

CURRICULUM VITAE

Elena Bosch

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From 2012: Assistant Professor (Profesora Titular) at Pompeu Fabra University

Research interests

Human population genomics: analysis of the genomic and evolutionary forces that drive genome-wide patterns of genomic variation within human populations. Detection of natural selection and analysis of the genetic bases of adaptations. Evolutionary analysis of disease-related genes. Understanding complex disease and quantitative phenotypes in human populations.

Formal education

- June 1995, B.Sc. in Biology, University of Barcelona
- February 2000, Ph.D. by Universitat Pompeu Fabra. Thesis advisor: Jaume Bertranpetit. Dissertation title: "Genome Diversity of North African populations"

Positions held

- January 1996 - November 1998: Graduate student at the Anthropology Unit, Biology School, University of Barcelona (Barcelona, Spain). Fellowship from Direcció General de Recerca de la Generalitat de Catalunya, Spain (FI/96-1.153).
July - August 1997: Research visitor, Dept. of Biochemistry, University of Oxford (UK). Overseas research fellowship 97BV00018 by DGRGC.
- November 1998 - December 1999: Graduate student at the Unitat de Biologia Evolutiva, Departament de Ciències Experimentals i de la Salut, Universitat Pompeu Fabra (Barcelona, Spain). Fellowship from Direcció General de Recerca de la Generalitat de Catalunya, Spain (FI/96-1.153).
October-November 1998: Research visitor, Dept. of Genetics, Stanford University (US). Overseas research fellowship 98BV00077 by DGRGC.
- February 2000 - July 2002: Post-doctoral Research Associate, Dept. of Genetics, University of Leicester. Wellcome Trust funded project "The Y Chromosome as a Marker for the History and Structure of Human Populations".
- January 2003 - December 2003: Researcher at the Unitat de Biologia Evolutiva, Universitat Pompeu Fabra (Barcelona, Spain). Funded by Agència de Gestió d'Ajuts Universitaris i de Recerca de la Generalitat de Catalunya, Spain (2002RED-00009).
- January 2004 - December 2008: Researcher at the Unitat de Biologia Evolutiva, Universitat Pompeu Fabra (Barcelona, Spain). Funded by Ministerio de Ciencia y Tecnología, Spanish government ("Ramon y Cajal" Program).
- December 2008 – February 2012: Assistant professor (Professor Agregat) at the Evolutionary Biology Research Unit (UPF)
- February 2012 – now: Assistant professor (Professor Titular) at the Evolutionary Biology Research Unit (UPF)

Research certificates awarded

- July 2018: Accreditation Catedrático de Universidad – Rama Ciencias, ANECA
- October 2017: Advanced Research accreditation, AQU, Generalitat de Catalunya.
- Icrea academia award (2015)
- May 2010: Accreditation Profesor Titular de Universidad, ANECA
- November 2007: Certificate of outstanding research career, Programa I3. Spanish Ministry of Science and Innovation.
- February 2005: Research accreditation, AQU, Generalitat de Catalunya.

Doctoral theses directed

- Andrés Moreno Estrada: “Analysis of Human Genetic Variation in Candidate Genes under Positive Selection on the Human Lineage”. Universitat Pompeu Fabra. 18/07/2005 – 21/04/2009. Defended: 21 April 2009
- Elena Carnero Montoro: “Genomic and Functional Approaches to Human Adaptations”. Universitat Pompeu Fabra. 01/10/2010 – 25/10/2013. Defended: 25 October 2013
- Nino Spataro: “Human genetic disorders: linking Mendelian and complex diseases”. Universitat Pompeu Fabra. Start date: 11/10/2012 – 26/10/2016. Defended: 26 October 2016
- Juan Antonio Rodríguez Pérez: “Testing two evolutionary theories of ageing by using public genome-wide data”. Co-directed with Arcadi Navarro. Universitat Pompeu Fabra. 19/10/2012- 24/01/2017. Defended: 24 January 2017.
- Ana Roca-Umbert: “The role of positive selection on zinc transporter genes”. Universitat Pompeu Fabra. 11/01/2017 – 22/12/2021. Defended: 22 December 2021.
- Barbara Sinigaglia: “Deciphering adaptation in the human genome: the case of CaSR in south-east Asian hunter-gatherers”. Universitat Pompeu Fabra. 05/10/2017 – 25/11/2022. Defended: 25 November 2022.
- Rocio Caro Consuegra: “Genetic adaptation in underrepresented populations: the cases of Peruvian and North African populations”. Universitat Pompeu Fabra. 02/10/2018 – 18/12/2022. Defended: 15 February 2023.
- Jorge Garcia Calleja: “Exploring genetic adaptations in the Iberian Peninsula: the GCAT Dataset”. Universitat Pompeu Fabra. From 04/10/2021.
- Xavier Martí Perez: “Deciphering signatures of polygenic selection on the human genome”. Universitat Pompeu Fabra. From 10/10/2022.

