

Curriculum Vitae

Beatriz Gamarra Rubio

CONTACT INFORMATION

Email: beagamarra@gmail.com, bgamarra@iphes.cat

Researcher ID: J-1969-2017

ORCID ID: 0000-0003-3764-497X

Website: <https://beatrizgamarrarubio.com/>
<http://www.iphes.cat/gamarra-beatriz>
https://www.researchgate.net/profile/Beatriz_Gamarra
<http://www.microwear.org/b-gamarra.php>

EDUCATION

- 2009- 2014 **Ph. D. in Biodiversity.** *Cum laude.*
Unit of Anthropology, Dept. of Animal Biology, University of Barcelona, Spain.
Thesis: *Phylogenetic and adaptive implications of dental morphology variability of extant and fossil Catarrhini primates.* Supervisors: Dr. A. Pérez-Pérez and Dr. Jordi Galbany i Casals.
- 2008- 2009 **M. S. in Primatology.**
Faculty of Psychology, University of Barcelona, Spain.
Thesis: *Geometric Morphometric Analysis of second lower molar in extant and fossil primates.* Supervisor: Dr. Jordi Galbany i Casals.
- 2003- 2008 **B. S. in Biology.**
Faculty of Biology, University of Barcelona, Spain.

CURRENT POSITION

- 01/2019 – 06/2021 **Post- Doctoral Research Fellow**
Institut Català de Paleoecologia Humana i Evolució Social (IPHES), Tarragona, Spain. Beatriu de Pinòs (BP-2017) Post-Doctoral Fellowship. Project title: Dental analyses of the first agropastoralists: an integrative approach.

PREVIOUS POSITIONS

- 06/2016- 06/2018 **MSCA Research Fellow (Post- Doctoral Research Fellow).**
Social Science and Law/Archaeology, University College Dublin, Ireland.
Marie Skłodowska-Curie Individual Fellowship. Project title: “An integrative analysis of shifting trends in dental traits in human populations from Neolithic to Iron Age” (ANCIENT_TEETH).
- 12/2015 05/2016 **Post- Doctoral Research Fellow.**
Social Science and Law/Archaeology, University College Dublin, Ireland.
Funded by IRC “ From hunters to farmers the evolution of human populations preceding the emergence of agriculture ” (Dec 2013- Jun 2016).
- 07/2015- 11/2015 **Research Assistant.**
School of Archaeology, University College Dublin, Ireland.
Funded by ERC “From the earliest modern humans to the onset of farming, 45,000-4,500 BP” (Oct 2012 - Dec 2015; €1.18m).
Responsibilities: provide assistance to the completion of the analysis of 200 human bones from various archaeological sites. The analysis entailed DNA born preparation, extraction protocols and library preparations protocols as well as sequencing at UCD-Conway Intitute on the Illumina platform.
- 2010 – 2014 **Experimental Animal Technician.**
Experimental Animal Unit (Campus Bellvitge), University of Barcelona, Spain.

Responsibilities: Installation, maintenance and cleaning of rodents, Zebra fish, ferrets, pigs and dogs; handling and moving animals; obtaining biological samples as blood drawing and laryngopharyngeal and caecum sampling with sterile cotton buds; monitoring animal conditions; rodent breeding and colony monitoring; anesthetic and euthanasia animal procedures.

RESEARCH EXPERIENCE

- **Member of Research Groups and Scientific associations**

04/2017 – present – Member of Irish Quaternary Association (Ireland).

2017, 2020 – Member of European Association of Archaeologists.

07/2015 – 06/2018 – Member of Ron Pinhasi team (<https://sites.google.com/site/pinhasierc/home>), School of Archaeology, University College Dublin/Dept. Anthropology, University of Vienna. PI: Ron Pinhasi. Study of dental morphology, dietary patterns (isotopes) and paleogenomics of ancient prehistoric populations.

2007 – present – Member of Primate Evolutionary Biology and Dental Ecology group (<http://www.microwear.org/>), Dept. of Evolutionary Biology, Ecology and Environmental Sciences, University of Barcelona. PI: Dr. Alejandro Pérez-Pérez. Study of dental ecology, tooth morphology, cranial morphology and skeletal anatomy primates and hominins.

- **Mobility stays**

02/2018 Laboratory of Physical Anthropology and ancient DNA, Department of Cultural Heritage, Ravenna, University of Bologna (Italy). Responsible researcher: Prof. Stefano Benazzi.

01/2018 Department of Anthropology, University of Vienna (Austria). Responsible researcher: Prof. Ron Pinhasi.

