone, Italy
- 2006 Co-organizer of the first meeting of the Italian Society for Evolutionary Biology. Ferrara, Italy
- 2006 Co-organizer of the second meeting of the Italian Society for Evolutionary Biology. Firenze, Italy
- 2006 Co-organizer of the plenary symposium *The Evolution of Genes and Genomes*. Meeting of FISV, Italian Life Sciences Federation. Riva del Garda, Italy.
- 2005 Co-organizer of the plenary symposium *Population genetics for animal conservation*. Meeting of UZI, Italian Zoological Association. Rome, Italy
- 2005 Co-organizer of the parallel symposium *Population genetics and evolution*. FISV, Italian Life Sciences Federation. Riva del Garda, Italy
- 2004 Co-organizer of the plenary symposium *Conservation Genetics*. Meeting of FISV, Italian Life Sciences Federation. Riva del Garda, Italy
- 2003 Co-organizer of the international workshop *Population Genetics for Animal Conservation*. Monte Bondone, Italy

8. Dissertation Committee Memberships

- 2009 University of Bologna, Italy. PhD defence of 5 candidates. PhD program in Biodiversity and Evolution
- 2008 University of Sassari, Italy. PhD defence of 5 candidates. PhD program in Environmental Biology
- 2007 University of Bari, Italy. PhD defence of 4 candidates. PhD program in Genetics and Molecular Evolution
- 2007 University of Turin, Italy. PhD defence of 4 candidates. PhD program in Veterinary Biotechnology
- 2007 University of Ferrara, Italy. PhD defence of 5 candidates. PhD program in Biology
- 2006 University of Bologna, Italy. PhD defence of 5 candidates. PhD program in Evolutionary Biology
- 2006 University of Padova, Italy. PhD defence of 4 candidates. PhD program in Biodiversity and Evolution
- 2005 Università Joseph Fourier, Grenoble, France. Defence of one post-doctoral candidate for the *Habilitation à diriger des recherches*

9. Invited talk

Invited talk in the following Universities:

Italy	Padova
	Bologna
	Ferrara
	Milano
	Torino
	Verona
	Firenze
Switzerland	Geneva
	Bern
France	Montpellier
UK	Cardiff
USA	Berkeley
	Los Angeles
Canada	Edmonton
Thailand	Chaing Mai

10. Manuscript reviewing

American Journal of Human Genetics
American Journal of Physical Anthropology
Animal Conservation
Annals of Human Genetics
BMC Evolutionary Biology
BMC Genetics
Conservation Genetics
European Journal of Human Genetics
Human Heredity
Heredity
Journal of Evolutionary Biology
Journal of Theoretical Biology
Molecular Biology and Evolution
Molecular Phylogenetics and Evolution
Molecular Ecology
Molecular Ecology Notes
PloS Genetics
PloS One

Proceedings of the National Academy of Science USA

Proceedings of the Royal Society of London

11. Grant panels

2010	Austrian Science Fund
2009	University of Padova, Italy. Local funding of projects in Biological Sciences
2008	University of Padova, Italy. Local funding of projects in Biological Sciences
2007	European Commission, Seventh Framework Programme. Projects <i>Ideas, Starting Grant</i>
2007	University of Padova, Italy. Local funding of projects in Biological Sciences
2007	Estonian Science Foundation
2005	University of Ferrara, Local funding of projects in Biological and Agricultural Sciences
2005	Netherlands Organization for Scientific Research
2004	University of Ferrara, Local funding of projects in Biological and Agricultural Sciences
2004	European Commission, Sixth Framework Programme. Projects <i>NEST, New and Emerging Science and Technology</i>

12. Teaching

Complete courses (undergraduate and graduate level)

