



SCIENTIFIC PROGRAM

23rd Symposium on Glycosaminoglycans

Heparin centenary.

Past, present and future perspectives

September 17th – 19th, 2015

Organizers:

Roland Krämer, Job Harenberg
University of Heidelberg, Germany

Giangiaco Torri, Annamaria Naggi
„G. Ronzoni“ Institute for Chemical and Biochemical Research,
Milan, Italy

Under the patronage of:



Regione Lombardia
IL CONSIGLIO

DFG Deutsche
Forschungsgemeinschaft



Agenzia Italiana del Farmaco
AIFA

Welcome to Villa Vigoni 2015

As for the past editions, the 23rd Glycosaminoglycan Symposium will take place in Villa Vigoni (Lovenno, Lake Como). Eminent specialists from all over the world are invited to contribute to discussion of topics of actual or emerging interest in the field of chemistry, biochemistry, biology, pharmacology, and clinical applications of heparin and other glycosaminoglycans. Both basic and applied aspects will be covered and discussed, with about twenty percent of participants being associated with industrial companies. Participation in the symposium (only by invitation) is limited to a maximum of 80 participants.

Wishing to start the celebrations of the “heparin centenary”, this year we have modified the usual approach preceding the Lovenno-based symposium with a Milan day, on “Present and Future Prospective on Heparin Guidance”, and inserting, in the Villa Vigoni program, some mini reviews on specialized topics. The subjects selected for discussions include heparin synthesis, structural characterization and protein interactions, biological functions, clinical aspects including anti inflammatory and anti tumor activity.

Keynote speakers will outline the state-of-the art in each field and present novel results and future perspectives. A sufficient time will be allotted to in-depth discussion. The informal, workshop-like character of the symposia and the pleasant surroundings of the villa traditionally stimulate also after-session interactions among participants.

Job Harenberg

job.harenberg@medma.uni-heidelberg.de

Giangiaco Torri

torri@ronzoni.it

Scientific board

Giangiaco Torri, Job Harenberg, Roland Krämer, Ram Sasisekharan, Annamaria Naggi, Benito Casu.

Scientific Secretary

Annamaria Naggi

Thursday, September 17th, 2015, afternoon

14.30-14.40	Welcome address J. Harenberg
Lectures	Moderator: G. Torri.
14.40-15.05	Past, present and future perspectives on synthetic glycosaminoglycans M. Petitou, Paris
15.05-15.30	Past, present and future perspectives on structural interaction of heparin R. Sasisekharan, Boston
15.30-15.50	J. van den Born, Groningen. Glycosaminoglycans as binding partners of complement factors
15.50-16.00	Discussion
16.00-16.20	Coffee and Tea
Lecture	Moderator: R. Sasisekharan
16.20-16.50	Past, present and future perspectives of biological roles of heparin/heparan sulfate. U. Lindahl, Uppsala
17.10-17.30	L. Kjellén, Uppsala Heparan sulfate in brain pathology
17.30-17.50	J. Esko, San Diego Proteoglycan mediated nose-to-brain delivery
17.50-18.10	J.-P. Li, Uppsala Collected information about the functions of heparan sulfate and heparanase in Alzheimer disease.
18.10 -18.30	Discussion

Friday, September 18th 2015, morning

	<p>Moderator: J. Esko</p> <p>STRUCTURAL FEATURES AND INTERACTION OF GLYCANS</p>
8.45-9.05	<p>A.-K. Schoenfeld, S. Alban, Kiel Control of complement activation by sulfated glycans via C1 inhibitor potentiation</p>
9.05-9.25	<p>A. Bisio, Milan Investigation on heparan sulfate structure in multiple osteochondroma disease.</p>
9.25-9.45	<p>K. Sugahara, Sapporo Mutations in the biosynthetic enzymes for the protein linker region of chondroitin/dermatan/heparan sulfate cause skeletal and skin dysplasias</p>
9.45-10.05	<p>J. Turbull, Liverpool Heparan sulfate in cancer cell survival: Sulfatases and cancer stem cells</p>
10.05-10.25	<p>M. Schlesinger, Bonn Impact of LMWH on platelet activation in the early metastatic niche</p>
10.25-10.45	Discussion
10.45-11.05	Coffee and Tea
Lecture:	Moderator: U. Lindahl
11.05-11.35	<p>Past, present and future perspectives of heparanase inhibition. I. Vlodaysky, Haifa.</p>
	<p>Moderator: J. Gallagher</p> <p>HEPARIN AND OTHER GLYCOSAMINOGLYANS IN TUMOR</p>
11.35-11.55	<p>G. Bendas, Bonn LMWH can overcome the cisplatin resistance of ovarian cancer cells - Insight into underlying mechanisms</p>
11.55-12.15	<p>M. Götte, Münster Role of Heparan Sulfate in Tumor-Initiating cells</p>
12.15- 12.35	<p>P. Barbieri, Mendrisio (CH) Phase 1 clinical trial with Roneparstat</p>
12.35-12.45	Discussion