06/2016 Department of Archaeology, University of Cambridge (UK). Responsible researcher: Prof. Jay Stock.

- **Field and Museum Experience**

07/2016 Collection of human bone samples for “Ancient Teeth” Marie Skłodowska-Curie project at Herman Ottó Múzeum, Miskolc (Hungary).

Collection of human bone samples for IRC project at University of Copenhagen, Copenhagen (Denmark).

05/2013, 07/2014 *In vivo* mandrill (*Mandrillus sphinx*) tooth molding at Parc de la Lékédi (Gabon). Collaboration with Project Mandrillus, directed by Dr. Marie Charpentier (Centre Nationale du Recherche Scientifique (CNRS) and University of Montpellier, France).

2011 Primate tooth digital imaging. Natural History Museum of London (UK).

2011 Primate dental molding. Royal Belgian Institute of Natural Science, Brussels, (Belgium).

2009 – 2011 Primate dental molding. Institut Català de Paleontologia, Sabadell (Spain).

2009 Primate dental molding. Natural Science Museum of Barcelona (Spain).

2007 – 2008 Recording of ethological data of diary activity, space use and social interaction pattern of a chimpanzee group (*Pan troglodytes*), directed by Carme Maté and Marc Escobar. Zoo Park of Barcelona (Spain).

2005 – 2006 Study of Hymenoptera plague in crops, directed by Dra. Marta Goula. Department of Animal Biology, University of Barcelona (Spain).

- **Participation and collaboration in international research projects**

12/2015 – 05/2016 – **Researcher**. RPG2013-2, Irish Research Council Advanced Research Project Grant. From hunters to farmers: the evolution of human populations preceding the emergence of agriculture. €343,814. School of Archaeology, University College

Dublin (Dublin, Ireland). PI: Dr. Ron Pinhasi. Stable isotope analysis of prehistoric human population.

07/2015 – 12/2018 – **Collaborator**. Reich Laboratory (<https://reich.hms.harvard.edu/>), Department of Genetics, Harvard Medical School (Boston, USA). Co-authorship of several papers (Nature, Science).

07/2015 – 12/2015 – **Research Assistant**. ERC-2010-StG 263441- European Research Council (ERC) Starting Grant. From the earliest modern humans to the onset of farming (45,000-4,500 BP). €1.18m. School of Archaeology, University College Dublin (Dublin, Ireland). PI: Dr. Ron Pinhasi. Preparation of bone samples for DNA extraction and sequencing; technician lab management.

05/2013 – 07/2014 – **Collaborator**. Mandrillus project (<http://www.projetmandrillus.com/>), Centre National de la Recherche Scientifique (Montpellier, France). PI: Dr. Marie Charpentier. Primate dental moulding at Park de la Lévedi (Gabon).

• **Participation in national research projects**

2019 – 2021 **Collaborator**. MICINN-FEDER PGC2018-093925-B-C32. Ministry of Science, Innovation and Universities (Spain). “*Comportamiento eco-social de los homínidos de la Sierra de Atapuerca durante el Cuaternario V*”. €396,880. Institut Català de Paleocologia Humana i Evolució Social. Principal Investigator: Dr. Marina Mosquera.

2019 – 2020 **Member**. 2017 SGR 1040. Generalitat of Catalonia (Spain). € 60,628. *Social, cultural and biological Evolution during the Pleistocene (StEP)*. Program: *Ajuts per donar suport a les activitats dels grups de Catalunya* (SGR 2017- 2019). AGAUR - Agència de Gestió d'Ajuts Universitaris i de Recerca. Principal Investigator: Dr. Andreu Ollé.

2018 – 2020 **Collaborator**. 2017 SGR 102. Generalitat of Catalonia (Spain). *Grup d'Estudi de la Biologia Evolutiva dels Homínids i altres Primats*. Program: *Ajuts per donar suport a les activitats dels grups de Catalunya* (SGR 2017- 2019). AGAUR - Agència de Gestió d'Ajuts Universitaris i de Recerca. Principal Investigator: Dr. Alejandro Pérez-Pérez.

2015 – 2017 **Collaborator**. CGL2014-52611-C2-1-P, Ministry of Economy and Competitiveness (Spain). “*Adaptaciones anatómicas de la región maxilofacial en Primates en relación con la dieta y el hábitat: implicaciones evolutivas y funcionales*”. €72,600. Dept. of Animal Biology, University of Barcelona. Principal Investigator: Dr. Alejandro Pérez-Pérez.