Principal investigator in the following projects with competitive financing

- “Detección de selección positiva mediante el análisis del desequilibrio de ligamiento en genes de alta divergencia entre humanos y chimpancés (BFU2005-00243)”. Funded by Dirección General de Investigación, Spanish government, 2006 - 2008 (83,300 €). PI: Elena Bosch.

- "Identification and characterization of genes and regulatory elements under local natural selection in modern humans (Az: I/82 750)". Funded by Volkswagenstiftung (Germany), 2007-2010 (113,500 €). UPF-PI: Elena Bosch/ Max-Planck Institute Evolutionary Biology (Germany) - PI: Mark Stoneking.
- "Detección de la selección natural en genes candidatos: aproximación a las bases de la adaptación humana (BFU2008-01046)". Funded by Subdirección General de Proyectos de Investigación, Spanish government, 2009 – 2011 (108,900 €). PI: Elena Bosch.
- "Local Adaptation of Modern Humans to Micronutrient Deficiencies (Az: I/85 198)". Funded by Volkswagenstiftung (Germany), 2010-2012 (175,500 €). UPF-PI: Elena Bosch/ Max-Planck Institute Evolutionary Biology (Germany)-PI: Mark Stoneking.
- "Variantes genéticas raras en la enfermedad de Parkinson: Aproximación evolutiva y resecuenciación de alto rendimiento (SAF2011-29239)". Funded by Subdirección General de Proyectos de Investigación, Spanish government, 2012-2014 (108,900 €). PI: Elena Bosch.
- "Selección adaptativa en las poblaciones humanas (BFU2016-77961-P)". Funded by Agencia Estatal de Investigación (AEI), Fondo Europeo de Desarrollo Regional (FEDER), and Ministerio de Economía y Competitividad, Spanish government, 2017-2019 (220,000 €). PIs: Jaume Bertranpetit, Elena Bosch.
- "Adaptación Humana: de la señal genómica al fenotipo adaptativo (PID2019-110933GB-I00)". Funded by Ministerio de Ciencia, Innovación y Universidades (MCIU), Agencia Estatal de Investigación (AEI), Spanish government, 2020-28/02/2024 (242,000 €). PIs: Elena Bosch, Jaume Bertranpetit.
- PLAWB00621. Planetary Wellbeing Project. Universitat Pompeu Fabra. Identification and isolation of probiotic bacteria to protect the critically endangered Montseny Brook newt against chytridiomycosis. 2021 - 2023 (19,025 €). Co-PIs: Javier del Campo, Salvador Carranza, Elena Bosch.
- MMT24-IBE-01. Genetic Programming for Population Genomics. Programa Momento CSIC: Talento Digital. IBE (CSIC-UPF). 01/10/2024 – 01/10/2028. DRFC2 contract (70.814,73 €/year). PIs: Oscar Lao, Elena Bosch.
- PID2023-147621NB-I00. Descifrando Fenotipos Adaptativos en Poblaciones Humanas. Proyectos de Generación de Conocimiento. Ministerio de Ciencia, Innovación y Universidades. Agencia Estatal de Investigación, Spanish government. PIs: Elena Bosch, Francesc Calafell. UPF. 01/09/2024-31/08/2027. 215,000 €

Team member in the following projects with competitive financing

- "Variación del Genoma Humano: análisis de diversas regiones genómicas en poblaciones de especial interés". Dirección General de Investigación Científica y Técnica, 1996 - 1999 (17,970,000 ptas). PI: Jaume Bertranpetit.
- "Historia Biològica de les poblacions humanes (Grup de Recerca Consolidat)". Direcció General de Recerca, Comissionat per a Universitats i Recerca, Generalitat de Catalunya, 1996 - 1997 (4,600,000 ptas). PI: Jaume Bertranpetit.
- "Historia Biològica de les poblacions humanes (Grup de Recerca Consolidat)". Direcció General de Recerca, Comissionat per a Universitats i Recerca, Generalitat de Catalunya, 1998 - 1999 (2,000,000 ptas). PI: Jaume Bertranpetit.

