# CHIARA HERZOG, PH.D.

King's Prize Fellow King's College London chiaraherzog.github.io

**)** +44 7413 711127

● London, UK

chiara.herzog@kcl.ac.uk

github.com/chiaraherzog

in /in/chiara-herzog

## **SUMMARY**

Experienced and award-winning researcher interested in personalised health monitoring and ageing research. Explore my full CV on my website under **chiaraherzog.github.io**.

### KEY TOPICS -

epigenetics & biomarkers

wulti-omic human studies

disease risk prediction

ageing research and women's cancer

#### **EDUCATION**

2015 - 2019 Ph.D in Neuroscience

University of Edinburgh, UK

2014 - 2015 M.Sc by Research in Integrative Neuroscience (distinction ★)

University of Edinburgh, UK

2011 - 2014 B.Sc. in Molecular Medicine (distinction ★)

Innsbruck Medical University, AT

graduated from degree top of my class aged 19; joint classes with medical school

#### EXPERIENCE (SELECTED) -

2024 - current King's Prize Fellow

King's College London, UK

• establishing an independent research program

## 2020 - current Postdoc/senior scientist and lecturer

Universität Innsbruck, AT

- Lead of computational biology team at the European Translational Oncology Prevention and Screening Institute; analysis of high-dimensional omics data for disease risk prediction, including development of new classifiers and clinical resulting in patents and real-world application
- Co-PI of a human multi-omic intervention trial; in charge of conception, development, and execution of several scientific studies
- · Teaching and course material development, supervision of staff and students

# 2023 - current **Executive committee member**

**Biomarkers of Aging Consortium, US** 

- Scientific roadmap development to translate biomarkers of aging into clinically useful tools
- · Key involvement since 2022, including consensus-building manuscripts and conference organisation
- 2019 2020 Associate business development manager

BioClavis Ltd., Glasgow, UK

• Scientific liaison for research collaborations at omics-based precision diagnostics company

2019 - 2019 **Postdoctoral researcher** 

University of Edinburgh, UK

• Investigated immune-derived signalling factors involved in neuroprotection using molecular and computational methods (gene expression analysis, *in vivo* CRISPR/Cas9, microscopy, data analysis)

2015 – 2019 Ph.D. re

Ph D researcher

University of Edinburgh, UK

- Explored the immune system's contribution to central nervous system repair in a regenerative organism (*D. rerio*) using molecular, cellular, and computational tools (*in vivo* confocal timelapse microscopy, RNA-seq/qRT-PCR, pharmacological and genetic perturbations, computation analysis)
- · Awarded a travelling fellowship for two-month visit to collaborating research institution
- Selected to present at scientific conference (the only Ph.D. student to present among senior postdocs and group leaders)

2014 - 2015 **M.Sc. researcher** 

University of Edinburgh, UK

· Extensive biochemical analysis of evolutionary conservation of synaptic protein complexes

## **PUBLICATIONS (SELECTED)**

\* denotes joint first authorship. A full list of my >20 peer-reviewed articles can be found on <u>Google Scholar</u> and <u>my website</u>.

2024 Challenges and Recommendations for The Translation of Biomarkers of Aging

Herzog C\*, Goeminne L\*, Poganik JR\*, ..., & Gladyshev VN. (10.1038/s43587-024-00683-3). forthcoming

Cell- and exposure-specic DNA methylation changes in response to cigarette smoking indicate shared carcinogenic mechanisms with e-cigarette use

Cancer Research

Herzog C, ..., & Widschwendter M. (10.1158/0008-5472.CAN-23-2957)

2024 Validation of Biomarkers of Aging

Nature Medicine

Moqri M\*, Herzog C\*, Poganik JR\*, ..., & Gladyshev VN (10.1038/s41591-023-02784-9)

