

Jeremy Ewan Turnbull



Jeremy Ewan Turnbull is the Johnston Professor of Biochemistry, and Head of Department of Biochemistry & Cell Biology at the University of Liverpool. His research interests include the chemical biology of cell surface and matrix heparan sulphate proteoglycans (HSPGs) as dynamic cell regulators. The major focus is using chemical biology tools and strategies to elucidate the structure-function relationships of HSPGs, in particular in the nervous system and neural diseases (eg AD, nerve repair), with growing interests in stem cell differentiation and regenerative medicine. Major emphasis has been placed on pioneering chemical and analytical tools to support these studies, including analytical methods for glycan sequencing, engineered heparins, glycoarray methods and glycomics strategies, and more recently extending into drug discovery pathways. He currently has over 29 years research experience (22 years postdoctoral) in

a variety of different research environments, and his research has resulted in a number of seminal contributions to the proteoglycan and related research fields, including: development of the first direct HS sequencing method; widely accepted prototypic model for HS structure; characterisation of specific sugar sequences in HS which bind to basic FGF and act as ligand and receptor specific regulators of FGF activity; discovering that the Alzheimer's β -secretase BACE1 is regulated by HS and developing novel inhibitors for AD therapy (1 patent granted and 1 pending); development of synthetic heparins as AD drugs with IRL Ltd (patent pending); discovering a novel action of HS in glial cell transplantation relevant to nerve repair strategies (patent submitted). Over the years, he has supervised 12 PhD students and >75 MRes and Hons. students to completion. His group at the University of Liverpool currently comprises three postdoctoral fellows, one technician, five PhD students, and two Honours students. His labs current grants income since 2008 is £1.8m as PI (+ £2.9m as Col), with pre-2008 combined income of £11m.