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Postdoctoral scientist

25.11.1983, San José, Costa Rica

**SCIENTIFIC VITA**

<b>2015</b>	-	<b>Present</b>	<b>Postdoctoral scientist</b> , Institut für Zelltherapeutische Forschung, Universitätsklinikum Essen, Essen, Germany
<b>2010</b>	-	<b>2014</b>	<b>PhD - Haematology</b> , Clinical Research Group, Anthony Nolan Research Institute, Royal Free & University College Medical School, University College London Cancer Institute, United Kingdom
<b>2007</b>	-	<b>2014</b>	<b>Lecturer and Research Associate</b> , Haematology section, Department of Clinical Analyses, Faculty of Microbiology, and Centre for Research in Haematology and Related Disorders (CIHATA), University of Costa Rica, San José, Costa Rica
<b>2007</b>	-	<b>2009</b>	<b>Magister Scientiae – Microbiology</b> , University of Costa Rica
<b>2009</b>	-	<b>2009</b>	<b>Specialty in Clinical Immunology</b> , University of Costa Rica
<b>2008</b>	-	<b>2008</b>	<b>Visiting Scientist</b> , Anthony Nolan Trust Histocompatibility Laboratories, Research Institute, and Cell Therapy Centre, Royal Free Hospital, University College London, and Nottingham Trent University, United Kingdom
<b>2006</b>	-	<b>2006</b>	<b>Clinical Pathology Intern</b> , <i>Dr. Clodomiro Picado Twight</i> Clinical Laboratory, San Juan de Dios Hospital, San José, Costa Rica
<b>2001</b>	-	<b>2006</b>	<b>Doctor of Microbiology and Clinical Chemistry (Clinical Pathology/Laboratory Medicine)</b> , University of Costa Rica

**MEMBERSHIP IN SCIENTIFIC SOCIETIES**

- Fellow of the DKTK School of Oncology (2020-2023)
- European Federation for Immunogenetics (EFI) - elected Councillor to Executive Committee 2020-2023
- European Society for Blood and Marrow Transplantation (EBMT)
- Deutsche Gesellschaft für Immunogenetik (DGI)
- British Society for Histocompatibility and Immunogenetics (BSHI)

**FIELDS OF INTEREST**

Immunogenetics of hematopoietic cell transplantation, alloreactivity, leukemia immunotherapy, genetic association studies, population genetics, genetic epidemiology, functional immunology, molecular diagnostics, human genetic diversity, human leukocyte antigen genetics.

**AWARDS & HONORS**

- May 2019**      **Third Best Abstract Award**, 33<sup>rd</sup> European Immunogenetics and Histocompatibility Conference, Lisbon, PT
- May 2018**      **Best Poster Award**, 32<sup>nd</sup> European Immunogenetics and Histocompatibility Conference, Venice, IT
- May 2016**      **Adaptive Biotechnologies Young Investigator Award (\$5,000)**
- February 2015**    **EFI Conference Travel Bursary (€750)**, European Federation of Immunogenetics
- June 2013**      **DNA Genotek ‘Your Choice’ Award (\$10,000)**
- May 2013**      **British Society for Histocompatibility and Immunogenetics Education and Training Bursary (£400)**
- June 2012**      **Best Research Student Poster Award**, UCL Cancer Institute 5<sup>th</sup> Annual Conference and the 3<sup>rd</sup> Annual UCL Cancer Research UK Centre Conference. London, UK
- June 2012**      **Life Technologies Best Young Scientist Poster Award**, The Joint 16<sup>th</sup> International HLA and Immunogenetics Conference/26<sup>th</sup> European Immunogenetics and Histocompatibility Conference/23<sup>rd</sup> British Society for Histocompatibility and Immunogenetics Conference. Liverpool, UK
- May 2012**      **British Society for Histocompatibility and Immunogenetics Education and Training Bursary (£225)**
- April 2012**      **Kitty Cookson Travel Award (£250)**, University College London Cancer Institute, United Kingdom
- April 2012**      **EFI Conference Travel Bursary (€700)**, European Federation of Immunogenetics
- February 2011**    **COST Training School Grant (€400)**, European network of the HLA diversity for histocompatibility, clinical transplantation, epidemiology and population genetics (HLA-NET)
- January 2011**    **Graduate School Student Conference Award (£738)**, University College London, United Kingdom
- January 2011**    **Kitty Cookson Travel Award (£200)**, University College London Cancer Institute, United Kingdom
- November 2010**   **British Society for Histocompatibility and Immunogenetics Education and Training Bursary (£250)**
- 2010–2014**      **PhD scholarship (\$46,000)**, Costa Rican National Council for Scientific and Technologic Research (CONICIT)
- 2010–2014**      **PhD scholarship (\$154,000)**, University of Costa Rica
- April 2010**      **Global Excellence Scholarship (£5,000)**, University College London, United Kingdom
- November 2005**   **First Place**, National Examination for University Clinical Internship for Medical, Pharmacy, and Microbiology and Clinical Chemistry Students, Costa Rican Social Security Authority (CCSS)