- "The Y chromosome as a marker for the History and Structure of Human Populations". The Wellcome Trust, 1999 - 2004. PI: Mark A Jobling.
- "Segmental duplications in neurodevelopmental, neurological and behavioural disorders". Genoma España & Genoma Canada, 2004 - 2006. Coordinator: Xavier Estivill.
- "Genes de interés evolutivo". Genoma España, 2003 - 2004 (300,000 €). PI: Jaume Bertranpetit.
- "Diversitat Biològica Humana (Grup de Recerca Consolidat)". Direcció General de Recerca, Comissionat per a Universitats i Recerca, Generalitat de Catalunya, 2001 - 2004 (48,080.97 €). PI: Jaume Bertranpetit.
- "Mitochondrial DNA and Y-chromosome diversity in Bantu and Pygmy populations of Central Africa (Acciones Integradas Hispano-Francesas)". Dirección General de Investigación, 2005 - 2006 (10,612 €). PI: David Comas.
- "Diversitat Biològica Humana (Grup de Recerca Consolidat)". Direcció General de Recerca, Departament d'Universitats, Recerca i Societat de la Informació (DURSI), Generalitat de Catalunya, 2005 - 2008 (49,600 €). PI: Jaume Bertranpetit.
- "Analysis of candidate genes for schizophrenia using brain imaging as endophenotype (Acciones Hispano-Alemanas)". Dirección General de Investigación, 2007 - 2008 (8,120 €). PI: Araceli Rosa de la Cruz.
- CIBER de Epidemiología y Salud Pública (CIBERESP), Area de Enfermedades Infecciosas y Salud Internacional, 2007-2010. PI within the Unit: Jaume Bertranpetit. Coordinators within the area: Pedro Alonso y Ildefonso Hernandez. Instituto de Salud Carlos III (Ministerio de Sanidad y Consumo).
- "Grup de Recerca en Biologia Evolutiva (Grup de Recerca Consolidat)". Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR), Generalitat de Catalunya, 2009 - 2013 (49,920 €). PI: Jaume Bertranpetit.
- "Grup de Recerca en Genètica de les Poblacions Humanes (Grup de Recerca Consolidat 2014 SGR866)". Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR), Generalitat de Catalunya, 2014 - 2016 (49,500 €). PI: Jaume Bertranpetit.
- "Red temática en Genómica de la Adaptación (AdaptNET)". Acciones de dinamización "Redes de Excelencia". Dirección General de Investigación Científica y Técnica, Subdirección General de Proyectos de Investigación. 2016 - 2017 (40,000 €). PI: Julio Rozas.
- "Grup de Recerca en Genètica de les Poblacions Humanes (Grup de Recerca Consolidat 2017 SGR702)". Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR), Generalitat de Catalunya, 2017 - 2021 (37,800 €). PI: Jaume Bertranpetit.
- "Red temática en Genómica de la Adaptación (CGL2017-90681-REDT)". Acciones de dinamización "Redes de Excelencia". Agencia Estatal de Investigación. Ministerio de Ciencia, Innovación y Universidades. 01/07/2018 – 30/06/2020 (13,000 €). PI: Fernando González-Candelas.
- "Red temática en Genómica de la Adaptación (RED2022-134865-T)". Ayudas a "Redes de Investigación". Agencia Estatal de Investigación. Ministerio de Ciencia e Innovación. 01/07/2023 – 30/06/2024 (18,300 €). PI: Carles Vilà.
- "Grup de Recerca en Genètica de Poblacions Humanes (Grup de Recerca Consolidat 2021 SGR004666)". Agència Gestió Ajuts Universitaris i Recerca (AGAUR), Generalitat de Catalunya, 2022 – 2024. PI: David Comas.

