

Program

13th Symposium on Glycosaminoglycans

September 22th-24th, 2005

Organizers:

Job Harenberg

4th Department of Medicine Faculty of Clinical Medicine
Mannheim

Benito Casu

„G. Ronzoni“ Institute for Chemical and Biochemical Research,
Milan

Welcome to Villa Vigoni 2005

As for the past twelve editions, the 13th Glycosaminoglycan Symposium will take place in Villa Vigoni (Lovenno, Lake Como). Started as Italian-German meetings (the villa is owned by the German Government), the symposia have become more and more international, with eminent specialists from all over the world 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 60 participants.

This year the topics selected for discussions include: approaches to establish structure-activity relationships, low- and ultra-low-molecular weight heparins, bioavailability of glycosaminoglycans, clinical assessment of heparins and non-GAG antithrombotic agents, and - in a minisymposium devoted to assessment of new therapeutic targets - heparins and cancer. Keynote speakers will outline the state-of-the art in each field and present novel results. 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.

The 13th Glycosaminoglycan Symposium will start in the early afternoon of Thursday, September 22 and end the evening of Saturday, September 24. Accommodation for most of the participants will be arranged in Villa Vigoni and in its surroundings. Accommodation can be arranged also in hotels in Menaggio. Meals will be served in the villa.

Invited participants will receive further information in due course.

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Main topics

Anticoagulants

argatroban, dermatansulfate, glycosaminoglycans, heparins, hirudins, low-molecular-weight heparins, pentasaccharide, new antithrombotic drugs, thrombin inhibitors

Characterization of Glycosaminoglycans

Anticoagulant assays, nuclear magnetic resonance, mass spectrometry, new biological assays, standardization and harmonization of methods

Structure-function relationship

Drug interactions of anticoagulants, glycosaminoglycans and platelet factor 4, glycosaminoglycans, growth factors and heparanase, glycosaminoglycans and inflammation, heparin-induced thrombocytopenia, protein-glycosaminoglycan interactions, glycosaminoglycans and malignancy

Clinical studies

Deep venous thrombosis and pulmonary embolism, glycosaminoglycans, ischemic stroke, myocardial infarction, new indications, prolonged prophylaxis of venous thromboembolism, pentasaccharides, thrombin inhibitors

Scientific board

HK Breddin, B. Casu, J. Harenberg, G. Torri, R. Sasisekharan

Thursday, September 22nd, 2005

Session I	Structure-activity relationships studies Moderators: M. Petitou, Toulouse; J. Gallagher, Manchester
14.30-14.40	J. Harenberg , Mannheim and B. Casu, Milan: Welcome address
14.40-15.00	J. Turnbull, Liverpool: Interactions of heparins with proteins
15.00-15.20	J.-p- Li, Uppsala: Disturbed metabolism of heparan sulfate in heparanase transgenic mice
15.20-15.40	J. Gallagher, Manchester: The saccharide template for assembly of the FGF-FGFR signalling complex
15.40-16.00	Discussion
16.00-16.20	Coffee and tea
16.20-16.40	M. Spraul, Karlsruhe: Advances in methods for profiling drugs and their metabolites in biological fluids
16.40-17.00	A. Bernkop-Schnürch, Innsbruck: Oral absorption of heparin
17.00-17.20	A. Stemberger, Munich: New technologies for formulation and release of heparins
17.20-17.40	G. Venkataraman, Boston: Glycosaminoglycan mediated non-invasive delivery
17.40-18.00	Discussion

