

# About The Sialic Acids Society

**Aims and Activities of Sialic Acids Society**

**Organization of the Sialic Acids Society**

**Organized Symposia**

## Aims and Activities of Sialic Acids Society

The Sialic Acids Society supports lectures and meetings covering the studies of sialic acids.

Since the 19<sup>th</sup> annual meeting held in 1997, Japanese Society for Carbohydrate Research (JSCR) selects poster awards in every annual meeting and the Sialic Acids Society provides financial support for the awards.

Japanese Consortium for Glycoscience and Glycotechnology (JCGG) started Tamio Yamakawa Award in 2016. The award internationally honors a scientist who has made great contributes to Glycoscience every two years and was realized with great efforts by Prof. Haruo Ogura and the financial support by the Sialic Acid Society.

The Society activities are supported by funds kindly donated by the Society supporting members. Their kind and generous supports are essential and are very much appreciated.

# Organization of the Sialic Acids Society

President:

Tamio Yamakawa

Secretary General:

Haruo Ogura

Board Members:

Tatsuo Irimura, Tomoya Ogawa, Haruo Ogura, Ken Kitajima, Akira Kobata ,  
Masaki Saito, Akemi Suzuki, Kunihiro Suzuki, Shigeo Suzuki, Yasuo  
Suzuki, Naoyuki Taniguchi

Auditors:

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Advisory Members:

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Narimatsu, Taeko Miyagi, Keiichi Yoshida, Teruo Yoshino  
Tetsuo Ichiji (Combi), Noriaki Inamura (Seikagaku Kogyo), Tomomasa  
Fukuda (Toyo Life Service), Yuji Matsuzaki (Tokyo Chemical Industry CO.,  
LTD)  
S. Hakomori, R. Schauer, R. R. Schmidt

August 2016

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August, 2006

President:

Tamio Yamakawa

Secretary General:

Haruo Ogura

**Board Members:**

Tatsuo Irimura, Toshiaki Osawa, Tomoya Ogawa, Haruo Ogura, Ken Kitajima, Akira Kobata , Masaki Saito, Akemi Suzuki, Shigeo Suzuki, Yoshitaka Nagai, Ikuo Yamashina

**Auditors:**

Yoshiyasu Shitori, Satoshi Toyoshima

**Advisory Members:**

Tetsuo Shiba, Takashi Tsuiki, Taeko Miyagi, Kyoko Hotta, Yasuo Suzuki, Makoto Kiso, Teruo Yoshino, Yasuyuki Tsuda, Hideki Kawamura (Seikagaku Kogyo), Kazumi Narahara, (Brans Japan), Shigeki Sato (JPS), Yasuo Kondo (Shionogi), Yuji Matsuzaki (Tokyo Chem.) S. Hakomori, R. Schauer, R. R. Schmidt

**Correspondence:**

Haruo Ogura

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## Organized Symposia

### The 1st Symposium on Sialic Acids

on June 21, 1980, at Kitasato Institute

Organized by Haruo Ogura (Kitasato University)

#### Program

Kimio Furuhashi (Kitasato University):

Studies on sialic acids – Chemistry of N-acetylneuraminic acid –

Shojiro Ito (Kohno Clinical Medical Research Inst.):

Microcalorimetry and Sialic acids

Yoko Yamada (Kohno Clinical Medical Research Inst.):

Sialic acids and heat reaction – Relation with sialic acid content of red blood cells and plasma –

### The 2nd Symposium on Sialic Acids

on February 14, 1981, at Kanto-ishi-seiyaku Co. Ltd., Mitsui Building Meeting Room

Organized by Haruo Ogura (Kitasato University)

#### Program

Toshiaki Osawa (The University of Tokyo):

T cell subsets and sialic acids

Arihiro Tomita (Jikei Medical College):

Effect of neuraminidase on human leukocytes

Kimio Furuhashi (Kitasato University):

Synthesis of sialic acids derivatives

### The 3rd Symposium on Sialic Acids

on July 21, 1981, at Nenkin-Kaikan, Seven city

Organized by Haruo Ogura (Kitasato University)

**Program**

**Krishna C. Agrawal (Tulane University, School of Medicine):**

Studies of sialic acids derivatives as inhibitory agents for cell membrane formation

**Kimio Furuhashi (Kitasato University):**

Synthesis of N-acetylneuraminic acid

**The 4th Symposium on Sialic Acids**

on December 27, 1982, at Nenkin-Kaikan, Seven city

Organized by Haruo Ogura (Kitasato University)