Other merits

- Deputy Director of the IBE (CSIC-UPF), from 26th of June 2017.
- Coordinator of the Population and Ecosystems (PAE) Program within the MELIS Department, from November 2024.
- MELIS representative at the Directors Committee of the UPF Center for Studies on Planetary Wellbeing (from March 2024).
- Vocal del Consell Assessor de la Transparència de la UPF en representació del personal docent i investigador, from February 2019 to October 2023.
- Member of the DCEXS PhD Student Mentoring Committee, from November 2019 to May 2022.
- IBE (CSIC-UPF) representative within the PRBB Good Scientific Practice Working Group, from November 2013 to May 2017.
- Coordinator of the Evolutionary Biology and Complex System (BESC) Program within the DCEXS, from February 2016 to October 2022.
- September 2013: UPF Social Council Prize for Quality in Teaching
- Secretary (Exchange Program Coordinator) of the Faculty of Health and Life Sciences, Universitat Pompeu Fabra, from May 2010 to April 2013.
- 4 “sexenios de investigación” (1996-2001; 2003-2008; 2009-2014; 2015-2020)
- Manuscript reviewer for: “Trends in Genetics”, “Journal of Molecular Evolution”, “Forensic Science International”, “Genome Biology”, “European Journal of Human Genetics”, “Heredity”, “Human Mutation”, “BMC Evolutionary Biology”, “Annals of Human Biology”, “Annals of Human Genetics” and “American Journal of Human Biology”
- Peer reviewer for FWF Austrian Science Fund (2024), Wellcome Trust (Collaborative Award in Science 2018 Call), Agencia Estatal de Investigación (AEI), Becas Leonardo Fundación BBVA (2017, 2018, 2019 and 2020 calls), Beatriu de Pinós-AGAUR (2018 call), ANEP – Proyectos Plan Estatal Retos (Biomedicine area, 2017 call), Ikerbasque Basque Foundation for Science, French National Research Agency (ANR) - 2013 BIOADAPT call; technical commission member for Proyectos Retos-JIN within Biodiversity subarea (2015 call), and CRG International Postdoctoral Programme (2018 INTREPiD call) panel member 2018.
- Editorial Board of the journal Genes (<http://www.mdpi.com/journal/genes>, ISSN 2073-4425) from 27 May 2020.
- Maternity leaves from 13 July to 5 November, 2005 and from 29 May to 25 September, 2008.

Publications in SCI and/or MEDLINE

I have contributed a total of 75 publications (21 as senior or correspondence author, and 14 as first) in JCR indexed journals. My h-index is 34 (34 articles cited $\geq$ 34 times) and my publications accumulate a total of 4,292 citations (average 148 citations/year in 2019-2023; Web of Science, 02/09/2024).

