Curriculum Vitae Daniela Zanetti

Current Position (February 2023)

Marie Curie Postdoctoral Fellow at the Institute of Genetic and Biomedical Research (IRGB) of the National Research Council (CNR), Cagliari (Italy)

Personal Information

Date of birth: 09/04/1984
Place of birth: San Gavino Monreale, Sardinia, Italy.
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Research statement

My long-term goal is to use the power of population genetics, epidemiology, and Mendelian randomization to define the possible causal genes involved in the development of complex traits. My academic training and research experience have provided me with an excellent background in multiple biological disciplines including biology, population genetics, epidemiology, and genetics.

During my PhD research at the University of Barcelona, I have identified cardiovascular genetic risk markers in populations of different ancestry, and natural selection patterns involved in cardiovascular risk loci. In my postdoctoral training at Stanford, applying Mendelian randomization methods, I have identified causal genetic mechanisms involved in the development of cardiometabolic traits, such as low birth weight and kidney function. In addition, I am currently working on a project involving proteomic data to predict insulin sensitivity.

Currently at the IRGB-CNR, I will study the genetic and molecular components that differentially impact men and women on cardiometabolic traits. My project funded by the Marie Curie Postdoctoral Fellow will lead to find new drug target to perform equally well in males and females and will open the door to improve personalized and precision medicine in the near future.

A complete list of my published work can be found here.

Education

Date	Degree and University
01-03-2012 **26-11-2015**	**PhD in Population Genetics/Epidemiology** University of Barcelona Grade: magna cum laude Thesis title: Genetics of human populations: evolutionary and epidemiological applications Name of advisors: Pedro Moral and Marc Via
02-10-2009 **23-11-2011**	**Master Experimental and Applied Biology** University of Cagliari Grade: 110/110 cum laude Thesis title: Molecular analysis of four Argentinian populations from Patagonia through 16 Alu insertions

	Name of advisor: Carla Maria Calò
22-09-2003 **18-12-2009**	**Bachelor in Experimental Biology** University of Cagliari Grade: 101/110 Thesis title: Techniques for the detection of bacteria in blood samples Name of advisor: Enzo Tramontano

Positions and Employments:

Date	Project Information
01-04-2022 **31-12-2022**	**Maria Zambrano Postdoctoral Fellow at the University of Barcelona** Research field: Genetics of cognitive neuroscience Name of advisors: Marc Via Garcia
16-10-2021 **31-03-2022**	**Senior Scientist at the Palo Alto Veterans Institute for Research (PAVIR)** Research field: Genetics and Epidemiology of cardiometabolic traits Name of advisors: Tim Assimes
01-09-2016 **15-10-2021**	**Postdoctoral researcher at Stanford University** Research field: Genetics and Epidemiology of cardiometabolic traits Name of advisors: Erik Ingelsson and Tim Assimes

Scholarships, Funding Acquisition, and other Awards

- MSCA Postdoctoral Fellowships 2021
  "Molecular circuits of sex dimorphism in cardiometabolic traits and risk factors"
  Fundings: €172,750.08
  2023-2024
- Maria Zambrano Fellowship 2021
  "Mendelian Randomization methods to assess causality of environmental risk factors and biomarkers in cognitive neuroscience"
  Fundings: €48,000
  2022
- American Heart Association (AHA) Postdoctoral Fellowship Award
  "The role of kidney function in cardiovascular disease: a UK Biobank study"
  Funding: $106,532.00
  2019-2020
- Master and Back grant by Regione Autonoma della Sardegna (Italy)
  Funding: €72,000.00
  2012-2015
- Erasmus placement by European Commission
  2011
- Erasmus grant by European Commission
  2005-2006
- 18th World Congress on Insulin Resistance, Diabetes & Cardiovascular Disease (WCIRDC)
  "Plasma Proteomics to Predict Insulin-mediated Glucose Disposal/Uptake"
  Honorable Mention
  December 2020
- American Society of Human Genetics (ASHG) Congress
  "Genetic determinants of urinary biomarkers in the UK Biobank"
  Reviewer Choice Abstract, one into the top-scoring poster abstracts (~10%)
  October 2017

Invited Contributions to Scientific Meetings

- 18th World Congress on Insulin Resistance, Diabetes & Cardiovascular Disease (WCIRDC)
  "Plasma Proteomics to Predict Insulin-mediated Glucose Disposal/Uptake"
  December 2020
- Postdoc Research Roundtable
  "Studies of urinary biomarkers in the UK Biobank"
  Stanford Cardiovascular Institute, Stanford, USA, June 2018

