

ELENA GIGLI

E-mail elena.gigli@unifi.it

Telf: +39 339 7984512

TRAINING

PhD in Biomedicine, Pompeu Fabra University, Spain (2011), Excellent cum laude

Title: Evolutionary genetics of Homo neanderthalensis: adaptive traits and methodological problems

Master in Biomedical Research, Pompeu Fabra University, Spain (2009) 60 credits. To obtain the title I have passed exams of Molecular and cellular pathology, Molecular pathology of systems, epidemiology and scientific communication. I also performed practical activity making a metagenomics analysis of bacteria retrieved in soil from El Sidron cave (Asturia, Spain).

Degree in Natural Sciences, University of Florence, Italy (2005) 105/110

Titole: Genetics analysis of Sardinian Neolithic samples (2996-2856 a.C, San Benedetto di Iglesias, CA)

FELLOWSHIPS

PhD fellowship from Ministerio de Educación y Ciencia de España. Ref. BES-2007-15529 (2007-2009)

Fellowship for short periods abroad from Secretariado de Estado de Universidades e Investigación (2009)

Marie Curie Research Training Network GeneTime. EU contract number MEST-2004-007909 (1 March 2009 - 31 May 2009)

SHORT COLLABORATIONS IN OTHER LABORATORIES

Visiting Student; Institute for Evolutionary Anthropology

Institute; Max Planck

Time: February 2014

Tutor: dr. Matthias Meyer – prof. **Svante Pääbo group**

During this period I learned to apply the last biomolecular techniques for recover and sequencing highly degrade ancient human samples.

Visiting Student; Centre for Ancient Genetic in Biological Institute and the Niels Bhor Institute University of Copenhagen

Time: 3 months during 2009

Tutor: prof. M. Thomas P. Gilbert – **Eske Willerslev group**

During these months I learned the basic of Next Generation Sequencing and thanks of this collaboration we develop a base-PCR method to reduce the modern human contamination. I published this work as author. Also I have implemented my ability to work in international research groups.

PARTICIPATION IN FUNDED RESEACH PROJECTS

Proyecto de Investigación Fundamental, Comisión Interministerial de Ciencia y Tecnología. Ref. BFU 2009-06974. Title of the project: Neandertal genomic diversity using ultrasequencing techniques.

Main researcher: Prof. Carles Lalueza-Fox

Members: dr. Oscar Ramirez Bellido, **Elena Gigli**

OTHERS SCIENTIFIC ACTIVITIES

Referee

Referee for PlosOne and BMC Genetics

Tutor

I take care of technical training of students, I teach them the bimolecular techniques used in prof. D. Caramelli laboratory and I help them in planning of experiments. My brief experience as a teacher of primary school taught me to motivate the students and to guide them during the learning process. This aspect is also very useful in the mentoring activity.

COMMUNICATION SKILLS

Italian (mother tongue)

Spanish

English

I can write, and speak English and Spanish fluently. During the master I also made a scientific communication course that helped me to better address oral presentations.

LABORATORY SKILLS

Advanced, cutting-edge skills in the extraction, sequencing and analysis of samples

Single-Stranded Library

Double-Stranded Library

mtDNA Capture

Shotgun sequencing

Ability in using of AmpFISTRY-filer and AmpFISTRIdentifiler PCR amplification kit in Forensic analysis

Nanodrop

Agilent

RT-PCR

PCR

Cloning

Extreme adroitness and precise handling skills

Strong attention to detail with the ability to produce work accurately and efficiently

Awareness of ancient and modern human/animals DNA research

Ability to participate in the day to day running of a laboratory

Ability to deliver and publish research outcomes

Good organizational skills

I can work well independently and in a team

Good communication skills

INFORMATICS SKILLS

Operating Systems: Windows and Linux

Programs: scripts for bioinformatics analysis of NGS data; MIA and mapDamage softwares; Office, Mega, ClustalW, Bioedit

WORKSHOP and COURSES

“A day with ancient DNA” Florence 22 March 2012

I seminario de antropologia forense en el marco de los derecho humanos. 9 juny **2009**. Residencia d'Investigadors del CSIC de Barcelona (Spain)

Biostat 2006. International summer school on statistical inference in biology and human science. Polo scientifico di Asti, 27 Giugno-7 Luglio **2006**

SCIENTIFIC MEETING

Talk as invited speakers:

Ancient DNA: Applications in human evolutionary history, The **Royal Society** at Chicheley Hall, Buckinghamshire, 20-21 November **2013**, **TALK:** Ancient DNA studies: new perspectives on old samples

Italian Young anthropologists congress, 13-14 September **2012** Florence, Italy
TALK: Neanderthal paleogenomic from El Sidron site

Other participation at conferences:

Ancient DNA: The First three decades, The Royal Society, London 18-19 November **2013**

XX Congress of the Italian Anthropologists, Ferrara University, Ferrara, 11-13 September **2013**

ISBA4: Fourth International Symposium on Biomolecular Archaeology. Copenhagen, 7-11 September **2010**.