1. Comas, D; Calafell, F; Mateu, E; Pérez-Lezaun, A; **Bosch, E**; Bertranpetit, J (1997). Mitochondrial DNA variation and the origin of the Europeans. *Human Genetics* 99 (4): 443-499. IF: 2.662 (30/90 in Genetics). Q2. 65 citations.
2. Pérez-Lezaun, A; Calafell, F; Mateu, E; Comas, D; **Bosch, E**; Bertranpetit, J (1997). Allele frequencies for 20 microsatellites in a worldwide population survey. *Human Heredity* 47 (4): 189-196. IF: 0.955 (68/90 in Genetics). Q3. 60 citations.
3. **Bosch, E**; Calafell, F; Pérez-Lezaun, A; Comas, D; Mateu, E; Bertranpetit, J (1997). Population history of North Africa: Evidence from classical genetic markers. *Human Biology* 69 (3): 295-311. IF: 0.986 (27/63 in Biology). Q2. 98 citations.
4. Pérez-Lezaun, A; Calafell, F; Seielstad, M; Mateu, E; Comas, D; **Bosch, E**; Bertranpetit, J (1997). Population genetics of Y-chromosome short tandem repeats in humans. *Journal of Molecular Evolution* 45(3): 265-270. IF: 3.181 (22/90 in Genetics). Q1. 76 citations.
5. Comas, D; Mateu, E; Calafell, F; Pérez-Lezaun, A; **Bosch, E**; Martínez-Arias, R; Bertranpetit, J (1998). HLA class I and class II DNA typing and the origin of Basques. *Tissue Antigens* 51(1): 30-40. IF: 2.305 (34/120 in Immunology). Q2. 75 citations.
6. Comas, D; Calafell, F; Mateu, E; Pérez-Lezaun, A; **Bosch, E**; Martínez-Arias, R; Clarimón, J; Facchini, F; Fiori, G; Luiselli, D; Pettener, D; Bertranpetit, J (1998). Trading genes along the silk road: mtDNA sequences and the origin of central Asian populations. *American Journal of Human Genetics* 63(6): 1824-1838. IF: 10.869 (6/103 in Genetics). Q1 (D1). 295 citations.
7. Pérez-Lezaun, A; Calafell, F; Comas, D; Mateu, E; **Bosch, E**; Martínez-Arias, R; Clarimón, J; Fiori, G; Luiselli, D; Facchini, F; Pettener, D; Bertranpetit, J (1999). Sex-specific migration patterns in central Asian populations, revealed by analysis of Y-chromosome short tandem repeats and mtDNA. *American Journal of Human Genetics* 65(1): 208-219. IF: 10.426 (5/105 in Genetics). Q1 (D1). 118 citations.
8. Hurles, ME; Veitia, R; Arroyo, E; Armenteros, M; Bertranpetit, J; Pérez-Lezaun, A; **Bosch, E**; Shlumukova, M; Cambon-Thomsen, A; McElreavey, K; de Munain, AL; Rohl, A; Wilson, IJ; Singh, LJ; Pandya, A; Santos, FR; Tyler-Smith, C; Jobling, MA (1999). Recent male-mediated gene flow over a linguistic barrier in Iberia, suggested by analysis of a Y-chromosomal DNA polymorphism. *American Journal of Human Genetics* 65(5): 1437-1448. IF: 10.426 (5/105 in Genetics). Q1 (D1). 130 citations.
9. **Bosch, E**; Calafell, F; Santos, FR; Pérez-Lezaun, A; Comas, D; Benchemsi, N; Tyler-Smith, C; Bertranpetit, J (1999). Variation in short tandem repeats is deeply structured by genetic background on the human Y chromosome. *American Journal of Human Genetics* 65(6): 1623-1638. IF: 10.426 (5/105 in Genetics). Q1 (D1). 98 citations.
10. Pérez-Lezaun, A; Calafell, F; Clarimón, J; **Bosch, E**; Mateu, E; Gusmao, L; Amorim, A; Benchemsi, N; Bertranpetit, J (2000). Allele frequencies of 13 short tandem repeats in population samples from the Iberian Peninsula and Northern Africa. *International Journal of Legal Medicine* 113(4): 208-214. IF: 1.497 (1/9 in Legal Medicine). Q1. 44 citations.
11. **Bosch, E**; Calafell, F; Pérez-Lezaun, A; Clarimón, J; Comas, D; Mateu, E; Martínez-Arias, R; Morera, B; Brakez, Z; Akhayat, O; Sefiani, A; Hariti, G; Cambon-Thomsen, A; Bertranpetit, J (2000). Genetic structure of north-west Africa revealed by STR analysis. *European Journal of Human Genetics* 8(5): 360-366. IF: 3.175 (36/114 in Genetics). Q2. 113 citations.
12. Rosser, ZH; Zerjal, T; Hurles, ME ; Adojaan, M; Alavantic, D; Amorim, A; Amos, W; Armenteros, M; Arroyo, E; Barbujani, G; Beckman, G; Beckman, L; Bertranpetit, J; **Bosch, E**; Bradley, DG; Brede, G; Cooper, G; Corte-Real, HBSM; de Knijff, P; Decorte, R; Dubrova, YE; Evgrafov, O; Gilissen, A; Glisic, S; Golge, M; Hill, EW; Jeziorowska, A;

