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und den Ortsverbänden
der **Deutschen Pharmazeutischen Gesellschaft** und der **Gesellschaft**
Deutscher Chemiker zu einem

K o l l o q u i u m d e r D P h G u n d d e r G D C h

Großer Hörsaal des Instituts für Biochemie

Felix-Hausdorff-Str. 4, Greifswald

Freitag, 09. Juni 2017, 13 Uhr c.t.

Prof. Dr. Peter J. Sadler FRS

Department of Chemistry, University of Warwick, UK

E-mail: P.J.Sadler@warwick.ac.uk

spricht zum Thema:

“ Organometallic and Photoactivatable Anticancer Complexes ”

Abstract:

I will describe our recent research of the design and mechanism of action of pseudo-octahedral low-spin d6 precious metal anticancer complexes.

Inert diazido platinum(IV) prodrugs can be activated in cells to give Pt(II) photoproducts which bind to DNA, together with a range of reactive species such as azidyl and hydroxyl radicals, nitrenes and singlet oxygen. They can be conjugated to receptor-targeting peptides, or spin labels for theranostic applications, and formulated into gels.

Ruthenium(II) and osmium(II) arenes can target DNA, but become inert with strong π -acceptor chelated ligands. They have interesting in-cell activation mechanisms. Transfer hydrogenation catalysis can be achieved in cells and increases anticancer potency by perturbing the NAD⁺/NADH ratio, inducing redox stress. Cyclopentadienyl iridium(III) complexes can also be efficient transfer hydrogenation catalysts and potent antiproliferative agents.

Unexpectedly, our work on complexes encapsulated in polymer micelles for drug delivery has led to the observation of single metal atom dynamics.

Einladender

Prof. Dr. Patrick Bednarski

PD Dr. Heike Kahlert

Vorsitzende des Ortsverbandes der GDCh