


# Dr Jonathan Millar

Senior Clinical Research Fellow and Honorary Consultant in Intensive Care Medicine

Baillie-Gifford Pandemic Science Hub, University of Edinburgh, United Kingdom

 jemillar.io |  +44 (0)7545 579065 |  jonathan.millar@ed.ac.uk

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I am an accomplished clinician-scientist with expertise in clinical research and computational biology. I have led interdisciplinary teams in high-impact research settings, including key roles in the world's largest critical care genome-wide association study (genomicc.org) and the international PANTHER phase II platform trial for acute respiratory failure (panthertrial.org). With over 50 original articles published, 7,000+ citations, and a £20M+ funding portfolio, I have made significant contributions to my field. My recent focus on AI applications in genomics and clinical trials has fuelled my passion for developing these cutting-edge approaches and translating them into real-world settings.

## Recent appointments

2023 - Present    **Senior Clinical Research Fellow**  
*University of Edinburgh*

- Principal investigator within the Baillie-Gifford Pandemic Science Hub, Institute for Regeneration & Repair.
- Research interests in functional genomics, foundation models of genomics, and their application to clinical trials.
- Key collaborations with researchers in the UK, Europe, US, Canada, and Australia.

2023 - Present    **Honorary Consultant in Intensive Care Medicine**  
*Queen Elizabeth University Hospital, Glasgow*

- Consultant physician in Scotland's largest critical care department and major trauma centre.
- Established clinical interest in acute severe respiratory failure/ARDS and extracorporeal life support.

2020 - 2023      **Edinburgh Clinical Academic Track (ECAT) Clinical Lecturer in Intensive Care Medicine**  
*University of Edinburgh and the Royal Infirmary of Edinburgh*

- Combined clinical and academic training as part of the prestigious ECAT/Scottish Research Excellence Development Scheme (SCREDS).
- Postdoctoral research in the lab of Prof. Kenneth Baillie (baillielab.net).

## Education

FFICM	<b>Faculty of Intensive Care Medicine</b> <ul style="list-style-type: none"><li>• All parts at first attempt.</li></ul>	2022
PhD	<b>University of Queensland</b> <ul style="list-style-type: none"><li>• NHMRC Doctoral Fellowship 2016-2019</li><li>• Thesis: Combining Cell Therapy and ECMO in ARDS</li><li>• Supervisors: Prof. John Fraser, Prof. Danny McAuley, Dr Jacky Suen</li></ul>	2021
MBBS	<b>University College London Medical School</b> <ul style="list-style-type: none"><li>• Bernard Hart Prize for Clinical Neurosciences</li><li>• Bunzl and Hart Prize for Psychiatry</li></ul>	2009

## Academic training

2020 - 2023	ECAT/SCREDS Clinical Lecturer in Intensive Care Medicine, University of Edinburgh
2018 - 2020	Honorary Clinical Lecturer in Intensive Care Medicine, University of Glasgow
2018	Clinical Research Fellow, Wellcome-Wolfson Institute for Experimental Medicine, Queen's University Belfast
2016 - 2018	NHMRC Doctoral Fellow, University of Queensland
2013 - 2015	Glasgow Clinical Academic Training Environment Specialist Trainee, University of Glasgow
2012 - 2013	Clinical Research Fellow in Emergency Medicine, Royal Victoria Hospital, Belfast
2009 - 2011	Academic Foundation Trainee, Northern Ireland Deanery and Queen's University Belfast

## Medical training

GMC: 7044611      *Entry to the Specialist Register for Intensive Care Medicine - August 2023*

2020 - 2023	Honorary Specialist Registrar in Intensive Care Medicine, South East Scotland
2018 - 2020	Specialist Registrar in Intensive Care Medicine, West of Scotland
2018	Clinical Research Fellow, RICU, Royal Victoria Hospital, Belfast
2016 - 2018	Resident Medical Officer, ICU, St. Andrew's War Memorial Hospital, Brisbane
2013 - 2015	Acute Care Common Stem (Emergency Medicine), West of Scotland
2012 - 2013	Clinical Research Fellow in Emergency Medicine, Royal Victoria Hospital, Belfast
2011 - 2012	General Duties Medical Officer, Royal Army Medical Corps, British Army
2009 - 2011	Academic Foundation Trainee, Northern Ireland Deanery and Queen's University Belfast

## Selected publications

Citations = 7,015      h-index = 23      i10-index = 32

1. Millar JE, et. al. 2024. The genomic landscape of Acute Respiratory Distress Syndrome: a meta-analysis by information content of genome-wide studies of the host response. **medRxiv**, 13.234301089.
2. Pairo-Castineira E, ..., Millar JE, ..., Baillie JK. 2023. GWAS and meta-analyses identifies 49 genetic variants underlying critical COVID-19. **Nature**, 617(7962):764-768.
3. Kousathanas A, ..., Millar JE, ..., Baillie JK. 2022. Whole genome sequencing reveals host factors underlying critical COVID-19. **Nature**, 607(7917):97-103.
4. Pairo-Castineira E, ..., Millar JE, ..., Baillie JK. 2021. Genetic mechanisms of critical illness in COVID-19. **Nature**, 591(7848):92-98.
5. Millar JE, et. al. 2020. Combined mesenchymal stromal cell therapy and ECMO in ARDS: a randomised controlled trial in sheep. **Am. J. Respir. Crit. Care Med.**, 202(3):383-392.

## Selected grants and awards

2024	Edinburgh Molecular Mechanisms Cluster		
	Medical Research Council (MR/Y030877/1)	Co-applicant	£ 5,313,306
2024	Precision medicine Adaptive Network platform Trial in Hypoxemic acuteE respiratory failuRe		
	NIHR EME (NIHR158714)	Co-applicant	£ 6,530,146
2022	Functional genomics and ARDS: in-silico and in-vitro gene editing to dissect genome wide associations in patients with Acute Respiratory Distress Syndrome		
	Academy of Medical Sciences (SGL027\1017)	Personal	£ 26,359

**A full list of publications, invited lectures, grants, and awards can be found at <https://jemillar.io>**