

PRELIMINARY DETAILED PROGRAMME

SUNDAY – 20 October 2013

- 15:00** **Registration Desk Open; Mounting the Posters**
- 15:30 – 17:00 Conference buses from Bratislava and Vienna arrive at Smolenice Castle
- 18:45 – 19:00 **Opening words - Štefan Janeček**
- 19:00 – 20:00 **ALAMY_5 Keynote Lecture**
Chair: Birte Svensson
Samuel C. Zeeman (Zürich, Switzerland): The roles of amyolytic enzymes in starch metabolism in plants.
- 20:00 – 22:00 **Opening Reception**

MONDAY – 21 October 2013

- 07:30 – 08:30 *Breakfast*
- 08:55 Announcements
- 09:00 – 11:50 **Structure-function relationships in the clan GH-H and related families**
Chair: Pedro M. Coutinho and Eva Nordberg Karlsson
- 09:00 – 09:40 **Alain Buléon (Nantes, France): A synchrotron view of enzymatic hydrolysis and synthesis of starch buiding blocks.**
- 09:40 – 10:05 **Marie S. Møller (Kgs. Lyngby, Denmark): Insights gained from the crystal structure of the complex of barley limit dextrinase and barley limit dextrinase inhibitor.**
- 10:05 – 10:30 **Alexandra Lipski (Lyon, France): Structural and functional studies of the first described trehalulose hydrolase MutA from *Rhizobium* sp.**
- 10:30 – 11:00 *Coffee/Tea Break and Posters*
- 11:00 – 11:25 **Stephen Bornemann (Norwich, UK): Binding, catalysis and regulation of the anti-TB target GH13_3 GIGe.**
- 11:25 – 11:50 **Claire Moulis (Toulouse, France): Search for new GH-70 α -transglucosylases in lactic acid bacteria diversity dedicated to the synthesis of tailor-made α -glucans.**
- 11:50 – 13:50 *Lunch Break*
- 13:50 – 15:00 **Flash Presentations**
Chair: Nushin Aghajari and Carsten Andersen
- 13:50 – 13:57 **Ema Camacho (Caracas, Venezuela): Role for an α -amylase in the cell wall reorganization of *Paracoccidioides brasiliensis* pathogenic yeast-like phase.**
- 13:57 – 14:04 **Margaret Dah-Tsyr Chang (Hsinchu, Taiwan, China): Characteristics of family 21 carbohydrate binding module in tandem repeat.**
- 14:04 – 14:11 **Olafur Fridjonsson (Reykjavik, Iceland): Amylomic enzymes captured by targeted metagenomics.**

- 14:11 – 14:18 **James H. Geiger** (*East Lansing MI, USA*): **Structure, function and specificity of branching enzyme.**
- 14:18 – 14:25 **Paul R. Gooley** (*Melbourne, VIC, Australia*): **AMP-activated protein kinase β subunit requires internal motion for optimal carbohydrate binding.**
- 14:25 – 14:32 **Or Kakhlon** (*Jerusalem, Israel*): **Searching for efficient therapeutic avenues to treat Adult Polyglucosan Body Disease (APBD) and Lafora Disease (LD) using a high-throughput screening platform.**
- 14:32 – 14:39 **Ryota Kuroki** (*Ibaraki, Japan*): **Substrate-binding mechanism in trehalose producing enzymes elucidated by crystallography.**
- 14:39 – 14:46 **Eva Nordberg Karlsson** (*Lund, Sweden*): **Amylolytic enzymes from new genera isolated via genetic tools: characterization of the first cyclomaltodextrin glucanotransferase from *Carboxydocella* sp.**
- 14:46 – 14:53 **Jean-Phillipe Ral** (*Canberra, ACT, Australia*): **Involvement of α -amylases in starch degradation of germinated wheat grain.**
- 14:53 – 15:00 **Casper Wilkens** (*Kgs. Lyngby, Denmark*): **Surface binding sites within α -glucan active enzymes.**
- 15:00 – 16:30 **Poster Session I.**
- 16:30 – 18:55 **Structure-function relationships in the clan GH-H and related families**
Chair: Pierre Monsan and Harry Brumer
- 16:30 – 17:10 **Stephen G. Withers** (*Vancouver, BC, Canada*): **Structural and mechanistic insights into trehalose synthase and new inhibitors for human pancreatic α -amylase.**
- 17:10 – 17:35 **Diana Santelia** (*Zürich, Switzerland*): **The *Arabidopsis* AtAMY3 is a unique redox-regulated chloroplastic α -amylase.**
- 17:35 – 18:05 *Coffee/Tea Break and Posters*
- 18:05 – 18:30 **Matthew S. Gentry** (*Lexington, KY, USA*): **Structural mechanisms of starch dephosphorylation.**
- 18:30 – 18:55 **Michael Emes** (*Guelph, ON, Canada*): **Multiple phosphorylation sites on starch branching enzyme isoforms regulate specific protein-protein interactions.**
- 19:00 – 22:00 *Supper (eventually at the court of the Castle) with a music*

TUESDAY – 22 October 2013

- 07:30 – 08:30 *Breakfast*
- 08:55 *Announcements*
- 09:00 – 10:20 **Starch- and glycogen-binding domains as CBM families**
Chair: Matthew Gentry
- 09:00 – 09:40 **Nicole Koropatkin** (*Ann Arbor, MI, USA*): **Tandem starch-binding CBMs enhance starch sensing and acquisition by human gut symbionts.**
- 09:40 – 10:20 **David Stapleton** (*Melbourne, VIC, Australia*): **The AMP-activated protein kinase uses a unique CBM48 to associate with glycogen particles.**
- 10:20 – 10:50 *Coffee/Tea Break and Posters*
- 10:50 – 11:15 **ALAMY_5 Special lecture - Focus on chitin**
Chair: Marc J.E.C. van der Maarel

Takayuki Ohnuma (Nara, Japan): Substrate binding and catalytic mechanism of family GH19 chitinases.