- Kalaydjieva, L; Kayser, M ; Kivisild, T ; Kravchenko, SA; Krumina, A; Kucinskas, V; Lavinha, J ; Livshits, LA ; Malaspina, P; Maria, S; McElreavey, K; Meitinger, TA; Mikelsaar, AV; Mitchell, RJ; Nafa, K; Nicholson, J; Norby, S; Pandya, A; Parik, J; Patsalis, PC; Pereira, L; Peterlin, B; Pielberg, G; Prata, ML; Previdere, C; Roewer, L; Rootsi, S; Rubinsztein, DC ; Saillard, J ; Santos, FR; Stefanescu, G; Sykes, BC; Tolun, A; Villems, R; Tyler-Smith, C; Jobling, MA (2000). Y-chromosomal diversity in Europe is clinal and influenced primarily by geography, rather than by language. *American Journal of Human Genetics* 67(6): 1526-1543. IF: 10.351 (6/114 in Genetics). Q1 (D1). 498 citations.
13. **Bosch, E**; Calafell, F; Pérez-Lezaun, A; Comas, D; Izaabel, H; Akhayat, O; Sefiani, A; Hariti, G; Dugoujon, JM; Bertranpetit, J (2000). Y chromosome STR haplotypes in four populations from northwest Africa. *International Journal of Legal Medicine* 114(1-2): 36-40. IF: 1.497 (1/9 in Legal Medicine). Q1. 40 citations.
 14. Brakez, Z; **Bosch, E**; Izaabel, H; Akhayat, O; Comas, D; Bertranpetit, J; Calafell, F (2001). Human mitochondrial DNA sequence variation in the Moroccan population of the Souss area. *Annals of Human Biology* 28(3): 295-307. IF: 0.926 (19/42 in Biology). Q2. 80 citations.
 15. **Bosch, E**; Clarimón, J; Pérez-Lezaun, A; Calafell, F (2001). STR data for 21 loci in Northwestern Africa. *Forensic Science International* 116(1): 41-51. IF: 1.052 (4/8 in Legal Medicine). Q2. 19 citations.
 16. **Bosch, E**; Calafell, F; Comas, D; Oefner, PJ; Underhill, PA; Bertranpetit, J (2001). High-resolution analysis of human Y-chromosome variation shows a sharp discontinuity and limited gene flow between northwestern Africa and the Iberian Peninsula. *American Journal of Human Genetics* 68 (4): 1019-1029. IF: 10.542 (7/113 in Genetics). Q1 (D1). 206 citations.
 17. Roewer, L; Krawczak, M; Willuweit, S; Nagy, M; Alves, C; Amorim, A; Anslinger, K; Augustin, C; Betz, A; **Bosch, E**; Caglia, A; Carracedo, A; Corach, D; Dekairelle, AF ; Dobosz, T; Dupuy, BM; Furedi, S; Gehrig, C; Gusmao, L; Henke, J; Henke, L; Hidding, M; Hohoff, C; Hoste, B; Jobling, MA; Kargel, HJ; de Knijff, P; Lessig, R; Liebeherr, E; Lorente, M; Martinez-Jarreta, B; Nievas, P; Nowak, M; Parson, W; Pascali, VL; Penacino, G; Ploski, R; Rolf, B; Sala, A; Schmidt, U; Schmitt, C; Schneider, PM; Szibor, R; Teifel-Greding, J; Kayser, M (2001). Online reference database of European Y-chromosomal short tandem repeat (STR) haplotypes. *Forensic Science International* 118 (2-3): 106-204. IF: 1.052 (4/8 in Legal Medicine). Q2. 175 citations.
 18. Hurles, ME; Nicholson, J; **Bosch, E**; Renfrew, C; Sykes, BC; Jobling, MA (2002). Y chromosomal evidence for the origins of Oceanic-speaking peoples. *Genetics* 160 (1): 289-303. IF: 4.483 (23/115 in Genetics). Q1. 96 citations.
 19. **Bosch, E**; Lee, AC; Calafell, F; Arroyo, E; Henneman, P; de Knijff, P; Jobling, MA (2002). High resolution Y chromosome typing: 19 STRs amplified in three multiplex reactions. *Forensic Science International* 125 (1): 42-51. IF: 1.023 (5/9 in Legal Medicine). Q3. 111 citations.
 20. Ploski, R; Wozniak, M; Pawlowski, R; Monies, DM; Branicki, W; Kupiec, T; Kloosterman, A; Dobosz, T; **Bosch, E**; Nowak, M; Lessig, R; Jobling, MA; Roewer, L; Kayser, M (2002). Homogeneity and distinctiveness of Polish paternal lineages revealed by Y chromosome microsatellite haplotype analysis. *Human Genetics* 110 (6): 592-600. IF: 3.429 (33/115 in Genetics). Q2. 90 citations.
 21. **Bosch, E** & Jobling, MA (2003). Duplications of the *AZF_a* region of the human Y chromosome are mediated by homologous recombination between HERVs and are

