

Dolapo Jolade Bello AMRSC

Synthetic Organic and Medicinal Chemist | PhD Researcher, Organic Chemistry

Loughborough, UK | +44 7901 036402 | dolapobello2013@gmail.com

Portfolio: [dolapobello.github.io](https://github.com/dolapobello) | LinkedIn: [linkedin.com/in/dolapo-bello](https://www.linkedin.com/in/dolapo-bello)

PROFILE

Synthetic organic chemist with published work in medicinal chemistry, undertaking a fully funded PhD at Loughborough University on bicyclo[1.1.1]pentane (BCP) analogues of quinolone antibiotics. I design and run multistep routes to new three dimensional drug scaffolds, optimise challenging strained ring chemistry, and fully characterise every compound I make. Three research degrees have given me a broad, adaptable lab skill set, and three 2026 presentation prizes show I can explain complex science clearly. I am seeking a Medicinal Chemist, Synthetic Chemist or R&D Scientist role in pharmaceutical, agrochemical or chemical industry research.

CORE COMPETENCIES

- Medicinal chemistry
- SAR and SPR analysis
- Strained ring chemistry
- Purification and chromatography
- Multistep organic synthesis
- Reaction optimisation
- Air sensitive techniques
- Scientific communication
- Bioisosteric design
- Heterocyclic chemistry
- NMR, HRMS, HPLC, GC
- Mentoring and teaching

SELECTED ACHIEVEMENTS

- 2 peer reviewed publications**, including The Journal of Organic Chemistry (2025), with a further manuscript in preparation.
- 3 presentation prizes in 2026**: Three Minute Thesis Winner and People's Choice (Loughborough University), and RSC Advances 5MT Runner Up (University of Bristol).
- Selected for RSC Broadening Horizons 2026**, a year long industry programme with GSK, AstraZeneca, Unilever, Johnson Matthey and Syngenta.
- Associate Member of the Royal Society of Chemistry (AMRSC)**, admitted June 2026.

RESEARCH EXPERIENCE

PhD Researcher, Organic and Medicinal Chemistry

2024 – Present

Loughborough University, UK

Fully funded studentship. Thesis: Bicyclo[1.1.1]pentane Analogues of Quinolone Antibiotics. Supervisor: Dr Marc Kimber

- Design and synthesise BCP containing quinolone analogues as three dimensional replacements for flat aromatic rings, targeting new antibiotics against resistant bacteria.
- Develop and optimise new multistep synthetic routes to these analogues, and prepare substituted derivatives for structure activity relationship (SAR) studies.
- Co-authored a J. Org. Chem. (2025) paper on nucleophilic substitution of 1,3-diiodobicyclo[1.1.1]pentane to make BCP pyridinium, quinolinium, isoquinolinium and pyrazolium salts.
- Optimise reaction conditions and explore substrate scope and mechanism to improve yield, efficiency and selectivity.
- Characterise every new compound by 1D/2D NMR, HRMS/MS, IR, HPLC and GC; handle air and moisture sensitive reagents using Schlenk line and glovebox techniques.
- Demonstrate in undergraduate organic chemistry labs and support MSc research students with experimental design and data analysis.

MSc Researcher, Chemistry

2023 – 2024

Nottingham Trent University, UK

- Designed and analysed microfluidic T junction systems to measure liquid mixing, diffusion and flow, using quantitative analysis to optimise performance. Supervisor: Dr Cheu Wing Li.

- Synthesised and characterised oxidised starch nanoparticles that remove toxic lead and cadmium from wastewater, modelling adsorption with kinetic, thermodynamic and isotherm models; published in 2021.

PUBLICATIONS

- Monroe, H.J.C.; **Bello, D.J.**; Duff, B.J.; Elsegood, M.R.J.; Watanabe, K.; Pritchard, G.J.; Kimber, M.C. Nucleophilic Substitution of 1,3-Diiodobicyclo[1.1.1]pentane: Synthesis of Bicyclo[1.1.1]pentyropyridinium, Quinolinium, Isoquinolinium, and Pyrazolium Salts. *J. Org. Chem.* 2025, 90 (23), 7712–7722. DOI: 10.1021/acs.joc.5c00565
- Awokoya, K.N.; Oninla, V.O.; **Bello, D.J.** Synthesis of oxidised starch (*Dioscorea dumetorum*) nanoparticles for the adsorption of lead(II) and cadmium(II) ions from wastewater. *Environ. Nanotechnol. Monit. Manag.* 2021, 14, 100440. DOI: 10.1016/j.enmm.2021.100440
- **Bello, D.J. et al.** Manuscript in preparation on new synthetic methodology from PhD research.

EDUCATION

PhD Chemistry (Organic Chemistry) Loughborough University, UK	2024 – Present
MSc Chemistry Nottingham Trent University, UK	2023 – 2024
MSc Industrial Chemistry Obafemi Awolowo University, Nigeria	2018 – 2020
BSc Industrial Chemistry Obafemi Awolowo University, Nigeria	2009 – 2015

Final year research: characterisation of Nigerian and Canadian tar sands using AAS, ICP-MS, FTIR, SEM and XRD.

TECHNICAL SKILLS

- **Synthesis:** Multistep synthesis, retrosynthesis, reaction optimisation, C–C and C–N bond formation, cross coupling, heterocycle and strained ring (BCP) chemistry, functional group transformations
- **Medicinal chemistry:** Bioisosteric replacement, molecular design, SAR and structure property relationships, antibiotic drug discovery
- **Analytical:** 1D/2D NMR, HRMS/MS, IR, HPLC, GC, UV–Vis, XRD, SEM, TEM, ICP, AAS
- **Laboratory:** Schlenk line, glovebox, inert atmosphere synthesis, flash chromatography, purification, rotary evaporation
- **Software:** ChemDraw, Chem3D, MestReNova, TopSpin, Mercury (CCDC), OPUS/OMNIC, EndNote, Mendeley

INDUSTRY ENGAGEMENT AND PRESENTATIONS

- **RSC Broadening Horizons, 5th cohort (2026):** taster event in Manchester and site visit to Unilever, Port Sunlight; partners include GSK, AstraZeneca, Unilever, Johnson Matthey, Syngenta, AM Technology and Nanomerics.
- Oral presentation, Science Matters Conference, Loughborough University, June 2026.
- Five Minute Thesis talk, Celebrating Women in Chemistry Conference, University of Bristol, May 2026.
- Delegate, RSC Heterocyclic and Synthesis Group 3rd Postdoctoral Symposium (virtual), May 2026.
- Poster presentations at RSC organic chemistry meetings, 2024 – 2026, including University of Sheffield, April 2026.

LEADERSHIP, OUTREACH AND MEMBERSHIPS

- **Women in Science (Nigeria):** helps organise the annual February event celebrating women scientists and encouraging girls into science.
- **Peer Educator, UNICEF Nigeria:** delivered health awareness sessions to secondary school students.
- **Conference Coordinator**, International Institute for Sustainable Development, 2016; **Financial Secretary (student executive)**, Department of Chemistry, Obafemi Awolowo University, 2014.
- **Memberships:** Associate Member, Royal Society of Chemistry (AMRSC), 2026; Black Women in Science (UK), 2024 – Present; Women in Science (Nigeria), 2021 – Present; International Institute for Sustainable Development (IISD).

Full research summary, publications and certificates: [dolapobello.github.io](https://github.com/dolapobello) References available on request.