2000 - present	<i>Biostatistics</i> (48 hours) Undergraduate level, Biological Sciences, University of Ferrara
	This course is an introduction to the main concepts and methods in statistics, with applications to biological questions
2009 - present	<i>Evolutionary biology</i> (48 hours) Masters degree in Ecology and Evolution, University of Ferrara
	This course is a general overview of the major topics and methods in evolutionary biology. It includes also a brief history of the evolutionary thought and a brief discussion about the public debate and misconceptions.
2001 - 2009	<i>Phylogeny reconstruction</i> (24 hours) Undergraduate level, Biological Science, Curriculum in Genetics and Informatics. University of Ferrara
	This course is a basic introduction to the phylogenetic approach in evolutionary studies. The most commonly used methods are presented and applied using simple computer applications
2005 - 2009	<i>Conservation Genetics</i> (24 hours) Masters degree in Ecology and Evolution, University of Ferrara
	This course focuses on the contributions that analyses of genetic variation provide to the

understanding, conservation and management of species.

Some lectures or short courses (graduate level)

- 2009 *An Introduction to Conservation Genetics*
5 hours, University of Chiang May, Thailand
- 2008 *Conservation Genetics*
14 hours for the “Master in Conservation of Animal Biodiversity”, University of Rome “La Sapienza”
- 2005 *Wild boar management and conservation: the contribution of genetic data*
Lecture for “Doctoral Program in Evolutionary Biology and Biodiversity Conservation”, University of Turin
- 2005 *The study of DNA as a legal tool for biodiversity protection and management*
Lecture for the course “Genetics and its forensic applications”, Italian Genetics Association, Bologna
- 2004 *Cattle, pig, and humans: are they all Neolithic immigrants?*
Lecture at the “International School of Animal Genomics”, University of Viterbo
- 2003 *Genetic data analysis in the study of divergence and hybridization*
Lecture at the “School of Genetics: Conservation Genetics”, Italian Genetics Association, Cortona, Italy
- 2001 *Genetic data and neutrality tests*
Lecture at the “School of Genetics: Molecular Evolution”, Italian Genetics Association, Cortona, Italy
- 2001 *Populations genetics of inherited diseases in humans*
Lecture at the “School of Medical Genetics”, University of Verona
- 2000 *Population genetics and the coalescent*
Lecture for the “Doctoral program in Mathematical Statistics”, University of Turin

Supervision of undergraduate students (*Tesi di Laurea*, University of Ferrara)

- 2009 Elisa Lazzeri. *Analisi molecolare di popolazioni di lucertola vivipara (Zootoca vivipara) in Trentino: distribuzione ecologica e tassonomica*
- 2008 Luca Cornetti. *HPLC denaturante (DHPLC) e nuove applicazioni genetiche nelle investigazioni scientifiche*
- 2008 Silvia Borsetto. *L'elevato polimorfismo al sistema MHC (Major Histocompatibility Complex): il caso del camoscio alpino (Rupicapra rupicapra)*
- 2008 Elisa Bagni. *I loci microsatelliti in uno studio sulla variabilità genetica: dal laboratorio all'analisi statistica*
- 2008 Paolo Trapani. *La domesticazione bovina: un'analisi spazio-temporale della variabilità genetica al DNA mitocondriale*
- 2008 Francesca De Gaetano. *Analisi genetiche di testuggini (Testudo hermanni) potenzialmente destinate alle reintroduzioni in natura*