Ad-hoc Reviewer

- American Heart Journal
- American Journal of Kidney Disease
- BMC Medical Genetics
- Circulation Cardiovascular and Precision Medicine
- Frontiers in Genetics
- Plos One
- Scientific Reports

Mentoring/Thesis Supervisor

- Daily supervisor, final project thesis
  Corinne Carland, M.D. (Massachusetts Institute of Technology, MIT, USA)
  2019-2020
- Daily supervisor, Medicine program final project thesis
  Helene Bergman, M.D. (Karolinska Institute, Sweden)
  2017-2018
- Daily supervisor, Master thesis
  Cristina Ros, M.Sc. (Universitat de Barcelona, Spain)
  2014-2015
- Daily supervisor, Master thesis
  Lucia Bridges, M.Sc. (Universitat de Barcelona, Spain)
  2013-2014

Publications

H-index: 9 (Scopus)

1. Selle J, Dinger K, Jentgen V, **Zanetti D,** Will J, Georgomanolis T, Vohlen C, Wilke R, Kojonazarov B, Klymenko O, Mohr J, V Koningsbruggen-Rietschel S, Rhodes CJ, Ulrich A, Hirani D, Nestler T, Odenthal M, Mahabir E, Nayakanti S, Dabral S, Wunderlich T, Priest J, Seeger W, Dötsch J, Pullamsetti SS, Alejandre Alcazar MA. Maternal and perinatal obesity induce bronchial obstruction and pulmonary hypertension via IL-6-FoxO1-axis in later life. Nat Commun. 2022 Jul 27;13(1):4352. doi: 10.1038/s41467-022-31655-z. PubMed PMID: 35896539; PubMed Central PMCID: PMC9329333.
2. Yang Z, Macdonald-Dunlop E, Chen J, Zhai R, Li T, Richmond A, Klarić L, Pirastu N, Ning Z, Zheng C, Wang Y, Huang T, He Y, Guo H, Ying K, Gustafsson S, Prins B, Ramisch A, Dermitzakis ET, Png G, Eriksson N, Haessler J, Hu X, **Zanetti** D, Boutin T, Hwang SJ, Wheeler E, Pietzner M, Raffield LM, Kalnapenkis A, Peters JE, Viñuela A, Gilly A, Elmståhl S, Dedoussis G, Petrie JR, Polašek O, Folkersen L, Chen Y, Yao C, Võsa U, Pairo-Castineira E, Clohisey S, Bretherick AD, Rawlik K, Esko T, Enroth S, Johansson Å, Gyllensten U, Langenberg C, Levy D, Hayward C, Assimes TL, Kooperberg C, Manichaikul AW, Siegbahn A, Wallentin L, Lind L, Zeggini E, Schwenk JM, Butterworth AS, Michaëlsson K, Pawitan Y, Joshi PK, Baillie JK, Mälarstig A, Reiner AP, Wilson JF, Shen X. Genetic Landscape of the ACE2 Coronavirus Receptor. Circulation. 2022 May 3;145(18):1398-1411. doi:

10.1161/CIRCULATIONAHA.121.057888. Epub 2022 Apr 7. PubMed PMID: 35387486; PubMed Central PMCID: PMC9047645.

