

## THE SEVENTEENTH RODNEY PORTER MEMORIAL LECTURE



**Thursday 28<sup>th</sup> May 2015 at 4.00pm**  
**Seminar Room, New Biochemistry**



**Professor Dame Carol Robinson, FRS, FMedSci**

Royal Society Research Professor and  
Doctor Lee's Professor of Chemistry Elect,  
University of Oxford

***"Two decades of structural biology  
in the gas phase"***

It is now some twenty years since the first mass spectra of non-covalent protein complexes were reported focusing on soluble complexes, contributing to ligand binding studies, subunit interaction maps and topological models. Recent discoveries have enabled delivery of membrane complexes, encapsulated in detergent micelles, prompting new opportunities. By maintaining interactions between membrane and cytoplasmic subunits in the gas phase, it is now possible to investigate the effects of lipids, nucleotides and drugs on intact membrane assemblies. These investigations reveal allosteric and synergistic effects of small molecule binding and expose the consequences of post-translational modifications. In my lecture I will present recent progress in the study of protein complexes, focusing particularly on complexes extracted from membranes, and outline future prospects for gas phase structural biology.

**All welcome**

**Followed by a Champagne Reception on the LG Floor**

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