- 2008 Luca Penso Dolfin. *Una nuova classificazione tassonomica: significato, limiti e potenzialità del Dna Barcoding*
- 2006 Cosetta Mattioli. *Distanze genetiche per identificare l'origine di una popolazione: uno studio di simulazione*
- 2005 Diana Callegari. *Struttura genetica al sistema MHC e a loci microsatellite in popolazioni di camoscio delle Alpi orientali*
- 2005 Federico Monesi. *Uno strumento di simulazione per stimare i parametri demografici di una popolazione a partire dai dati genetici*
- 2005 Alex Duranti. *Analisi delle filogenesi ad un locus MHC in diverse popolazioni e specie di camoscio*
- 2004 Sara Mantovani *Divergenza genetica e ibridazione in popolazioni europee di testuggine comune (Testudo hermanni): implicazioni per la conservazione di questa specie*
- 2004 Deborah Patroncini. *La relazione tra variabilità genetica e asimmetria fluttuante fitness in alcune popolazioni di cervo*
- 2004 Lidia Migliori. *La variabilità genetica nel cinghiale europeo*
- 2003 Erika Franzoni. *Divergenza genetica e linguistica delle tribù delle colline thailandesi: analisi di polimorfismi nucleari*
- 2002 Marco Ferrari. *Tipizzazione genetica ed analisi dei processi di ibridazione e reintroduzione nelle popolazioni di cinghiale (Sus scrofa) dell'Italia centrale mediante lo studio di loci microsatelliti*
- 2001 Paolo D'Annibale. *Variabilità genetica nel mtDNA in popolazioni naturali e reintrodotte di capriolo*
- 2001 Luca Mirimin. *Variabilità genetica in popolazioni naturali di testuggine (Testudo hermanni)*
- 2000 Enrico Melli. *Polimorfismi di sequenze ripetute nella provincia di Ferrara: struttura genetica e modelli mutazionali*

Supervision of graduate students (Doctorate Projects, University of Ferrara)

- 2009 - Sibelle Villaca. *Reconstructing by Approximate Bayesian Computation (ABC) the history, demography, and domestication of the wild boar (Sus scrofa)*
- 2009 - Luca Cornetti. *Molecular ecology, taxonomy, and conservation genetics of the European common lizard Zootoca vivipara*
- 2008 - Andrea Benazzo. *The relative role of modern and ancient DNA in demographic inferences: a simulation study*
- 2005-2007 Davide Besaggio. *Hill Tribes in Thailand: a model in the study of migrations and sociocultural factors on the basis of uniparentally inherited genetic markers*
- 2002 - 2004 Barbara Crestanello. *Genetic variation, divergence, and translocations in the chamois (Rupicapra spp.): implications for taxonomy and management*
- 2002 - 2004 Elena Pecchioli. *Genetic structure and variation in Lepus timidus: micro and macro*

*geographical phylogenetic and adaptive aspects***External co-supervision of graduate students (Doctorate Projects)**

- 2009 Wibhu Kutanan. *Analysis of Genetic Admixture along Migration Route of Northern Thai People*. University of Chiang Mai, Thailand
- 2006 Andrea Piotti. *Gene flow estimation in the Norway spruce (Picea abies, Karst.): the genetics of colonization at treeline*. University of Parma
- 2004 Jatupol Kanpuansai. *Mitochondrial DNA variation in Thai speaking peoples in Northern Thailand*. University of Chiang Mai, Thailand
- 2004 Merixtell Genovart Millet. *The conservation genetics of a critically endangered endemic species, the Balearic shearwater*. IMEDEA and the University of the Balearic Islands, Spain
- 2003 Elena Fabbri. *Colonization processes of the Italian wolf in the Western Alps: genetic analyses with non-invasive samples*. University of Ferrara and Italian Wild Life Institute, Ozzano Emilia, Bologna

Supervision of post-doctoral fellows

- 2007 - 2009 Stefano Mona
- 2006 Barbara Crestanello
- 2005 Stephanie Dronnet

13. Translations

- 2010 *The Analysis of Biological Data*. Whitlock MC, Schluter D. Roberts and Company Publishers. Supervision of the translation. Zanichelli Press. In press.
- 2006 *A Primer of Conservation genetics*. Frankham R, Ballou JD, Brisco DA. Supervision of the translation. Italian version: *Fondamenti di Genetica della conservazione*. Zanichelli Press
- 2005 *Population genetics II: Changes in Allele Frequency*. In: A Primer of Ecological Genetics. Conner JK, Hartl DL. Sinauer Associates Inc. Pages 47-96. Italian version: *Elementi di Genetica Ecologica*. Piccin Press

