



14th Symposium on Glycosaminoglycans

September 21st-23rd, 2006

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 2006

As for the past thirteen editions, the 14th Glycosaminoglycan Symposium will take place in Villa Vigoni (Loveno, 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 with special emphasis on inflammation and cancer), low- and ultra-low-molecular weight heparins, enzymatic cleavage of glycosaminoglycans, and clinical pharmacology assessment of heparins and non-GAG antithrombotic agents. 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.

Professor Eberhard Mammen, editor-in-chief of Seminars in Thrombosis and Hemostasis, agreed that we can submit manuscripts for a 3rd issue 2007 of this journal. Accordingly, we would like to encourage the speakers to send the manuscripts of their presentation to Job Harenberg by December 15, 2006.

Job Harenberg

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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

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

Thursday, September 21st, 2006

14.30-14.40	J. Harenberg , Mannheim and B. Casu , Milan: Welcome address
Session I	FRONTIERS IN GLYCOSAMINOGLYCAN SCIENCES Moderators: M. Petitou , Paris / R. Sasisekharan , Boston
14.40-15.00	J. Gallagher , Manchester Mechanism of growth factor modulation by heparan sulfate
15.00-15.20	B. Mulloy , London: Modeling heparin-protein interactions: adaptation of “drug discovery” methods to glycosaminoglycans
15.20-15.40	J. Turnbull , Liverpool: Functions of heparan sulfate in the nervous system
15.40-16.00	J.-P. Li , Uppsala: Effect of heparanase overexpression on A β peptide aggregate deposited in mouse brain
16.00-16.20	Discussion
16.20-16.40	Coffee and tea
Session II	BIOLOGICAL INTERPLAY OF GLYCOSAMINOGLYCANS AND ENZYMES Moderators: J. Gallagher , Manchester / F. Markwardt , Erfurt
16.40-17.00	E.A. Yates , Liverpool: The other face of heparan sulfate
17.00-17.20	A. Bisio , Milan: HPLC/mass spectrometric studies on susceptibility of heparin species to cleavage by heparanase
17.20-18.00	Discussion.

Friday, September 22nd, 2006

Session III	NEW FACTOR XA INHIBITORS Moderators: S. Alban , Kiel/ R. Linhardt , Troy, N.Y M. Guerrini , Milan: NMR studies on active conformation of heparin oligosaccharides. State of the art. J. Harenberg , Mannheim: Pharmacological data on idraparinux V. Laux , Wuppertal: Clinical data on the new oral factor Xa inhibitor Bay 59-7939 Discussion
8.30-8.50	
8.50-9.10	
9.10-9.30	
9.30-9.50	
9.50-10.10	Coffee, tea
Session IV	GLYCOSAMINOGLYCANS, INFLAMMATION AND CANCER Moderators: A. Falanga , Bergamo / G. Nowak , Jena S. A. Mousa , New York: Emerging links between thrombosis, inflammation, and angiogenesis: key role of heparin and derivatives C. Freeman , Brisbane: Design of novel antiangiogenic and antimetastatic drugs I. Vlodaysky , Haifa: Role of heparanase in inflammation R. D. Sanderson , Birmingham, Alabama: Targeting Heparan Sulfate for Cancer Therapy V. Ferro , Brisbane: PI-88 and novel heparan sulfate mimetics block angiogenesis L. Borsig , Zürich: Antimetastatic activities of heparin derivatives Discussion
10.10-10.30	
10.30-10.50	
10.50-11.10	
11.10-11.30	
11.30-11.50	
11.50-12.10	
12.10-12.30	

<p>Session V</p> <p>14.30-14.50</p> <p>14.50-15.10</p> <p>15.10-15.30</p> <p>15.30-15.50</p> <p>15.50-16.10</p> <p>16.10-16.50</p>	<p style="text-align: center;">BIOTECHNOLOGICAL GLYCOSAMINOGLYCANS</p> <p>Moderators: C. Kirchmaier, Wiesbaden / R.J. Linhardt, Troy, N.Y.</p> <p>R.J. Linhardt, Troy, N.Y.: Enzymatic synthesis of glycosaminoglycans</p> <p>P. Oreste, Milan: Antiviral properties of K5-PS derivatives</p> <p>T. Veromaa, Turku: Inhibition of cancer cell invasion and metastasis by O-sulfated derivatives of <i>E. coli</i> polysaccharide</p> <p>U. Cornelli, Milan: Title will follow</p> <p>A. Asari, Tokyo: Effects of hyaluronan oligosaccharides on several diseases</p> <p>Discussion</p>
<p>16.50-17.10</p>	<p>Coffee and tea</p>
<p>Session VI</p> <p>17.10-17.30</p> <p>17.30-17.50</p> <p>17.50-18.10</p> <p>18.10-18.30</p>	<p style="text-align: center;">STRUCTURAL AND INTERACTION STUDIES</p> <p>Moderators: J. Turnbull, Liverpool / G. Torri, Milan</p> <p>G. Bendas, Bonn: Detection of kinetic binding constants of glycosaminoglycans toward selectins using a biosensor technique</p> <p>S. Alban, Kiel: PS3 – <i>In vitro</i> and <i>in vivo</i> characterization of its antiinflammatory activity profile</p> <p>M. Hricovini, Bratislava / M. Guerrini, Milan: Molecular modeling and NMR studies on the interaction of heparin with heparanase peptides</p> <p>Discussion</p>

Saturday, September 24th, 2006

Session VII	LOW- AND ULTRA-LOW MOLECULAR WEIGHT HEPARINS
	Moderators: B. Casu , Milan / V. Laux , Wuppertal
9.00-9.20	G. Torri , Milan: Novel applications of NMR and mass spectroscopy to analysis of LMWHs
9.20-9.40	P. Bianchini , Modena: Heparin variability and LMWHs. Problems of generic LMWHs
9.40-10.00	Open discussion on generic LMW heparins
10.00-10.20	A. Calatzis , Munich: Determination of anticoagulants by prothrombin-induced clotting time
10.20-10.40	Discussion
10.40-11.00	Coffee, Tea
Session VIII	THROMBIN INHIBITORS VERSUS XA-INHIBITORS
11.00-11.20	G. Nowak , Jena: Measurement of maximum thrombin generation capacity in blood and plasma using THROGA (thrombin generation assay)
11.20-11.40	M. Donati , Campobasso: The common soil hypothesis for cancer and cardiovascular disease: population studies and biological plausibility with glycosaminoglycans.
11.40--12.20	Discussion B. Casu , Milan / J. Harenberg , Mannheim: Closing remarks

General Information

Thursday, September 21, 2006

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

Friday, September 22, 2006

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

Saturday, September 23, 2006

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
Loveno di Menaggio
I-22017 Menaggio (Como)

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Registration: Thursday, September 21, 2006

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Sponsors of the Symposium (as of September 4th, 2006)

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