Friday, September 23, 2005

Session II	Minisymposium: GLYCOSAMINOGLYCANS AND CANCER Moderator: R. Sasisekharan
8.30-8.50	R. Sasisekharan, Boston: Exploiting the roles of glycosaminoglycans in tumor progression
8.50-9.10	R.V. Iozzo, Philadelphia: Heparan sulfate proteoglycans and angiogenesis
9.10-9.30	Sanderson, R., Little Rock: Remodelling of heparan sulfate proteoglycans in the tumour microenvironment: Growth regulation and therapeutic opportunities.
9.30-9.50	M. Presta, Brescia: Heparins and angiogenesis
9.50-10.10	Discussion
10.10-10.30	Coffee, tea
10.30-10.50	I. Vlodaysky, Jerusalem: Heparin, heparan sulfate and heparanase in the control of cancer metastasis and angiogenesis
10.50-11.10	M. Salmivitra, Turku: Inhibition of cancer cell invasion and metastasis by O-sulfated derivatives of <i>E. coli</i> polysaccharide
11.10-11.30	M. Arlt, Munich: Inhibition of tumour growth by glycosaminoglycans/factor Xa inhibitors.
11.30-11.50	G. Nowak, Jena: Molecular weight extended direct antithrombin drugs with anticancer activity
11.50-12.10	Discussion

Friday, September 23rd, 2005

Session III	Interactions of glycosaminoglycans with selectins
	Moderators: J. Fareed, Chicago; L. Borsig, Zurich
14.00-14.20	L. Borsig, Zürich: Dissection of selectin-mediated and heparanase-dependent antimetastatic activity of heparin derivatives
14.20-14.40	S. Alban, Kiel: Selectin antagonization and antimetastatic activity of different heparins
14.40-15.00	G. Bendas, Bonn: Structure-function relationships of glycosaminoglycans and selectins
15.00-15.20	Discussion
15.20-15.40	Coffee, tea
15.40-16.00	Special session on open issues in LMW Heparins Moderator: U. Cornelli, Milan J. Fareed/O. Iqbal/J. Walenga, Maywood: Differentiation of LMWHs
16.00 -16.10	Discussion

Session IV	<p style="text-align: center;">Low- and ultra-low-molecular weight heparins</p> <p>Moderators: S. Alban, Kiel; G. Torri, Milan</p>
16.10-16.30	G. Torri, Milan: Novel applications of NMR and mass spectroscopy to analysis of LMWHs
16.30-16.50	E. A. Yates, Liverpool: Complementary spectroscopic studies of heparins/heparan sulfates in solution
16.50-17.10	E. Vismara, Milan: Mechanism of radical-catalyzed depolymerization of heparin
17.10-17.30	M. Guerrini, Milan: Molecular conformation of heparin octasaccharides with high affinity for antithrombin
17.30-18.00	Discussion

Saturday, September 24, 2005

Session V	Pharmacological and clinical assessment of glycosaminoglycans. Comparison with other antithrombotics
	Moderator: C. Kirchmaier, Wiesbaden, S. Penco, Milan
9.00-9.20	P. Bianchini, Modena: Antithrombotic activity of heparin with no affinity for antithrombin
9.20-9.40	E. Schleicher, Tübingen: Effect of glycosaminoglycans on angiotensin-induced activation of NAD(P)H oxidase in vascular cells.
9.40-10.00	C. Pisano, Rome: Pharmacodynamics of heparin derivatives in melanoma-bearing mice
10.00-10.20	L. Kulic, Zürich: Low-molecular-weight heparin for treatment of Alzheimer disease
10.20-10.40	Discussion
10.40-11.00	Coffee, Tea
11.00-11.20	J. Harenberg, Mannheim: Anticoagulant action of dalteparin, fondaparinux, idraparinux and BAY 59-7939 in comparison to thrombin inhibitors on PiCT assay
11.20-11.40	F. Markwardt, Erfurt, G. Nowak, Jena: Thrombin inhibitors compared to factor Xa inhibitors
11.40-12.00	V. Laux, Wuppertal: Preclinical data on the novel, oral, direct factor Xa inhibitor BAY 59-7939
12.00-12.20	Discussion B. Casu, Milan / J. Harenberg, Mannheim: Closing remarks

General Information

Social Program

Thursday, September 22, 2005

13.00 -14.00: *Lunch in Villa Vigoni*
19.00: *Dinner in Villa Vigoni*

Friday, September 23, 2005

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

Saturday, September 24, 2005

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
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Registration: Thursday, September 22, 2005

Organisers:

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