14. Science Outreach

- 2004 - present Some popular articles. Bertorelle G. 2008. Ma l'ornitorinco non contraddice le teorie di Darwin. *Corriere della Sera*. 21 May. Bertorelle G, Goutner V, Livoreill B, Mazzotti S. 2007. Genetische Studien an Westlichen Landschildkroten. *Marginata* 15: 48-53. Bertorelle G. 2006. Il nostro futuro ha bisogno di Darwin. *La Stampa*. 13 December. Bertorelle G, Ferraguti M. 2005. Gli evolucionisti trovano casa. *Darwin*, Novembre-

- Dicembre. Vernesi C, Caramelli D, Barbujani G. Bertorelle G. 2005. Risposte dal DNA antico. *Archeologia Viva*, Gennaio/Febbraio, 76-78. Bertorelle G. 2004. Sulle antiche tracce della nostra origine. *Accademia*, Eurac. 34: 4-6
- 2003 - present Some participation to nationwide programs: *Il volo delle oche*, Radio 24 (24 November 2003; 13 May 2006; 2 September 2006); *Radio3Scienza*, Radio Rai (2 June 2003; 29 August 2005; 16 November 2006; 25 March 2009)
- 2008 - 2009 Evolution Megalab. Italian Coordinator. The Evolution Megalab is an educational and research project which will involve thousand of people across Europe to celebrate Darwin's bicentenary studying the evolution of the banded snail (*Cepaea nemoralis*)
- 2009 Darwin Year in Ferrara. Organizer with the Museum of Natural History. The program included eight public talks, four activities for the schools, a symposium, and a special visit to the Museum on February, 12 (Charles Darwin's birthday)
- 2008 Darwin Day in Ferrara. Organizer with the Museum of Natural History. The program included three public talks, one stage play, and one activity for the schools
- 2008 Genova Science Festival. Invited speaker at the public discussion *Innovation and diversity in biology, economics, and probability*
- 2007 Darwin Day in Ferrara. Organizer with the Museum of Natural History. The program included three public talks and one activity for the schools
- 2006 Evolution, Science, and Society. Translation, adaptation, and distribution of the 12 pages document *Evolution, Science, and Society* prepared and supported by different US scientific societies (editorial chair: DJ Futuyama)

15. Publications

Papers in refereed journal

Mona S, Catalano G, Lari M, Larson G, Boscato P, Casoli A, Sineo L, Di Patti C, Pecchioli E, Caramelli D, Bertorelle G. 2010. Population dynamic of the extinct European aurochs: genetic evidence of a north-south differentiation pattern and no evidence of post-glacial expansion. *BMC Evolutionary Biology*. In press.

Fuselli S, de Filippo C, Mona S, Sistonen J, Fariselli P, Destro-Bisol G, Barbujani G, Bertorelle G, Sajantila A. 2010. Evolution of Detoxifying Systems: the Role of Environment and Population History in Shaping genetic Diversity at Human CYP2D6 Locus. *Pharmacogenetics and Genomics*. In press.

Valsecchi E, Corkeron PJ, Galli P, Sherwin W, Bertorelle G. 2010. Genetic evidence for sex-specific migratory behaviour in the western south Pacific humpback whales. *Marine Ecology Progress Series*. 398:275-286.

Flanagan JM, McMahon G, Brendan Chia SH, Fitzpatrick P, Tighe O, O'Neill C, Briones P, Gort L, Kozak L, Magee A, Naughten E, Radomyska B, Schwartz M, Shin JS, Strobl W, Tyfield LA, Waterham HR, Russell H, Bertorelle G, Reichardt JKV, Mayne PD, Croke DT. 2009. The Role of Human Demographic History in Determining the Distribution and Frequency of Transferase-Deficient Galactosaemia Mutations. *Heredity*. 104: 148–154.

Crestanello B, Pecchioli E, Vernesi C, Mona S, Martinkova N, Janiga M, Hauffe HC, Bertorelle G. 2009. The genetic impact of translocations and habitat fragmentation in *Rupicapra* spp. *Journal of Heredity*. 100:691-708.