## SELECTED PUBLICATIONS

- 1) Meurer T\*, Crivello P\*, Metzging MF, Kester M, Megger DA, Chen W, van Veelen PA, van Balen P, Westendorf A, Homa G, Layer SE, Turki AT, Griffioen M, Horn PA, Sitek B, Beelen DW, Falkenburg JHF, **Arrieta-Bolaños E\***, Fleischhauer K\*. Permissive HLA-DPB1 mismatches in HCT depend on immunopeptidome divergence and editing by HLA-DM. *Blood*. 2020 Sep 6;blood.2020008464. \*Equal contribution
- 2) Barquera R\*, Hernández-Zaragoza DI\*, Bravo-Acevedo A\*, **Arrieta-Bolaños E\***, Clayton S\*, Acuña-Alonzo V\*, Martínez-Álvarez JC\*, et al. The immunogenetic diversity of the HLA system in Mexico correlates with underlying population genetic structure. *Hum Immunol*. 2020 Jul 7:S0198-8859(20)30343-8. \*Joint first authorship
- 3) van Balen P, Kester MGD, de Klerk W, Crivello P, **Arrieta-Bolaños E**, de Ru AH, Jedema I, Mohammed Y, Heemskerk MHM, Fleischhauer K, van Veelen PA, Falkenburg JHF. Immunopeptidome analysis of HLA-DPB1 allelic variants reveals new functional hierarchies. *J Immunol*. 2020 Jun 15;204(12):3273-3282.
- 4) **Arrieta-Bolaños E**, Oliveira DC, Barquera R. Differential admixture, human leukocyte antigen diversity, and hematopoietic cell transplantation in Latin America: challenges and opportunities. *Bone Marrow Transplant*. 2020 Mar;55(3):496–504.
- 5) **Arrieta-Bolaños E**, Fleischhauer K. Learning the next-generation sequencing alphabet of immune reconstitution: factors determining CD8<sup>+</sup> T-cell receptor  $\alpha$ -chain repertoire dynamics after hematopoietic stem cell transplantation. *Haematologica*. 2019 Mar;104(3):422-25.
- 6) Crivello P, Ahci M, Maaßen F, Wossidlo N, **Arrieta-Bolaños E**, Heinold A, Lange V, Falkenburg JHF, Horn PA, Fleischhauer K, Heinrichs S. Multiple Knockout of Classical HLA Class II  $\beta$ -Chains by CRISPR/Cas9 Genome Editing Driven by a Single Guide RNA. *J Immunol*. 2019 Mar 15;202(6):1895-1903.
- 7) Meurer T, **Arrieta-Bolaños E**, Metzging M, Langer MM, van Balen P, Falkenburg JHF, Beelen DW, Horn PA, Fleischhauer K, Crivello P. Dissecting Genetic Control of HLA-DPB1 Expression and Its Relation to Structural Mismatch Models in Hematopoietic Stem Cell Transplantation. *Front Immunol*. 2018 Oct 5;9:2236.
- 8) **Arrieta-Bolaños E\***, Crivello P\*, Shaw BE, Ahn KW, Wang H-L, Verneris MR, Hsu KC, Pidala J, Lee SJ, Fleischhauer K, Spellman SR. In silico prediction of nonpermissive HLA-DPB1 mismatches in unrelated HCT by functional distance. *Blood Adv*. 2018 Jul 24;2(14):1773-83. \*Joint first authorship
- 9) **Arrieta-Bolaños E**, Madrigal-Sánchez JJ, Stein JE, Órlich-Pérez P, Moreira-Espinoza MJ, Paredes-Carias E, Vanegas-Padilla Y, Salazar-Sánchez L, Alejandro Madrigal J, Marsh SGE, Shaw BE. High-resolution HLA allele and haplotype frequencies in majority and minority populations of Costa Rica and Nicaragua: differential admixture proportions in neighboring countries. *HLA*. 2018 Jun;91(6):514–29.
- 10) **Arrieta-Bolaños E**, Crivello P, Metzging M, Meurer T, Ahci M, Rytlewski J, Vignali M, Yusko E, van Balen P, Horn PA, Falkenburg JHF, Fleischhauer K. Alloreactive T Cell Receptor Diversity against Structurally Similar or Dissimilar HLA-DP Antigens Assessed by Deep Sequencing. *Front Immunol*. 2018 Feb 19;9:280.
- 11) **Arrieta-Bolaños E**, Mayor NP, Marsh SG, Madrigal JA, Apperley JF, Kirkland K, Mackinnon S, Marks DI, McQuaker G, Perry J, Potter MN, Russell NH, Thomson K, Shaw BE. Polymorphism in *TGFBI* is associated with worse non-relapse mortality and overall survival after stem cell transplantation with unrelated donors. *Haematologica*. 2016 Mar;101(3):382-90.
- 12) **Arrieta-Bolaños E**, Madrigal JA, Shaw BE. Novel alleles of the *TGFBI* regulatory region and exon 1. *Tissue Antigens*. 2015 Jun;85(6):484-91.
- 13) **Arrieta-Bolaños E**, Alejandro Madrigal J, Shaw BE. Human leukocyte antigen profiles of Latin American populations: differential admixture and its potential impact on hematopoietic stem cell transplantation. *Bone Marrow Res*. 2012; 2012:136087. doi: 10.1155/2012/136087.

13.10.2020