2014 – 2016 **Collaborator**. SGR2014-45 Generalitat of Catalonia (Spain). *Biologia Evolutiva dels Humans i d'altres Primats*. Program: PIGC - *Projectes de recerca per potenciar els grups de recerca consolidats*. AGAUR - Agència de Gestió d'Ajuts Universitaris i de Recerca. Principal Investigator: Dr. Alejandro Pérez-Pérez.

2012 – 2014 **Collaborator**. CGL2011-22999, Ministry of Economy and Competitiveness (Spain). “*Medición de la tasa de cambio morfológico en relación con el cambio climático: modelos evolutivos en primates e implicaciones filogenéticas*”. €60,000. Dept. of Animal Biology, University of Barcelona. Principal Investigator: Dr. Alejandro Pérez-Pérez.

2011 **Collaborator**. CGL2010-15340, Ministry of Economy and Competitiveness (Spain). “*Adaptación y ambiente: modelos anatómicos y ecológicos de la dentición y el esqueleto en primates cercopitecoideos, hominoideos y poblaciones humanas cazadoras-recolectoras*”. €9,000. Department of Animal Biology, University of Barcelona. Principal Investigator: Dr. Alejandro Pérez-Pérez.

2009 – 2013 **Collaborator**. 2009 SGR 884, Generalitat of Catalonia (Spain). *Grup d'Estudis d'Evolució Dels Homínids i d'altres Primats*. €54,000. Program: PIGC - *Projectes de recerca per potenciar els grups de recerca consolidats*. AGAUR - Agència de

Gestió d'Ajuts Universitaris i de Recerca. Principal Investigator: Dr. Alejandro Pérez-Pérez.

2005 – 2009 **Collaborator.** 2005 SGR 955, Generalitat of Catalonia (Spain). *Grup d'Estudis d'Evolució Dels Homínids i d'Altres Primats*. 38,600€. Program: PIGC - *Projectes de recerca per potenciar els grups de recerca consolidats*. DURSI (Departament d'Universitats, Recerca i Societat de la Informació). Principal Investigator: Dr. Adrià Casinos Pardos.

FUNDED TO DATE

01/2019 – 12/2020 **Beatriu de Pinós (2017 BP 00210) Post-Doctoral Fellowship.** Generalitat of Catalonia (Spain), AGAUR - Agència de Gestió d'Ajuts Universitaris i de Recerca, and Direcció General de Recerca (DGR). “Dental analyses of the first agropastoralists: An integrative approach”. €92,000. Institut Català de Paleoecologia Humana i Evolució Social, Tarragona, Spain.

06/2016 – 06/2018 – **H2020-MSCA-IF-2015-703373.** ANCIENT-TEETH: “An integrative analysis of shifting trends in dental traits in human populations from Neolithic to Iron Age”. Budget managed €175,866. University College Dublin, Ireland (http://cordis.europa.eu/project/rcn/201137_es.html).

2010 – 2011 Collaborative grants at the Animal Experimental Unit of the University of Barcelona (Campus Bellvitge), through University of Barcelona, Spain. (€7,227)

2008 – 2009 General grant (course fee) for the studies of M.S. in Primatology (University of Barcelona), through Generalitat of Catalonia, Spain. (€1,300)

2003 – 2008 General grants (course fee) for the studies of B.S. Biology at University of Barcelona, through Generalitat of Catalonia, Spain. (800 €/year)

2007 Grant for English course, through Ministry of Education and Science, Spain. (€1,700)

PUBLICATIONS

Peer Reviewed Articles

2020

Agranat-Tamir, L., Waldman, S., Martin, M. A., Gokhman, D., Mishol, N., Eshel, T., Cheronet, O., Rohland, N., Mallick, S., Adamski, N., Lawson, A.M., Mah, M., Michel, M., Oppenheimer, J., Stewardson, K., Candilio, F., Keating, D., **Gamarra, B.**, Tzur, S., Novak, M., Kalisher, R., Bechar, S., Eshed, V., Kennett, D.J., Faerman, M., Yahalom-Mack, N., Monge, J.M., Govrin, Y., Erel, Y., Yakir, B., Pinhasi, R., Carmi, S., Finkelstein, I., Carmel, L., Reich, D., 2020. The genomic history of the Bronze Age southern Levant. *Cell*, 181(5), 1146-1157.