2023	Biomarkers of Aging for the Identification of Longevity Interv Moqri M*, <u>Herzog C</u> *, Poganik JR*,, & Gladyshev VN (10.1016/j.	
2023	Performance of the WID-qEC test versus sonography to detect uterine bleeding (EPI-SURE)  Evans,, Herzog C, Jurkovic D, & Widschwendter M. (10.1016/S	Lancet Oncology
2023	DNA methylation at quantitative trait loci (mQTLs) varies wi may improve breast cancer risk assessment Herzog C,, & Widschwendter M. (10.1038/s41698-023-00452	npj Precision Oncology
2022	A Simple Cervicovaginal Epigenetic Test for Screening and Redometrial Cancer: Validation in Several Cohort and Case/Co. Herzog C*, Marin F, & Widschwendter M. (10.1200/JC0.22.002)	ntrol Sets Journal of Clinical Oncology
2022	The WID-BC-index identifies women with primary poor progression in cervical samples  Barrett J*, Herzog C*, & Widschwendter M. (10.1038/s41467-0	Nature Communications
AWARDS —		
2024	Basic Science Research Award ÖGM	1BT (Austrian Society for Molecular Biotechnology), AT
2024	Prof. Anthony Mellows Medal & King's Prize Fellowship (offere	ed) King's College London, UK
2024	Young Scientist Award	Austrian Society for Gynaecologic Oncology, AT
2024	Prof. Ernst Brandl Prize	Ernst Brandl Stifung, AT
2022	Falling Walls Lab Winner	Falling Walls Austria, AT
2018	Runner up Student Publication of the Year	Scottish Newspaper Society, UK
MENTORSHIP	AND TEACHING (SELECTED)	
	Cell cycle and tumour biology  Development of new materials and lecturing	B.Sc. Biology – Universität Innsbruck, AT
2022 – current •	Epigenetics and cancer  Developed new month-long module on translational cancer recancer risk monitoring and early detection; including clinical students	
FUNDING —	9 ,	ldy design, biomarkers, biobanking, ethics
		udy design, biomarkers, biobanking, ethics
2015 - 2018	Competitive Ph.D. Scholarship	udy design, biomarkers, biobanking, ethics  University of Edinburgh, UK
2015 - 2018 2016		University of Edinburgh, UK
2016	Competitive Ph.D. Scholarship  Travelling Fellowship Grant for two-month exchange to LMU	University of Edinburgh, UK  Munich Company of Biologists, UK
2016 INVITED TALK	Competitive Ph.D. Scholarship  Travelling Fellowship Grant for two-month exchange to LMU  S – CONFERENCES (SELECTED)	University of Edinburgh, UK  Munich Company of Biologists, UK
2016	Competitive Ph.D. Scholarship  Travelling Fellowship Grant for two-month exchange to LMU  S – CONFERENCES (SELECTED)  Biomarkers of Aging for Geroscience Interventions (Keynote)	University of Edinburgh, UK  Munich Company of Biologists, UK
2016 INVITED TALK 2024	Competitive Ph.D. Scholarship  Travelling Fellowship Grant for two-month exchange to LMU  S – CONFERENCES (SELECTED)	University of Edinburgh, UK  Munich Company of Biologists, UK  Joint Congress, German Gerontology/Geriatry Soc.  Foresight Institute Vision Weekend EU
2016 INVITED TALK 2024 2024	Competitive Ph.D. Scholarship  Travelling Fellowship Grant for two-month exchange to LMU  S – CONFERENCES (SELECTED)  Biomarkers of Aging for Geroscience Interventions (Keynote)  The Path to Biomarker Standardization (Keynote)	University of Edinburgh, UK  Munich Company of Biologists, UK  Joint Congress, German Gerontology/Geriatry Soc.  Foresight Institute Vision Weekend EU  arkers of Aging GRC Systems Aging, ES
2016 INVITED TALK 2024 2024 2024 2022	Competitive Ph.D. Scholarship  Travelling Fellowship Grant for two-month exchange to LMU  S – CONFERENCES (SELECTED)  Biomarkers of Aging for Geroscience Interventions (Keynote)  The Path to Biomarker Standardization (Keynote)  Biomarkers of Aging Consortium: Establishing Reliable Biomarkers of Aging Consortium: Esta	University of Edinburgh, UK  Munich Company of Biologists, UK  Joint Congress, German Gerontology/Geriatry Soc.  Foresight Institute Vision Weekend EU  arkers of Aging GRC Systems Aging, ES
