

CONOR MCCALLION

MSci Medicinal Chemistry | Research Chemist | PhD Applicant

Derry, BT48 8GA | 075-269-31951 | conor.mccallion1@gmail.com

linkedin.com/in/conor-mccallion-186643153

PROFILE

Analytical scientist with over six years' experience in high-stakes, GMP-regulated research environments, now seeking to transition into health psychology research. My career at Almac Sciences developed core competencies in rigorous experimental design, systematic data interpretation, and evidence-based decision-making—skills directly transferable to quantitative and mixed-methods health research. A personal, long-term experience of chronic illness has shaped a deep interest in patient-centred care, self-management, and the psychological dimensions of living with endocrine conditions. I am applying to undertake doctoral research under Dr Liz Simpson at Ulster University, investigating the impact of adrenal insufficiency on health and well-being, with a focus on personalised approaches integrating nutritional and psychological profiling.

EDUCATION

MSci Medicinal Chemistry (2:1 Honours) | **Queen's University Belfast** 2014 – 2018

- Undergraduate thesis: Antimicrobial Peptide Tridecaptin A1 Analogue Synthesis and Testing.
- Developed expertise in analytical chemistry, experimental design, literature review, and scientific writing.
- Statistical analysis of experimental data; experience with hypothesis testing and data-driven conclusions.

PROFESSIONAL EXPERIENCE

Research Chemist | **Almac Sciences, Northern Ireland** Jan 2018 – Jan 2024

- Designed, optimised, and executed GMP-compliant preparative chromatography workflows for pharmaceutical compounds, consistently achieving >99% purity on multi-kilogram API batches.
- Authored standard operating procedures (SOPs), qualification protocols, and detailed technical reports—demonstrating capacity for systematic documentation, protocol development, and transparent reporting transferable to research governance and ethics submissions.
- Conducted complex chiral and achiral separations and impurity isolations under strict regulatory standards, requiring meticulous attention to method validation and quality assurance.
- Researched and implemented multi-column chromatography technology, improving purification throughput and efficiency—evidence of initiative-driven problem solving and process innovation.
- Collaborated across multidisciplinary teams (analytical, process, quality) to deliver project milestones under time-sensitive, high-accountability conditions.
- Interpreted complex analytical datasets to inform process decisions, directly analogous to interpreting quantitative health research data.

RESEARCH INTERESTS & DOCTORAL FOCUS

My proposed doctoral research centres on assessing the impact of adrenal insufficiency (Addison’s disease) on health and well-being in adults living on the Island of Ireland. Key areas of interest include:

- Patient experience of adrenal crisis, emergency care, and surgical settings
- Quality of life, stress, and coping strategies in chronic adrenal insufficiency
- Personalised medicine approaches integrating nutritional and psychological profiling for tailored self-management.
- The intersection of biological mechanisms (immune function, HPA axis) with psychological and behavioural factors
- Mixed-methods research design combining qualitative patient narratives with quantitative health outcome measures.

TRANSFERABLE SKILLS FOR HEALTH RESEARCH

Analytical & Data Complex dataset interpretation Statistical reasoning Method validation & QA Evidence-based decisions	Research Governance SOP & protocol authoring. GMP regulatory compliance Technical report writing Quality assurance systems	Professional & Personal Cross-functional collaboration Time-critical project delivery Lived experience of chronic illness. Patient-centred perspective
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TECHNICAL COMPETENCIES

Preparative Chromatography: HPLC, multi-column chromatography, LCMS | **Process:** Scalable purification, kilo-lab scale-up, clinical batch manufacture | **Separations:** Chiral and achiral methods, impurity isolation | **Other:** Bioprocessing ultrafiltration, oligonucleotide chemistry, mechanistic modelling

REFERENCES

Available upon request.