Barbisan F, Savio C, Bertorelle G, Patarnello T, Congiu L. 2009. Duplication polymorphism at MHC class II DRB1 locus in the wild boar (*Sus scrofa*). *Immunogenetics* 61:145-151.

Gabriele G, Vernesi C, Vicario S, Pecchioli E, Caccone A, Bertorelle G, Sbordoni V. 2009. Mitochondrial DNA variation in roe deer (*Capreolus capreolus*) from Italy: evidence of admixture in one of the last *C. c. italicus* pure populations from central-southern Italy. *Italian Journal of Zoology* 76:16-27.

Scandura M, Iacolina L, Crestanello B, Pecchioli E, Di Benedetto MF, Russo V, Davoli R, Apollonio M, Bertorelle G. 2008. Ancient vs. recent processes as factors shaping the genetic variation of the European wild boar: are the effects of the last glaciation still detectable? *Molecular Ecology* 17: 1745-1762.

Mona S, Crestanello B, Bankhead-Dronnet S, Pecchioli E, Ingrosso S, D'Amelio S, Rossi L, Meneguz PG, Bertorelle G. 2008. Disentangling the effects of recombination, selection, and demography on the genetic variation at a major histocompatibility complex class II gene in the alpine chamois. *Molecular Ecology* 17:4053-4067.

Caramelli D, Milani L, Vai S, Modi A, Pecchioli E, Girardi M, Pilli E, Lari M, Lippi B, Ronchitelli

A, Mallegni F, Casoli A, Bertorelle G, Barbujani G. 2008. A 28,000 years old Cro-Magnon mtDNA sequence differs from all potentially contaminating modern sequences. *PLoS ONE* 3(7):e2700.

Alboni P, Alboni M, Bertorelle G. 2008. The origin of the vasovagal syncope: to protect the heart or to escape predation? *Clinical Autonomic Research* 18:170-178.

Vernesi C, Bruford MW, Bertorelle G, Pecchioli E, Rizzoli A, Hauffe HC. 2008. Where's the Conservation in Conservation Genetics? *Conservation Biology* 22:802-804.

Kampuansai J, Bertorelle G, Castri L, Nakbunlung S, Seielstad M, Kangwanpong D. 2007. Mitochondrial DNA Variation of Tai Speaking Peoples in Northern Thailand. *ScienceAsia* 33: 443-448

Besaggio D, Fuselli S, Srikumool M, Kampuansai J, Castrì L, Tyler-Smith C, Seielstad M, Kangwanpong D, Bertorelle G. 2007. Genetic variation in Northern Thailand Hill Tribes: origins and relationships with social structure and linguistic differences. *BMC Evolutionary Biology* 7:S12.

Caramelli D, Vernesi C, Sanna S, Sampietro L, Lari M, Castrì L, Vona G, Floris R, Francalacci P, Tykot R, Casoli A, Bertranpetit J, Lalueza-Fox C, Bertorelle G, Barbujani G. 2007. Genetic variation in prehistoric Sardinia. *Human Genetics* 122:327- 336.

Genovart M, Oro D, Juste J, Bertorelle G. 2007. What genetics tell us about the conservation of the critically endangered Balearic Shearwater? *Biological conservation* 137:283-293.

Pellecchia M, Negrini R, Colli L, Patrini M, Milanese E, Achilli A, Bertorelle G, Cavalli-Sforza LL, Piazza A, Torroni A, Ajmone-Marsan P. 2007. The mystery of Etruscan origins: novel clues from *Bos taurus* mitochondrial DNA. *Proceedings of the Royal Society B* 274:1175-9.