- compatible with male fertility. *Human Molecular Genetics* 12 (3): 341-347. . IF: 8.597 (11/120 in Genetics). Q1 (D1). 72 citations.
22. Hurles, ME ; Maund, E ; Nicholson, J ; **Bosch, E**; Renfrew, C; Sykes, BC; Jobling, MA (2003). Native American Y chromosomes in Polynesia: The genetic impact of the Polynesian slave trade. *American Journal of Human Genetics* 72 (5): 1282-1287. IF: 11.602 (9/120 in Genetics). Q1 (D1). 33 citations.
 23. **Bosch, E**; Calafell, F; Rosser, ZH; Norby, S; Lynnerup, N; Hurles, ME; Jobling, MA (2003). High level of male-biased Scandinavian admixture in Greenlandic Inuit shown by Y-chromosomal analysis. *Human Genetics* 112 (4): 353-363. IF: 4.022 (27/120 in Genetics). Q1. 67 citations.
 24. **Bosch, E**; Rosser, ZH; Norby, S; Lynnerup, N; Jobling, MA (2003). Y-chromosomal STR haplotypes in Inuit and Danish population samples. *Forensic Science International* 132 (3): 228-232. IF: 1.616 (3/9 in Legal Medicine). Q2. 9 citations.
 25. **Bosch, E**; Hurles, ME; Navarro, A; Jobling, MA (2004). Dynamics of a human interparalog gene conversion hotspot. *Genome Research* 14 (5): 835-844. IF: 10.382 (9/120 in Genetics). Q1 (D1). 68 citations.
 26. King, TE; **Bosch, E**; Adams, SM; Parkin, EJ; Rosser, ZH; Jobling, MA (2005). Inadvertent diagnosis of male infertility through genealogical DNA testing. *Journal of Medical Genetics* 42 (4): 366-368. IF: 4.330 (25/124 in Genetics). Q1. 14 citations.
 27. Adams, SM; King, TE; **Bosch, E**; Jobling, MA (2006). The case of the unreliable SNP: recurrent back- mutation of Y-chromosomal marker P25 through gene conversion. *Forensic Science International* 159 (1): 14-20. IF: 1.397 (4/9 in Legal Medicine). Q2. 34 citations.
 28. **Bosch, E**; Calafell, F; González-Neira, A; Flaiz, C; Mateu, E; Scheil, H-G; Huckenbeck, W; Efremovska, L; Mikerezi, I; Xirotiris, N; Grasa, C; Schmidt, H; Comas, D (2006). Paternal and maternal lineages in the Balkans show a homogeneous landscape over linguistic barriers, except for the isolated Aromuns. *Annals of Human Genetics* 70: 459-487. IF: 2.727 (59/131 in Genetics). Q2. 101 citations.
 29. Gardner, M; Williamson, S; Casals, F; **Bosch, E**; Navarro, A; Calafell, F; Bertranpetit, J; Comas D (2007). Extreme individual marker F_{ST} values do not imply population-specific selection in humans: the *NRG1* example. *Human Genetics* 121: 759-762. IF: 3.974 (43/132 in Genetics). Q2. 21 citations.
 30. Berniell-Lee, G; Sandoval, K; Mendizabal, I; **Bosch, E**; Comas, D (2007). SNPlexing the human Y-chromosome: a single-assay system for major haplogroup screening. *Electrophoresis* 28(18): 3201-3206. IF: 3.609 (16/60 in Biochemical Research Methods), Q2. 11 citations.
 31. Moreno-Estrada, A; Casals, F; Ramírez-Soriano, A; Oliva, B; Calafell, F; Bertranpetit, J; **Bosch, E** (2008). Signatures of selection in the human olfactory receptor *OR511* gene. *Molecular Biology and Evolution* 25(1): 144-154. IF: 7.280 (4/39 in Evolutionary Biology). Q1. 28 citations.
 32. Berniell-Lee, G; Plaza, S; **Bosch, E**; Calafell, F; Jourdan, E; Césari, M; Lefranc, G; Comas, D (2008). Admixture and sexual bias in the population settlement of La Réunion Island (Indian Ocean). *American Journal of Physical Anthropology* 136(1):100-107. IF: 2.353 (3/61 in Anthropology). Q1 (D1). 11 citations.
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Contributions to scientific meetings (last five years)

- XXI Jornada de Biologia Evolutiva. Societat Catalana de Biologia. **Oral:** Sinigaglia B, Escudero J, Acosta S, Dobon B, Mondal M, Aguilera G, Forrow S, Martin-Caballero J, Bertranpetit J, Muñoz FJ, **Bosch E**. Exploring adaptive phenotypes for the R990G calcium-sensing receptor polymorphism. Barcelona, Spain. 29 June, 2022.
- X Jornada de Bioinformàtica i Genòmica. **Oral:** J García-Calleja, X Martí-Pérez, R de Cid, F Calafell, **E Bosch**. Exploring Genetic Adaptation in the Iberian Peninsula using a genome-wide scan of positive selection in the GCAT Data. Universitat de València, Burjassot, Spain. December 15-16, 2022.
- New Frontiers in Reconstructing Human Evolution History (E3-2023). Keystone Symposia. **Oral:** A Roca-Umbert, J Garcia-Calleja, M Vogel-González, A Fierro-Villegas, A Bosnjak, G Ill-Raga, V Herrera-Fernández, G Muntané, F Campelo, R Vicente, **E Bosch**. Adaptive archaic introgression related to cellular zinc homeostasis in humans. Hannover, Germany. May 29 – June 1, 2023.