3. Lind L, **Zanetti D**, Ingelsson M, Gustafsson S, Ärnlöv J, Assimes TL. Large-Scale Plasma Protein Profiling of Incident Myocardial Infarction, Ischemic Stroke, and Heart Failure. J Am Heart Assoc. 2021 Dec 7;10(23):e023330. doi: 10.1161/JAHA.121.023330. Epub 2021 Nov 30. PubMed PMID: 34845919; PubMed Central PMCID: PMC9075402.
4. Lankester J, **Zanetti D**, Ingelsson E, Assimes TL. Alcohol use and cardiometabolic risk in the UK Biobank: A Mendelian randomization study. PLoS One. 2021;16(8):e0255801. doi: 10.1371/journal.pone.0255801. eCollection 2021. PubMed PMID: 34379647; PubMed Central PMCID: PMC8357114.
5. Kuiper-Makris C, **Zanetti D**, Vohlen C, Fahle L, Müller M, Odenthal M, Felderhoff-Müser U, Dötsch J, Alejandre Alcazar MA. Mendelian randomization and experimental IUGR reveal the adverse effect of low birth weight on lung structure and function. Sci Rep. 2020 Dec 28;10(1):22395. doi: 10.1038/s41598-020-79245-7. PubMed PMID: 33372189; PubMed Central PMCID: PMC7769986.
6. Tcheandjieu C, **Zanetti D**, Yu M, Priest JR. Inherited Extremes of Aortic Diameter Confer Risk for a Specific Class of Congenital Heart Disease. Circ Genom Precis Med. 2020 Dec;13(6):e003170. doi: 10.1161/CIRCGEN.120.003170. Epub 2020 Nov 15. PubMed PMID: 33191768.
7. **Zanetti D**, Gustafsson S, Assimes TL, Ingelsson E. Comprehensive Investigation of Circulating Biomarkers and Their Causal Role in Atherosclerosis-Related Risk Factors and Clinical Events. Circ Genom Precis Med. 2020 Dec;13(6):e002996. doi: 10.1161/CIRCGEN.120.002996. Epub 2020 Oct 30. PubMed PMID: 33125266; PubMed Central PMCID: PMC8202726.
8. Lind L, **Zanetti D**, Högman M, Sundman L, Ingelsson E. Commonly used clinical chemistry tests as mortality predictors: Results from two large cohort studies. PLoS One. 2020;15(11):e0241558. doi: 10.1371/journal.pone.0241558. eCollection 2020. PubMed PMID: 33152050; PubMed Central PMCID: PMC7644047.
9. **Zanetti D**, Bergman H, Burgess S, Assimes TL, Bhalla V, Ingelsson E. Urinary Albumin, Sodium, and Potassium and Cardiovascular Outcomes in the UK Biobank: Observational and Mendelian Randomization Analyses. Hypertension. 2020 Mar;75(3):714-722. doi: 10.1161/HYPERTENSIONAHA.119.14028. Epub 2020 Feb 3. PubMed PMID: 32008434; PubMed Central PMCID: PMC8032218.
10. **Zanetti D**, Rao A, Gustafsson S, Assimes TL, Montgomery SB, Ingelsson E. Identification of 22 novel loci associated with urinary biomarkers of albumin, sodium, and potassium excretion. Kidney Int. 2019 May;95(5):1197-1208. doi: 10.1016/j.kint.2018.12.017. Epub 2019 Mar 12. PubMed PMID: 30910378; PubMed Central PMCID: PMC6535090.
11. Harati H, **Zanetti D**, Rao A, Gustafsson S, Perez M, Ingelsson E, Knowles JW. No evidence of a causal association of type 2 diabetes and glucose metabolism with atrial fibrillation. Diabetologia. 2019 May;62(5):800-804. doi: 10.1007/s00125-019-4836-y. Epub 2019 Feb 27. PubMed PMID: 30810766; PubMed Central PMCID: PMC6451665.
12. Fukaya E, Flores AM, Lindholm D, Gustafsson S, **Zanetti D,** Ingelsson E, Leeper NJ. Clinical and Genetic Determinants of Varicose Veins. Circulation. 2018 Dec 18;138(25):2869-2880. doi: 10.1161/CIRCULATIONAHA.118.035584. PubMed PMID: 30566020; PubMed Central PMCID: PMC6400474.
13. **Zanetti D**, Weale ME. Transethnic differences in GWAS signals: A simulation study. Ann Hum Genet. 2018 Sep;82(5):280-286. doi: 10.1111/ahg.12251. Epub 2018 May 7. PubMed PMID: 29733446.
14. **Zanetti D**, Tikkanen E, Gustafsson S, Priest JR, Burgess S, Ingelsson E. Birthweight, Type 2 Diabetes Mellitus, and Cardiovascular Disease: Addressing the Barker Hypothesis With Mendelian Randomization. Circ Genom Precis Med. 2018 Jun;11(6):e002054. doi:

10.1161/CIRCGEN.117.002054. PubMed PMID: 29875125; PubMed Central PMCID: PMC6447084.