Beja-Pereira A, Caramelli D, Lalueza Fox C, Vernesi C, Ferrand N, Sampietro L, Casoli A, Goyache F, Luis Royo L, Conti S, Lari M, Martini A, Ouragh L, Magid A, Atash A, Boscato P, Triantophylidis C, Ploumi K, Sineo L, Mallegni F, Taberlet P, Erhardt G, Bertranpetit J, Barbujani G, Luikart G, Bertorelle G. 2006. The origin of European cattle: evidence from modern and ancient DNA. *Proceedings of the National Academy of Science USA* 103:8113-8.

Caramelli D, Lalueza-Fox C, Condemi S, Longo L, Milani L, Manfredini A, de Saint Pierre M, Adoni F, Lari M, Giunti P, Ricci S, Casoli A, Calafell F, Mallegni F, Bertranpetit J, Stanyon R, Bertorelle G, Barbujani G. 2006. A highly divergent mtDNA sequence in a Neandertal individual from Italy. *Current Biology* 16:R630-2

Forlani A, Crestanello B, Mantovani S, Livoreil B, Zane L, Bertorelle G, Congiu L. 2005. Identification and characterization of microsatellite markers in Hermann's tortoise (*Testudo hermanni*, Testudinidae). *Molecular Ecology Notes* 5:228-230

- Coelho M, Luiselli D, Bertorelle G, Lopes IA, Seixas S, Destro-Bisol G, Rocha J. 2005. Microsatellite variation and evolution of human lactase persistence. *Human Genetics* 117:329-339.
- Barbujani G, Vernesi C, Caramelli D, Castri L, Lalueza-Fox C, Bertorelle G. 2004. Etruscan Artifacts: Much Ado about Nothing. *American Journal of Human Genetics* 75:923-927.
- Dupanloup I, Bertorelle G, Chikhi L, Barbujani G. 2004. Estimating the Impact of Prehistoric Admixture on the Europeans' Genome. *Molecular Biology and Evolution* 21:1361-1372.
- Mirimin L, Vernesi C, Bertolucci C, Mazzotti S, Bertorelle G. 2004. Mitochondrial DNA variation and divergence in three Hermann's tortoise (*Testudo hermanni*) populations. *Italian Journal of Zoology* Suppl 2, 199-201.
- Vernesi C, Caramelli D, Dupanloup I, Bertorelle G, Lari M, Cappellini E, Moggi-Cecchi J, Chiarelli B, Castri L, Casoli A, Mallegni F, Lalueza-Fox C, Barbujani G. 2004. The etruscans: a population-genetic study. *American Journal of Human Genetics* 74:694-704.
- Bertorelle G, Bruford M, Chemini C, Vernesi C, Hauffe HC. New flexible bayesian approaches to revolutionize conservation genetics. 2004. *Conservation Biology* 18:584.
- Beja-Pereira A, Luikart G, England PR, Bradley DG, Jann OC, Bertorelle G, Chamberlain AT, Nunes TP, Metodiev S, Ferrand N, Erhardt G. 2003. Gene-culture coevolution between cattle milk protein genes and human lactase genes. *Nature Genetics* 35:311-313.
- Barbujani G, Bertorelle G. 2003. Were Cro-Magnons too like us for DNA to tell? *Nature* 424:127.
- Dupanloup I, Pereira L, Bertorelle G, Calafell F, João Prata M, Amorim A, Barbujani G. 2003. A recent shift from polygyny to monogamy in humans is suggested by the analysis of worldwide Y-chromosome diversity. *Journal of Molecular Evolution* 57:85-97.
- Caramelli, C, Lalueza-Fox C, Vernesi C, Lari, M, Casoli A, Mallegni F, Chiarelli B, Dupanloup I, Bertranpetit J, Barbujani G, Bertorelle G. 2003. Evidence for a genetic discontinuity between Neandertals and Cro-Magnons. *Proceedings of the National Academy of Science USA* 100:6593-6597.
- Tighe O, Dunican D, O'Neill C, , Bertorelle G, et other 24 authors. 2003. Genetic diversity within the R408W phenylketonuria mutation lineages in Europe. *Human Mutation* 21:387-393.
- Zerjal T, Xue Y, Bertorelle G, and other 20 authors. 2003. The genetic legacy of the Mongols. *American Journal of Human Genetics* 72:717-721.
- Vernesi C, Crestanello B, Pecchioli E, Tartari D, Caramelli D, Hauffe H, Bertorelle G. 2003. The genetic impact of population decline and reintroduction in the wild boar (*Sus scrofa*): a microsatellite analysis. *Molecular Ecology* 12:585-595.