International conference Molecular Anthropology in the Genomic Era. 3-5 Dicembre University of La Sapienza, Rome, Italy **2009**

Second Meeting of Italian Evolutionary Biologists, First SIBE-ISEB congress. 4-7 September, Florence, Italy **2006**

XVI Congresso degli Antropologi Italiani. Il processo di umanizzazione., Genova, Italia, 29-31 ottobre **2005**

XV Congresso dell'Associazione Italiana. Variabilità umana e storia del popolamento in Italia., Chieti, Italia, 28-30 settembre **2003**

OTHERS EXPERIENCE

JOBS

2009-2011: Practice Contract at CSIC (Consejo Superior de Investigación Científica. Barcelona, Spain)
May-July 2012: Mathematics teacher school “Galeotti”, Pescia (Italy)

September-July 2012: Mathematics teacher school “Galeotti”, Pescia (Italy)

-2006-2007: Science teacher, high school “Don Bosco”, Montecatini Terme (Italy)

PUBLICATIONS

- 1-González-Ruiz M, Santos C, Jordana X, Simón M, Lalueza-Fox C, Gigli E, Aluja MP, Malgosa A.** 2012. Tracing the origin of the east-west population admixture in the Altai region (Central Asia). *PLoS One*. 7(11):e48904
- 2-Rizzi E, Lari M, Gigli E, De Bellis G, Caramelli D.** 2012. Ancient DNA studies: new perspectives on old samples. *Genet Sel Evol*. 2012 6;44:21
- 3-Lalueza-Fox, C., Gigli, E., Sánchez-Quinto, F., de la Rasilla, M., Fortea, J., Rosas, A.**2012. Issues from Neandertal genomics: Diversity, adaptation and hybridisation revised from the El Sidrón case study *Quaternary International* 247 (1) PP. 10 - 14
- 4-Marc García-Garcerà*,Elena Gigli***, Federico Sánchez-Quinto, Oscar Ramírez, Francesc Calafell, Sergi Civit², Carles lalueza-Fox. 2011. Fragmentation of contaminant and endogenous DNA in ancient samples determined by shotgun sequencing; prospects for human palaeogenomics. *PlosOne*
* These authors equally contributed to the work
- 5-Lalueza-Fox C, Rosas A, Estalrich A, Gigli E, Campos PF, García-Taberner A, García-Vargas S, Sánchez-Quinto F, Ramírez O, Civit S, Bastir M, Huguet R, Santamaría D, Gilbert MT, Willerslev E, de la Rasilla M.** Genetic evidence for patrilocal mating behavior Neandertal groups. 2011. *Proc Natl Acad Sci U S A*
- 6-Lalueza-Fox C, Gigli E, Bini C, Calafell F, Luiselli D, Pelotti S, Pettener D** Genetic analysis of the presumptive blood from Loius XVI, king of France. 2010. *Forensic Sci Int Genet*
- 7-Lalueza-Fox C, Gigli E, Sanchez-Quinto F, de la Rasilla M, Fortea J, Rosas A** Issues from Neandertal genomics: diversity, adaptation and hybridisation revised from the El Sidron case study. 2010. *Quaternary International* doi:10.1016/j.quaint.2010.10.012
- 8-Lalueza-Fox C., Gigli E., de la Rasilla M., Rosas A.** Bitter taste in Neanderthals through the anlysis of the TAS2R38. 2009.*Bio.Lett.* 5(6):809-11
- 9-*Gigli E., *Rasmussen M., Civit S., Rosas A., de la Rasilla M., Fortea J., Gilbert MTP., Willerslev E, Lalueza-Fox C.** An improved PCR method for endogenous DNA retrieval in contaminated neandertal sample based on the use of blocking primers. 2009. *Journal of Archaeological Science* 36:2676-2679
*These authors equally contributed to the work
- 10-Ramiez O., Gigli E., Bover P., Alcover JA., Bertranpetit J., Castresana J., Lalueza-Fox C.** Paleogenimics in a temperate environment: shotgun sequencing from an extinct Mediterranean caprine. 2009. *PLoS One* 4(5):e5670
- 11-Helgason A., Lalueza-Fox C., Ghosh S., Sigurethardottir S., Sampietro ML., Gigli E., Baker A., Bertranpetit J., Arnadottir L., Thornorsteinsdottir U., Stefansson K.** Sequences from first settler reveal rapid evolution in Icelandic mtDNA pool. 2009. *PLoS One* 5(1):e1000343
- 12-Lalueza-Fox C., Gigli E., de la Rasilla M., Fortea J., Rosas A., Bertranpetit J., Krause J.** Genetic caracterizazion of the ABO blood group in Neandertals. 2008. *BMC Evol. Biol.* 8:342

13-Vives S., Gilbert MT., Arenas C., **Gigli E.**, Lao O., Lalueza-Fox C. Statistical analysis of post mortem DNA damage-derived miscoding lesions in Neandertal mitochondrial DNA. 2008. BMC Res Notes 1:40

14-Forteza J., de la Rasilla M., Garcia-Tabernero A., **Gigli E.**, Rosas A., Lalueza-Fox C. Excavation protocol of bone remains for Neandertal DNA analysis in El Sidron Cave (Asturias, Spain). 2008. J. Hum. Evol. 55(2): 353-7

15-Pilli, E., Fox, C.L., Capelli, C., Lari, M., Sampietro, L., Gigli, E., Milani, L. et al. 2008. Ancient DNA and forensics genetics: The case of Francesco Petrarca. Forensic Science International: Genetics Supplement Series 1:(1):469 - 470

16-Caramelli D., Lalueza-Fox C., Capelli C., Lari M., Sampietro ML., **Gigli E.**, Milani L., Pilli E., Guimaraes S., Chiarelli B., Marin VT., Casoli A., Stanyon R., Bertranpetit J., Barbujani G. Genetic analysis of the skeletal remains attributed to Francesco Petrarca. 2007. Forensic Sci. Int. 173(1):36-40