Fernandes, D.M., Mittnik, A., Olalde, I., Lazaridis, I., Cheronet, O., Rohland, N., Mallick, S., Bernardos, R., Broomandkhoshbacht, N., Carlsson, J., Culleton, B.J., Ferry, M., **Gamarra, B.**, Martina Lari, Mah, M., Michel, M., Modi, A., Novak, M., Oppenheimer, J., A. Sirak, K.A., Stewardson, K., Mandl, K., Schattke, C., Özdoğan, K.T., Lucci, M., Gasperetti, G., Candilio, F., Salis, G., Vai, S., Camarós, E., Calò, C., Catalano, G., Cueto, M., Forgia, V., Lozano, M., Marini, E., Micheletti, M., Miccichè, R.M., Palombo, M.R., Ramis, D., Schimmenti, V., Sureda, P., Teira, L., Teschler-Nicola, M., Kennett, D.J., Lalueza-Fox, C., Patterson, N., Sineo, L., Coppa, A., Caramelli, D., Pinhasi, R., Reich, D., 2020. The spread of steppe and Iranian-related ancestry in the islands of the western Mediterranean. *Nature Ecology & Evolution*, <https://doi.org/10.1038/s41559-020-1102-0>.

2019

Narasimhan, V.M., Patterson, N., Moorjani, P., Rohland, N., Bernardos, R., Mallick, S., Lazaridis, I., Nakatsuka, N., Olalde, I., Lipson, M., Kim, A.M., Olivieri, L.M., Coppa, A., Vidale, M., Mallory, J., Moiseyev, V., Kitov, E., Monge, J., Adamski, N., Alex, N., Broomandkhoshbacht, N., Candilio, F.,

Callan, K., Cheronet, O., Culleton, B.J., Ferry, M., Fernandes, D., Freilich, S., **Gamarra, B.**, Gaudio, D., Hajdinjak, M., Harney, É., Harper, T.K., Keating, D., Lawson, A.M., Mah, M., Mandl, K., Michel, M., Novak, M., Oppenheimer, J., Rai, N., Sirak, K., Slon, V., Stewardson, K., Zalzal, F., Zhang, Z., Akhatov, G., Bagashev, A.N., Bagnera, A., Baitanayev, B., Bendezu-Sarmiento, J., Bissembaev, A.A., Bonora, G.L., Charyginov, T.T., Chikisheva, T., Dashkovskiy, P.K., Derevianko, A., Dobeš, M., Douka, K., Dubova, N., Duisengali, M.N., Enshin, D., Epimakhov, A., Fribus, A. V., Fuller, D., Goryachev, A., Gromov, A., Grushin, S.P., Hanks, B., Judd, M., Kazizov, E., Khokhlov, A., Krygin, A.P., Kupriyanova, E., Kuznetsov, P., Luiselli, D., Maksudov, F., Mamedov, A.M., Mamirov, T.B., Meiklejohn, C., Merrett, D.C., Micheli, R., Mochalov, O., Mustafokulov, S., Nayak, A., Pettener, D., Potts, R., Razhev, D., Rykun, M., Sarno, S., Savenkova, T.M., Sikhymbaeva, K., Slepchenko, S.M., Soltobaev, O.A., Stepanova, N., Svyatko, S., Tabaldiev, K., Teschler-Nicola, M., Tishkin, A.A., Tkachev, V. V., Vasilyev, S., Velemínský, P., Voyakin, D., Yermolayeva, A., Zahir, M., Zubkov, V.S., Zubova, A., Shinde, V.S., Lalueza-Fox, C., Meyer, M., Anthony, D., Boivin, N., Thangaraj, K., Kennett, D.J., Frachetti, M., Pinhasi, R., Reich, D., 2019. The formation of human populations in South and Central Asia. *Science*. 365, eaat7487.

2018

Lipson, M., Cheronet, O., Mallick, S., Rohland, N., Oxenham, M., Pietrusewsky, M., Pryce, T. O., Willis, A., Matsumura, H., Buckley, H., Domett, K., Nguyen, G. H., Trinh, H.H., Kyaw, A.A., Win, T.T., Bradier, B., Broomandkhoshbacht, N., Candilio, F., Changmai, P., Fernandes, D., Ferry, M., **Gamarra, B.**, Harney, E., Kampuansai, J., Kutana, W., Michel, M., Novak, M., Oppenheimer, J., Sirak, K., Stewardson, K., Zhang, Z., Flegontov, P., Pinhasi, R., Reich, D. (2018). Ancient genomes document multiple waves of migration in Southeast Asian prehistory. *Science*, eaat3188.

Gamarra, B., Howcroft, R., McCall, A., Dani, J., Hajdú, Z., Nagy, E.G., Szabó, L.D., Domboróczki, L., Pap, I., Raczky, P., Marcsik, A., Zoffmann, Z. K., Hajdu, T., Feeney, R. N. M., Pinhasi, R. (2018) 5000 years of dietary variations of prehistoric farmers in the Great Hungarian Plain. *PLoS ONE* 13(5): e0197214.