Vernesi C, Fuselli S, Castrì L, Bertorelle G, Barbujani G. 2002. Mitochondrial diversity in linguistic isolates of the Alps: a reappraisal. *Human Biology* 74:725-730.

O'Donnell KA, O'Neill C, Tighe O, Bertorelle G, Naughten E, Mayne PD, Croke DT. 2002. The mutation spectrum of hyperphenylalaninaemia in the Republic of Ireland: the population history of Irish revisited. *European Journal of Human Genetics* 10: 530-538.

Manni F, Rotola A, Caselli E, Bertorelle G, Di Luca D. 2002. Detecting recombination in TT virus: a phylogenetic approach. *Journal of Molecular Evolution* 55:563-572.

Vernesi C, Pecchioli E, Caramelli D, Tiedemann R, Randi E, Bertorelle G. 2002. The genetic structure of natural and reintroduced roe deer (*Capreolus capreolus*) populations in the Alps and Central Italy, with reference to the mitochondrial DNA phylogeography of Europe. *Molecular Ecology* 11:1285-1297.

Di Benedetto G, Erguven A, Stenico M, Castrì L, Bertorelle G, Togan I, Barbujani G. 2001. DNA diversity and population admixture in Anatolia. *American Journal of Physical Anthropology* 115:144-156.

Rannala B, Bertorelle G. 2001. Using linked markers to infer the age of a mutation. *Human Mutation* 18:87-100.

Slatkin M, Bertorelle G. 2001. The use of of intra-allelic variability for testing neutrality and estimating selection intensity and population growth rate, with applications to human genetic diseases. *Genetics* 158:865-874.

Dupanloup de Ceuninck, I., Bertorelle, G. 2001. Inferring admixture proportions from molecular data: extension to any number of parental populations. *Molecular Biology and Evolution* 18: 672-675.

Barbujani G, Bertorelle G. 2001. Genetics and the population history of Europe *Proceedings of the National Academy of Science USA* 98:22-25.

Bertorelle G, Bucchini L, Pilastro A, Matessi C. 1999. DNA fingerprinting data and the analysis of population genetic structure by comparing band-sharing patterns. *Molecular Ecology* 8:1851-1866.

Bertorelle G, and Rannala B. 1998. Using rare mutations to estimate population divergence times: A maximum likelihood approach. *Proceedings of the National Academy of Science USA* 95:15452:15457.

Bertorelle G, Excoffier L. Inferring admixture proportions from molecular data. 1998. *Molecular Biology and Evolution* 15:1298-1311.

Chikhi L, Destro-Bisol G, Bertorelle G, Pascali V, Barbujani G. 1998. Molecular clines suggest a recent, Neolithic ancestry of European populations. *Proceedings of the National Academy of Science*

USA 95:9053-9058.

Barbujani G, Bertorelle G, Chikhi L. 1998. Evidence for Palaeolithic and Neolithic gene flow in Europe. *American Journal of Human Genetics*. 62:488-491.

Bertorelle G, Barbujani G. 1997. Expected effects of mass screening policies on the frequency of cystic fibrosis homozygotes. *Human Genetics* 100:666-668.

Bertorelle G, Bisazza A, Marconato A. 1997. Computer simulation suggests that the spatial distribution of males influences female visiting behaviour in the river bullhead. *Ethology* 103:999-1014.

Stenico M, Nigro L, Bertorelle G, Calafell F, Capitanio MA, Corrain C, Barbujani G. 1996. High mitochondrial sequence diversity in linguistic isolates of the Alps. *American Journal of Human Genetics* 1363-1375.