**Program**

**Haruo Ogura (Kitasato University):**

Synthesis of sialic acid derivatives

**Satoshi Toyoshima (The University of Tokyo):**

Sialic acid derivatives and their biological activities

**The 5th Symposium on Sialic Acids**

on June 21, 1983, at Yakugaku-kaikan Hall

Organized by Haruo Ogura (Kitasato University)

**Program**

**Tamio Yamakawa (Tokyo Metropolitan Inst. of Medical Science):**

Stories on sialic acids

**\*Prof. Ogura asked Prof. Tamio Yamakawa to be the president of the Sialic Acids Society, and we decided to organize future symposia publicly opened.**

## **The 6th Symposium on Sialic Acids**

on December 27, 1983, at Kanto-ishi-seiyaku Co. Ltd., Meeting Room

Organized by Sialic Acids Society (Convener: Haruo Ogura)

### **Program**

Tamio Yamakawa (Society President):

Opening address

Akemi Suzuki (Tokyo Metropolitan Inst. of Medical Science):

Genetic control of sugar chains of glycolipids

Tomoya Ogawa (Institute of Physical and Chemical Research):

Recent topics about synthesis of sialic acids derivatives

General discussion

## **The 7th Symposium on Sialic Acids**

On July 28, 1984, at Gakusi-kaikan Bunshitu

Organized by Sialic Acids Society (Convener: Haruo Ogura)

### **Program**

Tamio Yamakawa (Society President):

Opening address

Tadashi Tai (Tokyo Metropolitan Inst. of Medical Science):

Ganglioside GM2 and GD2 identified as cancer related antigens

Yoshitaka Nagai (The University of Tokyo):

Biomembrane functions of sialic acid containing glycolipids

General discussion

## **The 8th Symposium on Sialic Acids**

on July 2, 1985, at Yakugaku-kaikan Hall

Organized by Sialic Acids Society (Convener: Haruo Ogura)

### **Program**

Tamio Yamakawa (Society President):

**Opening address**

**Akira Kobata (Inst. of Medical Science):**

**A relation between differentiation of blood cells and the structure of cell surface sugar chains**

**Juji Yoshimura (Tokyo Institute of Technology):**

**Synthetic studies on branched sugar derivatives**

**General discussion**

# The 9th Symposium on Sialic Acids

(The first International Conference)

on November 16, 1985, at Sumitomo Hall

## STRUCTURE AND FUNCTION OF GLYCOCONJUGATES

–RECENT PROGRESS–

Organized by Sialic Acids Society and Institute of Physical and Chemical Research

### Program

Tamio Yamakawa (Sialic Acids Society President):

Opening Address

10:00–10:50 chaired by Shoshichi Nojima

Tetsuo Shiba (Osaka University):

Recent Progress on Chemistry of Lipopolysaccharide

10:50–11:40 chaired by Tetsuo Suami (Keio University)

Seiichiro Ogawa (Keio University):

Synthesis of Biologically Active Compounds Containing Cyclitols

11:40–12:30 chaired by Koichi Shudo

Tomoya Ogawa (RIKEN):

Synthetic Studies on Glycosphingolipids

13:30–14:30 chaired by Juji Yoshimura

H. Paulsen (University of Hamburg):

Synthesis of Complex Oligosaccharide–Chains of Glycoconjugates

14:30–15:20 chaired by Toshio Miyazaki

Toshiaki Ohsawa (University of Tokyo):

Biological Activities of Sialic Acid Nucleoside

15:50–16:40 chaired by Akira Kobata

Yoshitaka Nagai (University of Tokyo):

Studies of Bioactive Gangliosides

16:40–17:40 chaired by Haruo Ogura

R.Schauer (University of Kiel):

Biochemistry of Sialic Acids

17:40–17:50



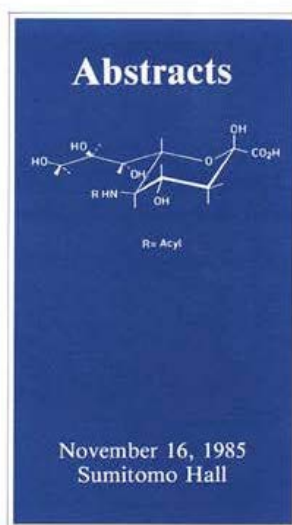
Haruo Ogura (Kitasato University):  
Closing remarks

18:00–20:00 Banquet

\*There were more than 300 attendants.