2016 INVITED TALK 2024 2024 2024 2022	Competitive Ph.D. Scholarship  Travelling Fellowship Grant for two-month exchange to LMU  S - CONFERENCES (SELECTED)  Biomarkers of Aging for Geroscience Interventions (Keynote)  The Path to Biomarker Standardization (Keynote)  Biomarkers of Aging Consortium: Establishing Reliable Biomarkers of Aging Consortium: Establishing Reliable Biomarkers of Aging	University of Edinburgh, UK  Munich Company of Biologists, UK  Joint Congress, German Gerontology/Geriatry Soc.  Foresight Institute Vision Weekend EU  arkers of Aging GRC Systems Aging, ES
2016 INVITED TALK 2024 2024 2024 2022 INVITED TALK 2024	Competitive Ph.D. Scholarship  Travelling Fellowship Grant for two-month exchange to LMU  S - CONFERENCES (SELECTED)  Biomarkers of Aging for Geroscience Interventions (Keynote)  The Path to Biomarker Standardization (Keynote)  Biomarkers of Aging Consortium: Establishing Reliable Biomarkers of Aging Consortium: Establishing Reliable Biomarkers of Aging  Discordance in general & epithelial ageing signatures indicated Mechanisms of Aging  S - OUTREACH AND POLICY (SELECTED)	University of Edinburgh, UK  Munich Company of Biologists, UK  Joint Congress, German Gerontology/Geriatry Soc. Foresight Institute Vision Weekend EU  arkers of Aging GRC Systems Aging, ES tes hormone-mediated cancer risk CSHL  Long Night of Museums, Futurium Berlin, DE
2016 INVITED TALK 2024 2024 2024 2022 INVITED TALK 2024	Competitive Ph.D. Scholarship  Travelling Fellowship Grant for two-month exchange to LMU  S - CONFERENCES (SELECTED)  Biomarkers of Aging for Geroscience Interventions (Keynote) The Path to Biomarker Standardization (Keynote) Biomarkers of Aging Consortium: Establishing Reliable Biomarkers of Aging Consortium: Establishing Reliable Biomarkers of Aging  Discordance in general & epithelial ageing signatures indicated Mechanisms of Aging  S - OUTREACH AND POLICY (SELECTED)  Epigenetics and ageing biomarkers	University of Edinburgh, UK  Munich Company of Biologists, UK  Joint Congress, German Gerontology/Geriatry Soc. Foresight Institute Vision Weekend EU  arkers of Aging GRC Systems Aging, ES tes hormone-mediated cancer risk CSHL  Long Night of Museums, Futurium Berlin, DE
2016  INVITED TALK 2024 2024 2022  INVITED TALK 2024 PRESS & MEDI	Competitive Ph.D. Scholarship  Travelling Fellowship Grant for two-month exchange to LMU  S - CONFERENCES (SELECTED)  Biomarkers of Aging for Geroscience Interventions (Keynote)  The Path to Biomarker Standardization (Keynote)  Biomarkers of Aging Consortium: Establishing Reliable Biomarkers of Aging Consortium: Establishing Reliable Biomarkers of Aging  Discordance in general & epithelial ageing signatures indicated Mechanisms of Aging  S - OUTREACH AND POLICY (SELECTED)  Epigenetics and ageing biomarkers  A (SELECTED)	University of Edinburgh, UK  Munich Company of Biologists, UK  Joint Congress, German Gerontology/Geriatry Soc. Foresight Institute Vision Weekend EU  arkers of Aging GRC Systems Aging, ES tes hormone-mediated cancer risk CSHL  Long Night of Museums, Futurium Berlin, DE
2016 INVITED TALK 2024 2024 2022 INVITED TALK 2024 PRESS & MEDI 2024	Competitive Ph.D. Scholarship  Travelling Fellowship Grant for two-month exchange to LMU  S - CONFERENCES (SELECTED)  Biomarkers of Aging for Geroscience Interventions (Keynote)  The Path to Biomarker Standardization (Keynote)  Biomarkers of Aging Consortium: Establishing Reliable Biomarkers of Aging Consortium: Establishing Reliable Biomarkers of Aging  Discordance in general & epithelial ageing signatures indicate Mechanisms of Aging  S - OUTREACH AND POLICY (SELECTED)  Epigenetics and ageing biomarkers  A (SELECTED)  Epigenetic impact of smoking and vaping (live TV interview)	University of Edinburgh, UK  Munich Company of Biologists, UK  Joint Congress, German Gerontology/Geriatry Soc. Foresight Institute Vision Weekend EU  arkers of Aging GRC Systems Aging, ES tes hormone-mediated cancer risk CSHL  Long Night of Museums, Futurium Berlin, DE  Sky News