Mathieson, I., Alpaslan Roodenberg S., Posth C., Szécsényi-Nagy, A., Rohland, N., Mallick, S., Olalde, I., Broomandkhoshbacht, N., Cheronet, O., Fernandes, D., Ferry, M., **Gamarra, B.**, Fortes, G.G., Haak, W., Harney, E., Jones, E., Keating, D., Krause-Kyora, B., Kucukkalipci, I., Michel, M., Mittnik, A., Nägele, K., Novak, M., Oppenheimer, J., Patterson, N. Pfrengle, S., Sirak, K., Stewardson, K., Vai, S., Alexandrov, S., Alt, K.W., Andreescu, R., Antonović, D., Ash, A., Atanassova, N., Bacvarov, K., Gusztáv, M. B., Bocherens, H., Bolus, M. Boroneanț, A., Boyadzhiev, Y., Budnik, A., Burmaz, J., Chohadzhiev, S., Conard, N. J., Cottiaux, R., Čuka, M., Cupillard, C., Drucker, D.G., Elenski, N., Francken, M., Galabova, B., Ganetsovski, G., Gély, B., Hajdu, T., Handzhyska, V., Harvati, K., Higham, T., Iliev, S., Janković, I., Karavanić, I., Kennett, D.J., Komšo, D., Kozak, A., Labuda, D., Lari, M., Lazar, C., Leppek, M., Leshtakov, K., Vetro, D. L., Los, D., Lozanov, I., Malina, M., Martini, F., McSweeney, K., Meller, H., Mendišić, M., Mirea, P., Moiseyev, V., Petrova, V., Price, T. D., Simalcsik, A., Sineo, L., Šlaus, M., Slavchev, V., Stanev, P., Starović, A., Szeniczey, T., Talamo, Sa., Teschler-Nicola, M., Thevenet, C., Valchev, I., Valentin, F., Vasilyev, S., Veljanovska, F., Venelinova, S., Veselovskaya, E., Viola, B., Virag, C., Zaninović, J., Zäuner, S., Stockhammer, P.W., Catalano, G., Krauß, R., Caramelli, D., Zariņa, G., Gaydarska, B., Lillie, M., Nikitin, A.G., Potekhina, I., Papathanasiou, A., Borić, D., Bonsall, C., Krause, J., Pinhasi, R., Reich, D. (2018). The Genomic History of Southeastern Europe. *Nature* 555, 97-203.

2017

Sirak, K.A, Fernandes, D.M., Cheronet, O., Novak, M., **Gamarra, B.**, Balassa, T., Bernert, Z., Cséki, A., Dani, J., Gallina, J.Z., Kocsis-Buruzs, G., Ko " vári, I., László, O., Pap, I., Patay, P., Petkes, Z., Szenthe, G., Szeniczey, T., Hajdu, T., and Pinhasi, R. (2017). A minimally-invasive method for sampling human petrous bones from the cranial base for ancient DNA analysis. *BioTechniques* 62 (6): 283–289.

2016

Lazaridis I, Nadel D, Rollefson G, Merrett DC, Rohland N, Mallick S, Fernandes D, Novak M, **Gamarra B**, Sirak K, Connell S, Stewardson K, Harney E, Fu Q, Gonzalez-Fortes G, Alpaslan- Roodenberg S,

Lengyel G, Bocquentine F, Gasparian B, Monge JM, Gregg M, Eshed V, Ahuva-Sivan M, Meiklejohn C, Gerritsen F, Bejenaru L, Blüher M, Campbell A, Cavalleri G, Comas D, Froguel P, Gilbert E, Kerr SM, Kovacs P, Krause J, McGettigan D, Merrigan M, Merriwether DA, O'Reilly S, Richards MB, Semino O, Shamoony-Pour M, Stefanescu G, Stumvoll M, Tönjes A, Torroni A, Wilson JF, Yengo L, Zalloua P, Hovhannisyann NA, Patterson N, Pinhasi R, Reich D (2016). Genomic insights into the origin of farming in the ancient Near East. *Nature* 536 (7617): 419-424.

Gamarra, B., Nova-Delgado, M, Romero, A., Galbany, J., Pérez-Pérez, A. (2016). Phylogenetic signal in molar dental shape of extant and fossil catarrhine primates. *J. Hum. Evol.* 94: 3-27.

2015

Nova-Delgado, M., **Gamarra, B.**, Nadal, J., Mercadal, O., Olesti, O., Guàrdia, J., Pérez-Pérez, A., Galbany, J. (2015). Dental shape variability in cercopithecoïd primates: A model for the taxonomic attribution of macaques from roman archaeological contexts. *Folia Primatologica* 85(6): 361-378.