15. Álvarez-Álvarez MM, **Zanetti D**, Carreras-Torres R, Moral P, Athanasiadis G. A survey of sub-Saharan gene flow into the Mediterranean at risk loci for coronary artery disease. Eur J Hum Genet. 2017 Apr;25(4):472-476. doi: 10.1038/ejhg.2016.200. Epub 2017 Jan 18. PubMed PMID: 28098150; PubMed Central PMCID: PMC5386420.
16. Carreras-Torres R, Ferran A, **Zanetti D**, Esteban E, Varesi L, Pojskic N, Coia V, Chaabani H, Via M, Moral P. Population structure from NOS genes correlates with geographical differences in coronary incidence across Europe. Am J Phys Anthropol. 2016 Dec;161(4):634-645. doi: 10.1002/ajpa.23063. Epub 2016 Aug 8. PubMed PMID: 27500977.
17. Álvarez-Álvarez MM, Carreras-Torres R, **Zanetti D**, Vegas E, Moral P. Population variation of LIN28B in the Mediterranean: Novel markers for microgeographic discrimination. Am J Hum Biol. 2016 Nov;28(6):905-912. doi: 10.1002/ajhb.22887. Epub 2016 Jun 24. PubMed PMID: 27338933.
18. Resano M, **Zanetti D**, Esteban EM, Moral P. X-Chromosome Alu Insertions in Bahía Blanca, Argentina: Assessment of Population Information from Varied Genetic Markers and Usefulness of X-Chromosome Markers to Trace Sex-Biased Parental Contributions. Hum Biol. 2016 Oct;88(4):275-286. doi: 10.13110/humanbiology.88.4.0275. PubMed PMID: 28826322.
19. **Zanetti D**, Via M, Carreras-Torres R, Esteban E, Chaabani H, Anaibar F, Harich N, Habbal R, Ghalim N, Moral P. Analysis of Genomic Regions Associated With Coronary Artery Disease Reveals Continent-Specific Single Nucleotide Polymorphisms in North African Populations. J Epidemiol. 2016 May 5;26(5):264-71. doi: 10.2188/jea.JE20150034. Epub 2016 Jan 16. PubMed PMID: 26780859; PubMed Central PMCID: PMC4848325.
20. **Zanetti D**, Carreras-Torres R, Esteban E, Via M, Moral P. Potential Signals of Natural Selection in the Top Risk Loci for Coronary Artery Disease: 9p21 and 10q11. PLoS One. 2015;10(8):e0134840. doi: 10.1371/journal.pone.0134840. eCollection 2015. PubMed PMID: 26252781; PubMed Central PMCID: PMC4529309.
21. Carreras-Torres R, Kundu S, **Zanetti D,** Esteban E, Via M, Moral P. Genetic risk score of NOS gene variants associated with myocardial infarction correlates with coronary incidence across Europe. PLoS One. 2014;9(5):e96504. doi: 10.1371/journal.pone.0096504. eCollection 2014. PubMed PMID: 24806096; PubMed Central PMCID: PMC4013019.
22. **Zanetti D**, Sadiq M, Carreras-Torres R, Khabour O, Alkaraki A, Esteban E, Via M, Moral P. Human diversity in Jordan: polymorphic Alu insertions in general Jordanian and Bedouin groups. Hum Biol. 2014 Spring;86(2):131-8. doi: 10.3378/027.086.0201. PubMed PMID: 25397703.

Presentation at Scientific Conferences

1. Puddu-Gallardo G, **Zanetti D**, Natàlia Gorina-Careta N, Carles Escera C, Clemente I, Via M. Genetic modulators of neural encoding of pitch: an electrophysiological and behavioral study. 52nd Behavior Genetics Annual Meeting 25th June 2022. Los Angeles. California

2. **Zanetti D**, Gustafsson S, Lazzeroni LC, Walker M, Lind L, Petrie J, Assimes TL. Plasma Proteomics to Predict Insulin-mediated Glucose Disposal/Uptake. **18th World Congress on Insulin Resistance, Diabetes & Cardiovascular Disease (WCIRDC)**. The Metabolic Institute of America. 3-5 December 2020. Virtual conference.

3. **Zanetti D**, Gustafsson S, Ingelsson E. Comprehensive investigation of serum biomarkers and their causal role in cardiometabolic disease**.** ***ASHG 2019 Annual Meeting,*** 15-19 October 2019. Houston. Texas.

4. **Zanetti D,** Bergman H, Themistocles L. Assimes, Ingelsson E. Sodium, potassium and cardiovascular disease in the UK Biobank: Observational analyses, GWAS and Mendelian randomization. **ASHG 2018 Annual Meeting,** 16-20 October 2017. San Diego. California.