Friday, September 18th 2015, afternoon

<p>Lectures:</p> <p>14.30-15.00</p> <p>15.00-15.30</p>	<p align="center">Moderator: A. Stemberger</p> <p>Heparins - A Century of Discoveries and Progress and Beyond J. Fareed, Chicago</p> <p>Past, present and future perspectives of heparin in clinics. J Harenberg, Heidelberg</p>
<p>15.30-15.50</p> <p>15.50-16.10</p> <p>16.10-16.20</p> <p>16.20-16.30</p>	<p align="center">Moderator: R. Krämer ANTICOAGULANT and ANTITHROMBOTICS</p> <p>V. Laux, Wuppertal The next wave of anticoagulants: characterization of contact pathway inhibitors</p> <p>G. Nowak, Jena Influence of dual inhibitors (aXa/alla) on the experimental lethal sepsis</p> <p>S. Zolfaghari, Frankfurt Securotec to determine silent cardiac arrhythmia as indication for therapy with heparins, VKA or NOAC (to be specified)</p> <p>Discussion</p>
<p>16.30-16.50</p>	<p>Coffee and Tea</p>
<p>Lecture:</p> <p>16.50-17.20</p> <p>17.20-17.40</p> <p>17.40-18.00</p> <p>18.00-18.20</p>	<p align="center">Moderator S. Alban</p> <p>Past, present and future perspectives of heparin characterization. M. Guerrini, Milan</p> <p>D. Keire, FDA, Silver Spring Development of a bench top crude heparin purification protocol.</p> <p>R. Krämer, Heidelberg Detection of non-anticoagulant heparins with the Heparin Red Kit</p> <p>Discussion</p>

Saturday, September 19th 2015, morning

	Moderator: J. Fareed
	HEPARIN AND OTHER GLYCOSAMINOGLYCANS IN MALIGNANCY
9.00-9.20	A. De Agostini , Geneve Role of heparan sulfate in protection against tumor invasion: study in endometrioid carcinoma
9.20-9.40	E. Holmer , Solna (Stockholm) Phase 1 clinical trial with tafoxiparin
9.40-10.00	M. Lima , S. Paulo Impact of Heparan Sulfate Post-synthesis Editing on Carcinogenesis
10.00-10.10	Discussion
10.10-10.30	Coffee and Tea
	Moderator C. Kirchmaier
10.30-10-50	Y. Yao , Jiang Su Diversification of heparin resourcing
10.50-11.10	B. Mulloy , London Heparin interactions with IL-12
11.10-11.30	B. Pinto , Patrica (FR) HPLC-MS/MS of Sulfated Oligosaccharides
11.30-11.40	Discussion
11.40-12.00	Closing remarks: G. Torri / J. Harenberg

General Information

Thursday, September 17th, 2015

12.30 -14.00: Lunch in Villa Vigoni
20.00 Dinner in Villa Vigoni

Friday, September 18th, 2015

8.00 - 9.00: Breakfast
13.00 -14.00: Lunch in Villa Vigoni
20.00 Dinner in Villa Vigoni

Saturday, September 19th, 2015

8.00 - 9.00: Breakfast
12.30 - 13.30: Lunch in Villa Vigoni

Location of the Symposium:

"Villa Vigoni e.V."
Via Giulio Vigoni 1
Lovenno di Menaggio
I-22017 Menaggio (Como)

Tel.: +39-0344/361232
Fax: +39-0344/361247
E-mail: reception@villavigoni.it
Internet: www.villavigoni.eu

Organisers:

Dr. G. Torri & Dr. A Naggi
Istituto di Ricerche Chimiche
e Biochimiche "G. Ronzoni"

Via G. Colombo, 81
I-20133 Milano
Italy
Tel: +39/02-70 641 624
Fax: +39/02-70 641 634

Prof. Dr. J. Harenberg
Clinical Pharmacology
Medical Faculty Mannheim
University of Heidelberg
Maybachstrasse 14
D-68169 Mannheim
Germany
Tel: +49/621-383 9623
Fax: +49/621-383 9622

Prof. R. Krämer
Institute of Inorganic Chemistry
Ruprecht-Karls
University of Heidelberg
Im Neuenheimer Feld 270
69120 Heidelberg
Germany
Tel: +49 (0) 62 21 - 54 84 38
Fax: +49 (0) 62 21 - 54 85 99

E-mail: torri@ronzoni.it
naggi@ronzoni.it

E-mail: job.harenberg@medma.uni-heidelberg.de
E-mail: harenberg-j@t-online.de
E-mail: Roland.Kraemer@urz.uni-heidelberg.de

Scientific Secretary:

Annamaria Naggi
Istituto di Ricerche Chimiche
E Biochimiche "G. Ronzoni"
Via G. Colombo, 81
I-20133 Milano
Italy
Tel: +39/02-70 641 626
Fax: +39/02-70 641 634
E-mail: naggi@ronzoni.it

SPONSORS OF THE SYMPOSIUM

Alfa Wasserman, Bologna, Italy

Aplagon, Helsinki, Finland

Biofer, Medolla, Italy

Bioiberica, S.A., Barcellona, Spain

Boaopharma, Inc., Natick, MA, USA

Chemi-Italfarmaco, Milan, Italy

Deutsche Forschungsgemeinschaft, Bonn, Germany

Laboratorio Derivati Organici (LDO), Trino Vercellese, Italy

Opocrin Biofamaci, Corlo di Formigine, Italy

Sanofi-Aventis Groupe, Paris, France

Scientific Protein Laboratories LLC, Waunakee, Wisconsin, USA

Sigma-Tau Research Switzerland S.A., Mendrisio, Switzerland