Debraekeleer M, Chaventrè A, Bertorelle G, Verlingue C, Raguènes O, Mercier B, Ferec C. 1996. Linkage disequilibrium between the four most common cystic fibrosis mutations and microsatellite haplotypes in the Celtic population of Brittany. *Human Genetics* 98:223-227.

Bertorelle G, Calafell F, Francalacci P, Bertranpetit J, Barbujani G. 1996. Geographic homogeneity and non-equilibrium patterns of mtDNA sequences in Tuscany, Italy. *Human Genetics* 98:145-150.

Barbujani G, Bertorelle G, Capitani G, Scozzari R. 1995. Geographical structuring in the mtDna of Italians. *Proceedings of the National Academy of Science USA* 92:9171-9175.

Pilastro A, Bertorelle G, Marin G. 1995 Winter fattening strategies in two sympatric insectivorous passerines: analysis of environmental and social determinants. *Journal of Avian Biology* 26:25-32.

Bertorelle G, Bertranpetit J, Calafell F, Nasidze IS, Barbujani G. 1995. Do Basques- and Caucasian-speaking populations share non-Indo-European ancestors? *European Journal of Human Genetics* 3:256-263.

Bertorelle G, Barbujani G. 1995. Analysis of DNA diversity by spatial autocorrelation. *Genetic*. 140:811-819.

Bertorelle G, Slatkin M. 1995 The number of segregating sites in expanding human populations, with implications for estimates of demographic parameters. *Molecular Biology and Evolution* 12:887-892.

Barbujani G, Whitehead GN, Bertorelle G, Nasidze I.S. 1994 Testing hypotheses on processes of genetic and linguistic change in the Caucasus. *Human Biology*. 66:843-864.

Books authored

Bertorelle G, Bruford MW, Chemini C, Hauffe HC, Vernesi C. 2009. *Population Genetics for Animal Conservation* (eds). Cambridge University Press.

Books chapters

Bertorelle G, Caramelli D, Lalueza C, Vernesi C, Barbujani G. aDNA in the study of human evolution: problems, results, perspectives. In: *Molecular Markers, PCR and Ancient DNA: Technology, Troubleshooting and Applications*. Eds: Dorado G. Science Publishers, Inc. USA. In press.

Bertorelle G, Papetti C, Hauffe HC, Boitani L. 2009. Monitoring and detecting translocations using genetic data. In: *Population Genetics for Animal Conservation*. Cambridge University Press.

Mona S, Bertorelle G. 2008. Population Differentiation: Measures (version 2.0). In: *Encyclopedia of Life Sciences*. John Wiley & Sons, Ltd: Chichester

Bertorelle G, Barbujani G. 2006. Geographic Structure of Human Genetic Variation: Medical and Evolutionary Implications. In: *Encyclopedia of Genetics, Genomics, Proteomics and Bioinformatics*. Eds: Jorde L, Goldstein D. John Wiley & Sons.

Bertorelle G. 2006. Estinzione, ibridazione e sovrappopolamento: dati genetici e la gestione del cinghiale in Italia. In: *Fondamenti di Genetica della Conservazione* (Frankham R, Ballou JD, Briscole DA). Zanichelli Editore.

Bertorelle G. 2002. Population differentiation: measures of. In: *Nature Encyclopedia of the Human Genome*. Nature Publishing Group, Macmillan Publishers Ltd.

Bertorelle G, Excoffier L. 1996. A new estimator of population admixture based on molecular data. In *Mathematical Genetics*. Eds. M. Clementi and P. Forabosco. Padova, Cleup. Pg. 72-83.

Barbujani G, Bertorelle G. 1996. AIDA: Geographical patterns of DNA diversity investigated by autocorrelation analysis. In *Molecular Biology and Human Diversity*. Eds. A. J. Boyce and C. G. N. Mascie-Taylor. Cambridge. Cambridge University Press. Pg. 93-111.