2014

Galbany, J., Romero, A., Mayo-Alesón, M., Itsoma, F., **Gamarra, B.**, Pérez-Pérez, A., Willaume, E., Kappeler, P.M., Charpentier, M.J.E. (2014). Age-related tooth wear differs between forest and savanna primates. *PloS one*, 9(4), e94938.

2011

Gamarra, B., Romero, A., Pérez-Pérez, A., Galbany, J. (2011). *Caracterización morfológica del M2 de Primates Hominoidea a partir de análisis de Fourier/ Morphological characterization of Hominoidea primates M2 through Fourier analysis. Revista Argentina de Antropología Biológica* 3(1): 29-41.

Gamarra, B., Romero, A., Pérez-Pérez, A., Galbany, J. (2011). *Determinación de la forma en molares de primates Hominoidea mediante análisis de Fourier: errores intra- e interobservador/ Molar shape definition of Hominoidea primates through Fourier analysis: intra- and interobserver error. Revista Española de Antropología Física* 32: 56-66.

2010

Pérez-Pérez, A., Galbany, J., Romero, A., Martínez, L.M., Estebaranz, F., Pinilla, B., **Gamarra, B.** (2010). *Origen y evolución de los dientes: de los cordados primitivos a los humanos modernos/ Origin and evolution of teeth: from primitive chordates to modern human. Revista Española de Antropología Física* 31: 67-192.

Conference Articles

2014

Romero, A., Galbany, J., Górká, K., **Gamarra, B.**, Pérez-Pérez, A. (2014). *Análisis de la topografía dental en relación al macro- y microdesgaste/ Dental topography analysis related to macro- and microwear. In: Alonso, S., Hervella, M., Izagirre, N., Peña, J.A., Rebato, E., de la Rúa, C. (Eds.), La investigación en antropología física – Una mirada al futuro. Pp. 85-197. University of Vasque Country (Spain).*

Mayo-Alesón, M., Romero, A., **Gamarra, B.**, Willaume, E., Itsoma, F., Pérez-Pérez, A., Kappeler, P.M., Charpentier, M.J.E., Galbany, J. (2014). *Relación entre el desgaste dental y la ecología en babuinos y mandriles/ Dental wear and ecology relationship between baboon and mandrills. In: Alonso, S., Hervella, M., Izagirre, N., Peña, J.A., Rebato, E., de la Rúa, C. (Eds.), La investigación en antropología física – Una mirada al futuro. Pp. 409-422. University of Vasque Country (Spain).*

2012

Gamarra, B., Romero, A., Artero, M., Nova-Delgado, M., Pérez-Pérez, A., Galbany, J. (2012). *Análisis de Fourier en molares de primates: evaluación metodológica y variabilidad morfométrica dental/ Fourier analysis in primate molars: methodological evaluation and dental morphometrics variability. In: Turbon, D., Fañanás, L., Rissech, C., Rosa, A. (Eds.). Biodiversidad humana y Evolucion. Pp. 445-449. University of Barcelona (Spain).*

Nova-Delgado, M., **Gamarra, B.**, Romero, A., Pérez-Pérez, A., Galbany, J. (2012). *Variabilidad morfológica dental de los primates Simiiformes/Dental morphometric variability in Simiiformes primates*. In: Turbon, D., Fañanás, L., Rissech, C., Rosa, A. (Eds.). *Biodiversidad humana y Evolucion*. Pp.467-471. University of Barcelona (Spain).

Artero, M., Romero, A., Galbany, J., **Gamarra, B.**, Pinilla, B., Pérez-Pérez, A. (2012). *Morfometría dentaria en grupos neolíticos de Kenia (Este de Africa)/ Dental morphometrics in neolithic groups of Kenia (East Africa)*. In: Turbon, D., Fañanás, L., Rissech, C., Rosa, A. (Eds.). *Biodiversidad humana y Evolucion*. Pp.231-235. University of Barcelona (Spain).

2009

Gamarra, B., Galbany, J., Pérez-Pérez, A. (2009). Shape variability in occlusal surfaces of second lower molar in extant and fossil primates. *Paleontologia i Evolució*, special memory 3: 65-66.

Book Chapters

Galbany, J., **Gamarra, B.**, Estebanaranz, F., Martínez, L. M., Romero, A., Nova-Delgado, M., Mayo-Alesón, M., Górká, K., Pérez-Pérez, A. (2014). *Morfología y Ecología Dental en Primates y Homininos/ Dental Morphology and Ecology in Primates and Hominines*. In: Associació ADÉS (Ed.), *Estudis d'evolució, etologia i cognició en primats*. Pp. 1-26 (Barcelona, Spain).

