

Chemical Protein Synthesis Meeting

April 3rd-6th, 2013

Department of Chemistry, University of Vienna (Währinger Str. 38, Lecture Hall II)

Organizers

Ashraf Brik (Israel), Phil Dawson (USA), Christian Hackenberger (Germany), Christian Becker (Austria)

Program

Topic	Time	Speaker	Title
Wednesday, April 3rd			
	18:00	Welcome reception	
	19:00	Welcome	
(1) Protein Synthesis	19:10	S. Kent	Through the Looking Glass: Racemic Protein Crystallography & D-Protein Therapeutics
Thursday, April 4th			
(1) Protein Synthesis	09:00	P. Dawson	Challenges in chemoselective amide bond formation
	09:30	J. Bode	Chemical Protein Synthesis with the KAHA Ligation
	10:00	A. Brik	Studying and Targeting Deubiquitinases Enabled by Chemical Protein Synthesis
	10:30	Coffee Break	
	11:15	O. Melnyk	Bis(2-sulfanylethyl)amido native peptide ligation and the total synthesis of hepatocyte growth factor subdomains: the challenge of understanding MET tyrosine kinase receptor activation
	11:45	L. Liu	Examining the Use of Peptide Hydrazides for Protein Chemical Synthesis
	12:15	C. Hackenberger	When Staudinger meets Huisgen: Chemical Approaches to Functional Proteins
	12:45	Lunch (in house)	
	14:00	Short Poster Talks (10 min each) Please see list below	
	15:30	Coffee Break	
	16:15	O. Seitz	Templated native chemical ligation
(2) Protein Chemistry	16:45	E.J. Petersson	Thioamides: Minimalist chromophores for monitoring protein dynamics
	17:15	E. Lemke	Genetically encoded tools to decipher protein plasticity at the single molecule level
	17:45	Y. Wu	Probing protein function by chemical modification
	18:15	Poster Session (including drinks)	
	20:00	Dinner (on your own)	

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Friday, April 5 th		
(3) Peptide / Protein drugs	A. Beck-Sickinger	Chemical modification of proteins for efficient drug release and novel biomaterials
09:00	A. Karlstrom	Affibody molecules for diagnostic applications
09:30	D. Neri	Tumor targeting: from armed antibodies to small targeted cytotoxics
10:00		
10:30	Coffee Break	
11:15	G. Dawson	Targeted Quantum Dot delivery of peptides and proteins into cells
11:45	D. Schwarzer	Evolved sortase A mutants for peptide and protein chemistry
12:15	Lunch (in house)	
(4) Glycoprotein	Y Kajihara	Chemical Synthesis of Homogeneous Erythropoietin bearing M9-highmannose type oligosaccharide
14:30		
15:00	B. Davis	Sugars & Proteins
15:30	C. Unverzagt	Semisynthesis of N-glycoproteins by convergent methods
16:00	Coffee Break	
16:30	D. Varon Silva	Glycosylphosphatidylinositol Anchors: A Complex Bridge Between Proteins and Membranes
17:00	R. Payne	Synthesis of Glycopeptide and Glycoproteins via Ligation Chemistry
(5) Protein Function	C. Becker	Modified Silaffin Peptides – Understanding silica precipitation activity and biotechnological applications
17:30		
18:00	M. Engelhard	Chemical synthesis of membrane proteins: Challenges and solutions
18:30	Dinner (together)	Melker Stiftskeller, Schottengasse 3, 1010 Wien

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	Saturday, April 6 th	
(5) Protein Function 09:00	D. Trauner	Enzymes and GPCRs: The Age of Enlightenment
09:30	H. Lashuel	Dissecting role of post-translational modifications in the pathogenesis of neurodegenerative disease using chemical protein synthesis and semisynthetic strategies
10:00	H. Mootz	Chemical conjugation of proteins with ubiquitin-like modifiers
10:30	Coffee Break	
11:15	S. Horne	Sequence-Based Strategies for the Mimicry of Protein Tertiary Folding
11:45	F. Bordusa	Engineering Trypsin for Peptide and Protein Semisynthesis
12:15	Lunch & Departure	

Short Poster Talks: (10 min each)

Wolfgang Fischle Stijn Agten	Probing post-translational histone modifications using in vitro approaches Chemoselective reactions in proteins and peptides using an optimized oxime strategy: the demise of levulinic acid.
Vincent Aucagne	Simplifying Chemical Protein Synthesis: Iterative Solid-Supported Peptidomimetic Ligations with Concomitant Purifications
Eric R. Strieter	Chemical tools for studying ubiquitin signaling
Norman Metanis	Using Selenocysteine Substitutions to Steer Oxidative Protein Folding
Carsten Schultz	New tools to cross-link proteins in intact cells
Verena Schart	Synthesis of Alkene-derivatized Fucose – Toward the Detection of Glycoproteins
Christian Gruber	Pharmacological applications of natural peptide libraries
Cornelia Panse	Photocleavable auxiliary in PNA base pairing mediated ligation