2016  INVITED TALK 2024 2024 2022  INVITED TALK 2024  PRESS & MEDI 2024 2024 2024 2024	Competitive Ph.D. Scholarship  Travelling Fellowship Grant for two-month exchange to LMU  S - CONFERENCES (SELECTED)  Biomarkers of Aging for Geroscience Interventions (Keynote) The Path to Biomarker Standardization (Keynote) Biomarkers of Aging Consortium: Establishing Reliable Biomarkers of Aging Consortium: Establishing Reliable Biomarkers of Aging Discordance in general & epithelial ageing signatures indicated Mechanisms of Aging  S - OUTREACH AND POLICY (SELECTED)  Epigenetics and ageing biomarkers  A (SELECTED)  Epigenetic impact of smoking and vaping (live TV interview) Vaping 'linked to cancer and damages body like smoking'	University of Edinburgh, UK  Munich Company of Biologists, UK  Joint Congress, German Gerontology/Geriatry Soc. Foresight Institute Vision Weekend EU  arkers of Aging GRC Systems Aging, ES tes hormone-mediated cancer risk CSHL  Long Night of Museums, Futurium Berlin, DE  Sky News Front page article in The Times
2016  INVITED TALK 2024 2024 2022  INVITED TALK 2024  PRESS & MEDI 2024 2024 2024 2024	Competitive Ph.D. Scholarship  Travelling Fellowship Grant for two-month exchange to LMU  S - CONFERENCES (SELECTED)  Biomarkers of Aging for Geroscience Interventions (Keynote) The Path to Biomarker Standardization (Keynote) Biomarkers of Aging Consortium: Establishing Reliable Biomarkers of Aging Consortium: Establishing Reliable Biomarkers of Aging  Discordance in general & epithelial ageing signatures indicated Mechanisms of Aging  S - OUTREACH AND POLICY (SELECTED)  Epigenetics and ageing biomarkers  A (SELECTED)  Epigenetic impact of smoking and vaping (live TV interview) Vaping 'linked to cancer and damages body like smoking' Womb cancer 2023 test breakthrough 'cuts diagnosis time'	University of Edinburgh, UK  Munich Company of Biologists, UK  Joint Congress, German Gerontology/Geriatry Soc. Foresight Institute Vision Weekend EU  arkers of Aging GRC Systems Aging, ES tes hormone-mediated cancer risk CSHL  Long Night of Museums, Futurium Berlin, DE  Sky News Front page article in The Times
2016  INVITED TALK 2024 2024 2022  INVITED TALK 2024 PRESS & MED 2024 2024 2024 2023  CONFERENCE	Competitive Ph.D. Scholarship  Travelling Fellowship Grant for two-month exchange to LMU  S - CONFERENCES (SELECTED)  Biomarkers of Aging for Geroscience Interventions (Keynote) The Path to Biomarker Standardization (Keynote) Biomarkers of Aging Consortium: Establishing Reliable Biomarkers of Aging Consortium: Establishing Reliable Biomarkers indicated Mechanisms of Aging  S - OUTREACH AND POLICY (SELECTED)  Epigenetics and ageing biomarkers  A (SELECTED)  Epigenetic impact of smoking and vaping (live TV interview) Vaping 'linked to cancer and damages body like smoking' Womb cancer 2023 test breakthrough 'cuts diagnosis time' ORGANISATION	University of Edinburgh, UK  Munich Company of Biologists, UK  Joint Congress, German Gerontology/Geriatry Soc. Foresight Institute Vision Weekend EU  arkers of Aging GRC Systems Aging, ES  tes hormone-mediated cancer risk CSHL  Long Night of Museums, Futurium Berlin, DE  Sky News  Front page article in The Times  The Standard Tech & Science Daily Podcast