- XXII Jornada de Biologia Evolutiva. Societat Catalana de Biologia. **Oral:** J Garcia-Calleja, A Roca-Umbert, M Vogel-González, A Fierro-Villegas, A Bosnjak, G Ill-Raga, V Herrera-Fernández, G Muntané, F Campelo, R Vicente, **E Bosch**. Adaptive archaic introgression related to cellular zinc homeostasis in humans. Barcelona, Spain. July 5, 2023.
- Society for Molecular Biology & Evolution (SMBE) 2023. Poster: A Roca-Umbert, J Garcia-Calleja, M Vogel-González, A Fierro-Villegas, A Bosnjak, G Ill-Raga, V Herrera-Fernández, G Muntané, F Campelo, R Vicente, **E Bosch**. Adaptive archaic introgression related to cellular zinc homeostasis in humans. Ferrara, Italy. July 23-27, 2023.
- XI Jornada de Bioinformàtica i Genòmica. Poster: A Roca-Umbert, J Garcia-Calleja, M Vogel-González, A Fierro-Villegas, A Bosnjak, G Ill-Raga, V Herrera-Fernández, G Muntané, F Campelo, R Vicente, **E Bosch**. Adaptive archaic introgression related to cellular zinc homeostasis in humans. Barcelona, Spain. December 15-16, 2023.
- SESBE 2024 – 9th Meeting of the Spanish Society for Evolutionary Biology. **Oral:** A Roca-Umbert, J Garcia-Calleja, M Vogel-González, A Fierro-Villegas, A Bosnjak, G Ill-Raga, V Herrera-Fernández, G Muntané, F Campelo, R Vicente, R, E Bosch. Adaptive archaic introgression related to cellular zinc homeostasis in humans: the *SLC30A9* case. Malaga, Spain. January 17-19, 2024.
- XXIII Jornada de Biologia Evolutiva 2024. Societat Catalana de Biologia. **Oral:** X Martí-Perez, J García-Calleja, R de Cid, F Calafell, **E Bosch**. Exploring Adaptation across Europe through a Polygenic Perspective. Barcelona, Spain. June 20, 2024.
- Society for Molecular Biology & Evolution (SMBE) 2024. Poster: I Derkx, F Ceballos, SA Biagini, S Subedi, P Rajbhandari, A Gyawali, **E Bosch**, L Vinicius, J Bertranpetit, A Migliano. The genetic population history of the last Himalayan hunter-gatherers. Puerto Vallarta, Mexico. 7-11 July, 2024.
- Seminaris de Recerca en Genòmica i Evolució. Universitat Autònoma de Barcelona. **Invited: E. Bosch**. Deciphering Human Adaptation: From Detecting Genomic Signatures to Understanding Adaptive Phenotypes. Bellaterra, Spain. 20 September, 2024.
- XII Jornada de Bioinformàtica i Genòmica. Secció de Bioinformàtica i Genòmica de la SCB, Universitat de Lleida. **Oral:** X Martí-Perez, J García-Calleja, R de Cid, F Calafell, **E Bosch**. Exploring Adaptation across Europe through a Polygenic Perspective. Lleida, Spain. 12 -13 December 2024.
- SMBE 2025 – Annual Meeting of the Society for Molecular Biology & Evolution. Poster: J García-Calleja, CA Fortes-Lima, O Lao, **E Bosch**. The *SLC30A9* Met50Val Case: ABC-Based Testing of Denisovan Adaptive Introgression. Beijing, China. July 20-24, 2025.
- SMBE 2025 – Annual Meeting of the Society for Molecular Biology & Evolution. Poster: X Martí-Pérez, J García-Calleja, A Jiménez-Navarro, F Calafell, R del Cid, **E Bosch**. Exploring Human Adaptation Across Europe Through a Polygenic Perspective. Beijing, China. July 20-24, 2025.
- ESEB 2025 – Congress of the European Society for Evolutionary Biology. Poster: J Garcia-Calleja, O Lao, **E Bosch**. The *SLC30A9* gene case: Testing Denisovan Adaptive Introgression using Approximate Bayesian Computation. Barcelona, Spain. 17-22 August 2025.
- ESEB 2025 - Congress of the European Society for Evolutionary Biology. Poster: Tulloch Jiménez S, Estarellas M, Adams D, Bonacolta A, Pagone V, Fernández-Guiberteau, Amat F, Montori A, Calafell F, Obon E, Alonso M, Sanmartín M, Marsol R, Guinart D, Solórzano S, Talavera A, Carranza B, Bosch E, del Campo J, Carranza S. Comparative microbiome analyses reveal differences between wild and captive populations of the Montseny Brook Newt (*Calotriton arnoldi*). Barcelona, Spain. 17-22 August 2025.