Curriculum vitae Immacolata Andolfo

Personal information

Family name: Andolfo **First name**: Immacolata

Researcher unique identifier(s): 26424923900 (Scopus); 0000-0003-0493-812X (ORCID).

Place and date of birth: Napoli, Italy - December 22, 1982

- **Education & Employment**

Current position

2024 – present: Associate professor of Medical Genetics at Department of Molecular Medicine and Medical Biotechnologies, University of Naples Federico II, Naples, Italy

2021 - 2024: tenure-track assistant professor of Medical Genetics at Department of Molecular Medicine and Medical Biotechnologies, University of Naples Federico II, Naples, Italy.

Previous positions

2018 - 2021: Post doctoral fellow within the group of Prof. A. Iolascon at CEINGE, biotecnologie avanzate, Naples, Italy

2012 - 2017: Research fellow at department of Molecular Medicine and Medical Biotechnologies, University of Naples Federico II, Naples, Italy

Education

2014 - 2017: PhD in Molecular Medicine and Medical Biotechnologies - University of Naples Federico II, Naples, Italy

2006 - 2011: Post-graduate Residency school in Medical Genetics - University of Naples Federico II, Naples, Italy

2001 - 2006: Degree in Medical Biotechnologies - University of Naples Federico II, Naples, Italy

- **Other experience**

2022-present: member of the specialized working group (SWG) committee of the European hematology association (EHA).

Teaching activities

2021 - Present: Medical Genetics course at School of Medicine and Surgery, Residency School of Medical Genetics, Medical Biotechnologies School, and Biomedical laboratory technicians School - University of Napoli Federico II

Professional membership

2024 - Member of the International Society for the Study of Iron in Biology and Medicine.

2018 - Member of the Italian Society of Human Genetics (SIGU)

2018 - Member of the Italian Society of Thalassemia and Hemoglobinopathy (SITE)

2012 - Member of European Hematology Association (EHA)

Organization of congresses

Organization of Meeting Club of Red Cell Club e SITE (Società italiana talassemie ed emoglobinopatie). September 2017

Additional professional activities:

2020 - Associate editor “Hematology”, ISSN: 1607-8454.

2017 - Associate Editor “American Journal of Hematology” - ISSN: 1096-8652.

2017 - Associate Editor “Scientific Report” - ISSN 2045-232. Subject area: genetics and genomics.

2018 - Associate editor “Frontiries in Phisiology”, ISSN: 2673-6217 Subject area: “Red Blood cells physiology”

Invited speaker (last 3 years):

- Third translational research conference erythropoiesis control and ineffective erythropoiesis – from bench to bedside, Paris 3-5 March 2023

- LXIV Congreso Nacional SEHH XXXVIII Congreso Nacional SETH, 38th World Congress of the International Society of Hematology (ISH) 6 - 8 Oct 2022 Barcelona, Spain.

- Meeting del club del globulo rosso 2022 Napoli, 12 e 13 Settembre 2022

- Congresso Società Italiana di Genetica Umana (SIGU) “Meccanobiologia e Stomatocitosi” 2021

- Congresso società italiana talassemia ed emoglobinopatie (SITE) “Diagnosi delle membranopatie” 2021

-Young European Hematology Association (EHA2021) Virtual “PIEZO1 a new player in iron metabolism” 2021

- Hematology Passport – Secondo Semestre 2020. Webinar. Anemia emolitica Difetti del trasporto di membrana (approccio diagnostico). 2020.

- Virtual Red Cell Club Meeting USA, Virtual edition. Gain-of-function mutations in PIEZO1 directly impair hepatic iron metabolism via the inhibition of the BMP/SMADs pathway. 2020.
- 31th congresso della Società Ellenica di ematologia. Virtual Edition. "PIEZO1 gene: A new Hepatic Iron Metabolism Regulator and Possible new Therapeutic Target for Iron Overload". 2020.
- Webinar per ERN-EuroBloodNet. Genetics of Hereditary Stomatocytosis. 2020.

Honors and Awards

2022: award of Italian Society of Pediatrics (SIP) 2022 "New perspectives from young scientists".
2021: Under 40 in Hematology award (Italian Society of Hematology) for best study in basic research: PIEZO1 as new iron metabolism regulator.
2020: Award of the "Società italiana di Genetica Umana, SIGU "Claudio Castellan" – for the best oral communication in Clinical Genetics, XXIII Congresso SIGU, Virtual.
2020: International award by "The International Research and Recreation Promotion Council" (IRPC) as eminent scientist of the year 2020 in the field of Human Genetics.
2020 Campania Got Rarer Talent award of the Rare Diseases Association, for the study on the identification and characterization of PIEZO1 gene in DHS.