CONFERENCE PRESENTATIONS

- 09/2020 26th Annual Meeting of the European Association of Archaeologist, Virtual. *Oral contribution: Gamarra, B.*, McCall, A., Del Bove, A., Koós, J., Csengeri, P., Kalli, A., Domboróczki, L., Anders, A., Feeney, R.N.M., Pinhasi, R. Dental morphological analysis of Neolithic to Iron Age populations from the Great Hungarian Plain. A Geometric Morphometrics approach.
- 09/2018 24th Annual Meeting of the European Association of Archaeologist, Barcelona (Spain). *Oral contribution: Hernando, R., Gamarra, B.*, Lozano, M., Tutkovichs, E. K., Kalli, A., Köhler, K., Szeniczey, T., Hajdu, T., Feeney, R.N.M., Pinhasi, R. Paleodietary reconstruction of the Bükkábrány – Bánya Population (Eastern Hungary).
- 08/2018 27th International Primatological Society Congress, Nairobi (Kenya). *Poster: Nadal, L., Martínez, L.M., Romero, A., Gamarra, B.*, Galbany, J., Pérez-Pérez, A. Maintaining functionality throughout life: The adaptive values of molar wear patterns in hominoid primates.
- 09/2017 23rd Annual Meeting of the European Association of Archaeologist, Maastrich (Netherlands). *Poster: Gamarra, B.*, Howcroft, R., McCall, A., Dani, J., Domboróczki, L., Pap, I., Raczky, P., Anders, A., Hajdu, T., Pinhasi, R. 5000 years of dietary variations of prehistoric farmers at the Great Hungarian Plain.
- 7th Annual Meeting of the European Society for the study of Human Evolution, Leiden (Netherlands). *Poster: Gamarra, B.*, Galland, M., Howcroft, R., Lynnerup, N., Pinhasi, R. Morphometric and diet changes in the Nile Valley during the Middle and Late Holocene.
- 04/2016 IQUA Spring Meeting, UCD School of Archaeology, University College Dublin (Ireland). *Podium: Morphometric and dietary changes among early and late farmers in Ancient Lower Nubia.*
- 86th Annual Meeting of the American Association of Physical Anthropologist, New Orleans (U.S.A.). *Poster: Sirak, K.A., Fernandea, D.M., Cheronet, O., Novak, M., Gamarra, B.*, Balassa, T., Bernert, Z., Cséki A, Dani, J., Gallina, J., Kővári, I., László, O., Pap, I., Patay, R., Petkes, Z., Szenthe, G., Szeniczey, T., Hajdu, T., Pinhasi, R. A novel cranial base drilling method with direct access to petrous bones for analysing ancient DNA and preserving ancient human remains.
- 03/2016 One day conference: Palaeodiet, inferring dietary changes in the human past. Hosted by the Centre for Human Palaeoecology and Evolutionary Origins, University of York (UK).

Podium: Morphometric and diet changes among early and late farmers in Egypt and Sudan.

- 09/2016 6th Annual Meeting of the European Society for the study of Human Evolution, Madrid (Spain). *Poster* : Becerra, JM., Casado, A., Cuesta-Torralvo, E., Pérez-Pérez, A., Pacheco, D., Romero, A., Galbany, J., **Gamarra, B.** Geometric Morphometric topography and dental crown loss analyses in hominoidea primates; *Poster 2*: **Gamarra, B.**, Romero, A., Mayo-Alesón, M., Pérez-Pérez, A., Galbany, J. Dental topography and dietary adaptations in European Miocene hominids.
- 07/2013 10th International Congress of Vertebrate Morphology, Barcelona (Spain). *Poster*: P-057: **Gamarra, B.**, Nova-Delgado, M., Romero, A., Galbany, J., Pérez-Pérez, A. Phylogenetic signal of dental shape in extant and fossil Catarrhini primates: a geometric morphometric analysis of molar crown. *Anatomical Record*, Vol. 296, Special Feature-271. *Poster*: P-054: Torrijo, S., Romero, A., Galbany, J., **Gamarra, B.**, De Juan, J., Pérez-Pérez, A. Dental shape modularity and phenotypic variation in human populations. *Anatomical Record*, Vol. 296, Special Feature-270.
- 06/2011 17º Congreso de la Sociedad Española de Antropología Física. *Podium* : **Gamarra, B.**, Romero, A., Artero, M., Pérez-Pérez, A., Galbany, J. Análisis de Fourier en molares de primates: evaluación metodológica y variabilidad morfológica dental/ Fourier analysis in primate molars: methodological evaluation and dental morphometrics variability. *Podium 2*: Nova-Delgado, M., **Gamarra, B.**, Romero, A., Pérez-Pérez, A., Galbany, J. Variabilidad morfométrica dental en primates Simiiformes/ Dental morphometric variability in Simiiformes primates. *Podium 3*: Artero, M., Romero, A., Galbany, J., **Gamarra, B.**, Pinilla, B., Pérez-Pérez, A. Morfometría dentaria en grupos neolíticos de Kenia (Este de África)/ Dental morphometrics in neolithic groups of Kenia (East Africa).
- 07/2009 I Iberian Symposium on Geometric Morphometrics, Sabadell (Spain). *Poster*: **Gamarra, B.**, Galbany, J., Pérez-Pérez, A. Shape variability in occlusal surfaces of second lower molar in extant and fossil primates.