11:15 – 12:00

Award Ceremony

Chair: Štefan Janeček

11:20 – 12:00

Lifetime Achievement Award Lecture

Richard Haser (Lyon, France): Into the third dimension of glycosidases for contributing to understand and exploit their functions.

12:00 – 13:30

Lunch Break

13:30 – 23:00

Trip outside the Smolenice Castle (including a dinner)

~13:30

Conference buses leave the Castle

~ 23:30

Arrival at the Smolenice Castle

WEDNESDAY – 23 October 2013

07:30 – 08:30

Breakfast

08:55

Announcements

09:00 – 10:45

Structure-function relationships in families GH57 (GH119) and GH31

Chair: Stephen G. Withers

09:00 – 09:40

Harry Brumer (Vancouver, BC, Canada): A new α -transglucosidase from glycoside hydrolase family 31.

09:40 – 10:20

Elizabeth Ficko-Blean (Roscoff, France): The structure and function of a novel α -amylase produced by the pathogenic bacterium *Clostridium perfringens*.

10:20 – 10:45

Kwang-Hyun Park (Daejeon, Korea): Structural features underlying selective exo-maltogenic cleavage of a novel GH 57 enzyme from *Pyrococcus* sp. ST04.

10:45 – 11:15

Coffee/Tea Break and Posters

11:15 – 12:20

Novel family GH13 subfamilies

Chair: Takashi Kuriki

11:15 – 11:55

Birte Svensson (Kgs. Lyngby, Denmark): Analysis of surface binding sites within GH13 and GH77.

11:55 – 12:20

Dessy Natalia (Bandung, Indonesia): Novel raw starch-degrading GH13 amylases from marine bacteria.

12:20 – 14:00

Lunch Break

14:00 – 15:30

Poster Session II.

15:30 – 17:55

Human health and gut microflora

Chair: Nushin Aghajari & Samuel C. Zeeman

15:30 – 16:10

Mario B. Pinto (Burnaby, BC, Canada): Modulation of starch digestion for slow glucose release through “togging” of activities of mucosal α -glucosidases.

16:10 – 16:35

Maher Abou Hachem (Kgs. Lyngby, Denmark): Recent insight into α -glucan metabolism in probiotic bifidobacteria and lactobacilli.

16:35 – 17:05

Coffee/Tea Break and Posters

17:05 – 17:30

Takashi Furuyashiki (Osaka, Japan): Enzymatically synthesized glycogen improves intestinal microbiota and lipid metabolism.

17:30 – 17:55	Narayanan Ramasubbu (Newark, NJ, USA): Probing the interaction of human salivary α-amylase and amylase binding protein A (AbpA) of <i>Streptococcus gordonii</i>.
17:55 – 19:00	<i>Refreshment Break</i>
19:00 – 20:00	ALAMY_5 Banquet Lecture - IL10 Chair: Birte Svensson Pierre Monsan (Toulouse, France): From sucrose to starch, thanks to GH family 13 enzymes.
20:00 – 24:00	Symposium Banquet

THURSDAY – 24 October 2013

07:30 – 08:30	<i>Breakfast</i> Vacation of the rooms - Removing the Posters
08:55	Announcements
09:00 – 10:30	Industrial aspects of starch processing Chair: Marc J.E.C. van der Maarel
09:00 – 09:40	Adrienne Davenport (San Diego, CA, USA): Use of archaeal amylases in industry and insight into structural features conferring thermal stability.
09:40 – 10:05	Carsten Andersen (Bagsvaerd, Denmark): Enzyme development for conventional biofuel.
10:05 – 10:30	Robert G. Gilbert (Brisbane, QLD, Australia): A new method for investigating the active domain of starch/glycogen synthesis/degradation enzymes.
10:30 – 11:00	<i>Coffee/Tea Break</i>
11:00 – 11:50	Structure-function relationships in the clan GH-H and related families Chair: Pedro M. Coutinho
11:00 – 11:25	Marta Martinez-Garcia (Groningen, The Netherlands): Structure of the storage α-glucan from the thermoacidophilic red alga <i>Galdieria sulphuraria</i>.
11:25 – 11:50	Jun-ichi Abe (Kagoshima, Japan): Functional properties of GlgX from <i>Synechocystis</i> sp. PCC6803.
11:50 – 12:20	ALAMY_4 Closing Lecture Chair: Pierre Monsan Nushin Aghajari (Lyon, France): Structure and function relationship studies of a GH97 glycoside hydrolase.
12:20 – 12:30	Closing words - Štefan Janeček
12:30 – 13:30	<i>Lunch and Farewell</i>
12:30 – 13:00	The 1 st Conference Bus leaves for Bratislava and Vienna
13:30 – 14:00	The 2 nd Conference Bus leaves for Bratislava and Vienna