Other:

Coordinator of reviewers for the category "Iron biology" for the American society of Hematology (ASH) annual congress 2023.

- **Publications:**

5 top publications (Full citation should be given and the impact factor of the journal)

1. Andolfo I, et al. Multiple clinical forms of dehydrated hereditary stomatocytosis arise from mutations in PIEZO1. Blood. 2013 May 9;121(19):3925-35, S1-12. **Full citation 311; IF 20.3.**
2. Ma S, .. , **Andolfo I**, Patapoutian A. A role of PIEZO1 in iron metabolism in mice and humans. Cell. 2021 Feb 18;184(4):969-982.e13. **Full citation 96; IF 66.8.**
3. Andolfo I, et al. Novel Gardos channel mutations linked to dehydrated hereditary stomatocytosis (xerocytosis). Am J Hematol. 2015 Oct;90(10):921-6. **Full citation 96; IF 13.3.**
4. Andolfo I, et al. Genotype-phenotype correlation and risk stratification in a cohort of 123 hereditary stomatocytosis patients. Am J Hematol. 2018 Dec;93(12):1509-1517. **Full citation 46; IF 13.3.**
5. **Andolfo I,** et al. Gain-of-function mutations in PIEZO1 directly impair hepatic iron metabolism via the inhibition of the BMP/SMADs pathway. Am J Hematol. 2020 Feb;95(2):188-197. **Full citation 38; IF 13.3.**

- **Selected peer reviewed publications (max 10)**

1: Pinto VM, .. , **Andolfo I**. Coinheritance of PIEZO1 variants and multi-locus red blood cell defects account for the symptomatic phenotype in beta-thalassemia carriers. Am J Hematol. 2023 Jun;98(6):E130-E133.
2: **Andolfo I**, et al. Proteome alterations in erythrocytes with PIEZO1 gain-of-function mutations. Blood Adv. 2023 Jun 27;7(12):2681-2693.
3: Rosato BE, .. , **Andolfo I.** Hereditary anemia caused by multilocus inheritance of PIEZO1, SLC4A1 and ABCB6 mutations: a diagnostic and therapeutic challenge. Haematologica. 2022 Sep 1;107(9):2280-2284.
4: Ma S, .. , **Andolfo I,** Patapoutian A. A role of PIEZO1 in iron metabolism in mice and humans. Cell. 2021 Feb 18;184(4):969-982.e13.
5: **Andolfo I**, et al. Gain-of-function mutations in PIEZO1 directly impair hepatic iron metabolism via the inhibition of the BMP/SMADs pathway. Am J Hematol. 2020 Feb;95(2):188-197.
6: **Andolfo I,** et al. The BMP-SMAD pathway mediates the impaired hepatic iron metabolism associated with the ERFE-A260S variant. Am J Hematol. 2019 Nov;94(11):1227-1235.
7: Matte A, .. , **Andolfo I,** .., De Franceschi L. Resolution of sickle cell disease-associated inflammation and tissue damage with 17 Resolvin D1. Blood. 2019 Jan 17;133(3):252-265.
8: Andolfo I, Russo R, Gambale A, Iolascon A. Hereditary stomatocytosis: An underdiagnosed condition. Am J Hematol. 2018 Jan;93(1):107-121.
9: **Andolfo I**, et al. Novel Gardos channel mutations linked to dehydrated hereditary stomatocytosis (xerocytosis). Am J Hematol. 2015 Oct;90(10):921-6.
10: **Andolfo I**, et al. Multiple clinical forms of dehydrated hereditary stomatocytosis arise from mutations in PIEZO1. Blood. 2013 May 9;121(19):3925-35, S1-12.

Total Citations (Google Scholar) 7346.
H-index according to Google Scholar 38.

- **Other projects**

List of other projects for which you are PI

2024-2026 PI of the project "Dissecting the role of PIEZO1 in liver sinusoidal endothelial cells to identify new druggable targets for iron overload" EHA Bilateral Collaborative Grant of the European Hematology Association (EHA).

2022-2024 PI of the project of the project “Exploring mTOR pathway in PIEZO1 activating signaling” Cariplo Telethon Alliance GJC2021 -Fondazione Cariplo.
2018- 2021 PI of the project “Dissecting the role of PIEZO1 in the pathogenic mechanism of dehydrated hereditary stomatocytosis” Junior Research Grant of the European Hematology Association (EHA).

Naples, January 17, 2025

Immacolata Andolfo