

Centro Singular de Investigación en **Química Biolóxica** e **Materiais Moleculares**

Conferencia:

(Glyco)Materials for Infection and Biologic Storage



Department of Chemistry and Medical School - University of Warwick - Reino Unido

24/06/19

Aula de Seminarios do CIQUS

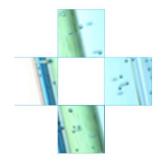
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Más información: www.usc.es/ciqus













PROFESSOR MATTHEW GIBSON.

Department of Chemistry and Medical School, University of Warwick, UK

PROFESSIONAL APPOINTMENTS

2016 –	Full Professor. Joint Chair between Department of Chemistry and Warwick Medical School,
	University of Warwick UK. [1st ever joint position between these Departments]
2015 - 2016	Associate Professor. Department of Chemistry, University of Warwick, UK
2012 - 2015	Assistant Professor. Department of Chemistry, University of Warwick, UK
2009 - 2012	Senior Research Fellow. (Independent position) University of Warwick, UK
2007 - 2009	Postdoctoral Researcher. Institute of Materials, Federal Institute of Technology, Lausanne,
	(EPFL), Switzerland. Supervisor: Prof Harm-Anton Klok
EDUCATION	
2003 - 2006	PhD Research in Macromolecular Chemistry, University of Durham UK.
	Awarded January 2008. Supervisor: Prof. Neil R. Cameron
1999 - 2003	MChem. 1st Class Honors. University of Durham, UK

RESEARCH STATEMENT

My research is focused on the development and application of novel macromolecules which can be applied to global healthcare challenges. This makes use of organic, polymer and carbohydrate chemistries but always with a focus on the analytical science to enable a quantitative understanding to be developed. This has been applied to diverse challenges spanning the control of ice crystal growth, cellular cryopreservation, point of care infectious disease diagnostics, and antimicrobials.

SELECTED AWARDS

2018	ACS Biomacromolecules/Macromolecules Young Investigator Prize
2016	Fellow of the Royal Society of Chemistry (FRSC)
2015	Polymers for Advanced Technology Young Talent Prize.
2015	Dextra Medal for Carbohydrate Science. Royal Society of Chemistry
2014	ERC Starting Grant Awardee
2014	Emerging Technologies Prize (Life Sciences). Royal Society of Chemistry
2012	MacroGroupUK Young Researchers Medal. Royal Society of Chemistry

PUBLICATION SUMMARY

- 117 Journal Publications, 2 Book Chapters, 5 recent publications;
- 1] Guy, C., Gibson, M.I., Fullam E.C., *Chemical Science*, **2019**, DOI: 10.1039/C9SC00415G, 'Targeting extracellular glycans: tuning multimeric boronic acids for pathogen-selective killing of Mycobacterium tuberculosis'
- **2]** Mitchell, DE., Deller, RC., Fayter, AC., Hasan, M., Gutierrez-Marcos, J., Gibson, M.I., *Materials Horizons*, **2019**, 6, 364 368, 'Ice-Recrystallization Inhibiting Polymers Protect Proteins Against Freeze-Stress and Enable Glycerol-Free Cryostorage'
- **3]** Blackman, LD., Varlas, S., Arno, M.C., Houston, Z., Fletcher, N., Thurecht, K, Hasan, M., Gibson M.I., and O'Reilly, R.K. *ACS Central Science*, **2018**, 4, 718-723 'Confinement of therapeutic enzymes in selectively permeable polymer vesicles by polymerization-induced self-assembly (PISA) reduces antibody binding and proteolytic susceptibility'
- 4] Graham, B., Fayter, AER, Houston, J.E., Evans, R.C., Gibson M.I., *Journal of the American Chemical Society*, 2018, 140, 5682-5685, 'Facially Amphipathic Glycopolymers Inhibit Ice Recrystallization'
- 5] Graham, B., Bailey, T.L., Healey, J.R., Marcellini, M., Deville, S., Gibson, M. I., *Angewandte Chemie*, 2017, 56, 15941–15944, 'Polyproline as a Minimal Antifreeze Protein Mimic That Enhances the Cryopreservation of Cell Monolayers'

RESEARCH AND SUPERVISION TRACK RECORD

- Group is comprised of 15 PhDs, 7 PDRA and several undergraduate/masters students.
- 15 PhDs have graduated from the lab
- Diverse funding portfolio from government, charity, EU, Industry.
- 6 Submitted Patents and 1 granted.