CONTINUOUS PROFESSIONAL DEVELOPMENT

- 01/2020 Course “Geometric Morphometrics in R 7th edition”. Transmitting Science, Capellades (Barcelona, Spain).
- 09/2016 Postgraduate course “R without fear: applied R for Biologist”. Transmitting Science, Sabadell (Barcelona, Spain).
- 07/2016 Summer School “Acquiring and post-processing 3D data in Anthropology and Archaeology”, directed by Stefano Benazzi. Università di Bologna, Ravenna (Italy).
- 03/2015 English course, Advanced level (C1). English Hour School, Dublin, Ireland.
- 2012 – 2013 English speaking course. Advanced level (C1). Official School of Languages, Cornellà de Llobregat, Spain.
- 12/2010 Course in Formation of Researcher User of Laboratory Animal. University of Barcelona, Barcelona, Spain.
- 2010 Course “Geometric Morphometrics and Phylogeny”, carried out by Dr. C.P. Klingenberg (University of Manchester). Universitat Autònoma de Barcelona, Barcelona, Spain.
- 2009 Course “Introduction to geometric morphometrics: theoretical background and basic analytical techniques”, carried out by Dr. C.P. Klingenberg (University of Manchester). Sabadell, Spain.
- 2008 Symposium of “Field Primatology”. University of Barcelona, Barcelona, Spain.
- 07/2007 Intensive English course of 3 weeks in “LAL Sliema”, Sliema, Malta.

OUTREACH ACTIVITIES

- 11/2017 Talk at the “Ancient-Food seminar series” at UCD-School of Archaeology, *You are what you eat: exploring ancient diets through analysis of human remains*.
- 2016/2017 Participant of seminar series of the UCD School of Archaeology and Ron Pinhasi Journal Club.
- 06/2016 Participant at the “Career development workshop for the Marie Skłodowska-Curie Actions Individual Fellowship call (2016)” organized by UCD- Research and Innovation Office.
- 2014 & 2018 Participation at “Conference series” at high school IES Joan Miró (Cornellà de Llobregat, Barcelona, Spain). Conference title: “*Primates*”.

COMPETENCIES

Lab skills

- Trained in the use of modern micro-CT techniques and Geometric Morphometric methods.
- Advanced knowledge of the collagen extraction technique for the study of stable isotopes and interpretation of their results within the framework of past human diets.
- Advanced knowledge of the extraction, library and sequencing method of ancient DNA techniques from osteological remains.

Journal referee Revista Argentina de Antropología Biológica

Journal of Human Evolution

Languages

Language	Understanding/Reading	Writing	Spoken
Spanish	Mother-tongue	Fluent	Fluent
Catalan	Mother-tongue	Fluent	Fluent
English	Excellent	Excellent	Excellent
French	Good	Basic	Basic

Informatics

- Advanced user in word processing, spreadsheets, database, Microsoft PowerPoint, Internet.
- User in statistical softwares: SPSS, PAST.
- Advanced user in Geometric Morphometric softwares (Viewbox, MorphoJ, Tps series)
- User of image editor software Adobe Photoshop, Adobe Illustrator, Geomagic Studio ®.
- User of Avizo software (micro-CT images, surface and segmentation modelling).
- **Student supervision**
01/10/17 - 30/11/17 Raquel Hernando Santamaria. PhD Student at IPHES (Director: Dr. Marina Lozano). Supervision of the student in the traineeship of stable isotopes analysis as part of the Program “Erasmus+ Pràctiques” of the Rovira i Virgili University (Tarragona) at School of Archaeology, University College Dublin (Ireland).