5. **Zanetti D,** Gustafsson S, Ingelsson E. Genetic determinants of urinary biomarkers in the UK Biobank. **ASHG 2017 Annual Meeting,** 17-21 October 2017. Orlando. Florida.

6. **Zanetti D,** Via M, Carreras-Torres R, Esther E, Àlvarez M, Ros-Surrá C, Moral P. Analysis of genomic regions associated with Coronary Artery Disease reveals continental-specific risk SNPs in North African populations. **The European Human Genetics Conference,** 6-9 June 2015. Glasgow. United Kingdom.

7. Ros-Surrá C, Carreras-Torres R, **Zanetti D**, Moral P. Nitric oxide synthase genes and cardiovascular risk in Spain. **The European Human Genetics Conference,** 6-9 June 2015. Glasgow. United Kingdom.

8. Álvarez M, Carreras-Torres R, **Zanetti**, Moral P. Molecular variation of three SNPs in LIN28B, related to developmental timing traits, in 24 Mediterranean populations. **The European Human Genetics Conference,** 6-9 June 2015. Glasgow. United Kingdom.

9. Moral P, Via M, **Zanetti D**, Esteban E, Ros-Surrá C, Álvarez M, Carreras-Torres R. Population variation of NOS genomic regions and coronary incidence differences in Europe. **The European Human Genetics Conference,** 6-9 June 2015. Glasgow. United Kingdom.

10. Parolin ML**, Zanetti D**, Ramallo V, Esteban E, Avena SA, Carnese FR, Moral P. Analisis de 16 polimorfismos Alu en poblaciones cosmopoltas de la Patagonia Argentina: Su utilidad en el estudio de las relaciones biològicas y mestizaje. **XIII Congreso de la Asociaciòn Latinoamerica de Antropologìa Biologica**, 15-18 October 2014. Santiago de Chile. Chile.

11. Esteban E, Carreras-Torres R**, Zanetti D**, Fernández-Santander A, Romero A, Gaibar M, Moral P. La diversité génétique au-delà de l'anthropologie classique: Facteurs de risque génétique, maladies complexes et background des populations humaines. **XXXème Colloque du Groupement des Anthropologistes en Langue Française**, 16-18 October 2013. Faculté de Médecine de Marseille, Marseille, France.

12. **Zanetti D**, Carreras-Torres R, Esteban E, Via M, Moral P. Did selection play a role at top GWAS associated loci to cardiovascular diseases? **Congreso Sociedad Española de Antropología Física 2013**. June. Bilbao. Spain.

13. Carreras-Torres R, Via M**, Zanetti D**, Esteban E, Moral P. Ecological genetic predictors for cardiovascular disease in human populations from Europe and the Mediterranean basin. **Congreso Sociedad Española de Antropología Física 2013**. June. Bilbao. Spain.

14. Moral P, Carreras-Torres R, **Zanetti D**, G Athanasiadis, Esteban E, Via M, Dujoujon JM, Luna F, Cruciani F, Chaabani H, Harich N, Gaya-Vidal M. Genotype and haplotyple population diversity of the 3 APOE/C1/C4/C2 gene cluster in the Mediterranean region. **Congreso Sociedad Española de Antropología Física 2013**. June. Bilbao. Spain.

15. Esteban E, Carreras-Torres R, **Zanetti D**, Via M, Moral P. Genetic risk score for myocardial infarction in Spain: Are data on nitric oxide synthase genes useful at an intra-country scale? **Congreso Sociedad Española de Antropología Física 2013**. June. Bilbao. Spain.

16. **Zanetti D**, Carreras-Torres R, Esteban E, Via M, Moral P. Genetic diversity within Jordania: Alu insertion variability between General Jordan and Bedouin population. **18th Congress of the European Anthropological Association**. September 2012. Ankara. Turkey.

17. Carreras-Torres R, Via M, **Zanetti D**, Esteban E, Moral P. Population genetic patterns of NOS coding regions and adjacent non-coding regions in the Mediterranean area. **18th Congress of the European Anthropological Association**. September 2012. Ankara. Turkey.
18. Carreras-Torres R, Via M, **Zanetti D**, Esteban E, Moral P. Genetic Risk Scores of NOS genes variation to understand Trends in Coronary-Event rates across European Populations. **European Human Genetic Conference 2012**. June. Nürnberg. Germany.

Languages

Italian: Native speaker

Spanish: Spoken: Proficient; Written: Proficient; Reading: Proficient

English: Spoken: Proficient; Written: Proficient; Reading: Proficient