## STRUCTURE AND FUNCTION OF GLYCOCONJUGATES

RECENT PROGRESS



Sialic Acids Society

# **The 10th Symposium on Sialic Acids**

**(The Second International Conference)**

**on October 13, 1986 at Keio Plaza Hotel**

**FRONTIERS OF GLYCOCONJUGATE RESEARCH**

**Organized by Sialic Acids Society**

## **Program**

**Tamio Yamakawa (Sialic Acids Society President):**

**Opening address**

**9:30–10:30 chaired by Shoshichi Nojima**

**Ikuo Yamashina (Kyoto University):**

**Monoclonal Antibodies Recognizing Cancer-associated Alterations of  
Carbohydrate Chains of Glycoproteins**

**10:30–11:30 chaired by Akira Kobata**

**Victor Ginsburg (NIH):**

**Monoclonal Antibodies Directed against Sialic Acid-containing  
Glycoconjugates**

**11:30–12:30 chaired by Toshiaki Ohsawa**

**Sen-ichiro Hakomori (Fred Hutchinson Cancer Res. Ctr.):**

**Chemistry of Tumor-associated and Allogenic Glycolipid Antigens with  
New Structures**

**14:00–15:00 chaired by Akemi Suzuki**

**Donald M. Marcus (Baylor College of Medicine):**

**Idiotypes and Regulation of Antibodies Directed against Carbohydrate  
Determinants**

**15:00–15:45 chaired by Juji Yoshimura**

**Haruo Ogura (Kitasato University):**

**Studies on Glycosylation Reactions of Sialic Acid**

**16:15–17:00 chaired by Tomoya Ogawa**

**Masao Iwamori (University of Tokyo):**

**Application of FAB-MS to Glycolipid Chemistry –Structure and  
Metabolism of Thymus Glycolipids–**

**17:00–18:00 chaired by Yoshitaka Nagai**

**Heinz Egge (University of Bonn):**

## Structural Studies on Sialylated Glycoconjugates

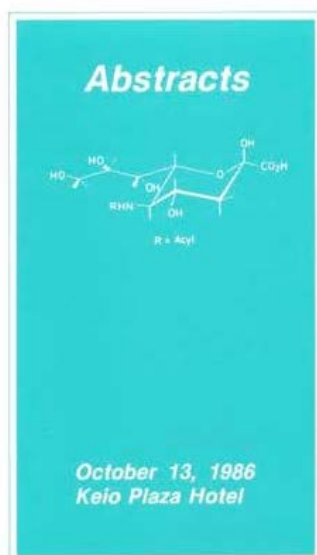
18:00–20:00 Banquet

**\*More than 440 attendants.**

Organized by Sialic Acids Society

### FRONTIERS OF GLYCOCONJUGATE RESEARCH

The 2nd International Meeting of Sialic Acids Society



Sialic Acids Society

# **The 11th Symposium on Sialic Acids**

**on October 24, 1987, at Kitasato University**

**Organized by Sialic Acids Society (Convener: Haruo Ogura)**

## **Program**

**Tamio Yamakawa (Society President):**

**Opening address**

**Chairperson: Haruo Ogura**

**Shinkiti Koto (Kitasato University):**

**Syntheses of sugar chains under a dehydration condensation**

**Chairperson: Shonosuke Zen**

**Kimio Furuhata (Kitasato University):**

**About ester derivatives of sialic acids**

**Chairperson: Kazuo Achiwa**

**Mamoru Sugimoto ( MECT Co., Ltd. ):**

**Synthetic studies on glycolipids containing sialic acids**

**Chairperson: Tomoya Ogawa**

**Akira Hasegawa (Gifu University):**

**Synthetic studies on sialic acids derivatives and their complex glycosides**

**Chairperson: Juji Yoshimura**

**Toshio Goto ( Nagoya University):**

**Synthetic studies on gangliosides**

## **The 12th Symposium on Sialic Acids**

(the Third International Conference)

May 18~21, 1988, at Japan and Germany Center, Berlin

Sponsored by Sialic Acids Society

Organizing Committee: Roland Schauer; Tamio Yamakawa

Secretaries: Gerd Reuter; Elfriede Schauer; Akemi Suzuki

Venue Address:

Japanisch-Deutsches Zentrum Berlin

Tiergartenstr. 24-27 D-1000 Berlin 30

### **Program**

**May 18**

**Opening Ceremony**

**T. Yamakawa:**

**Brief History of the Japanese Sialic Acids Society**

**E. Friese:**

**Support of German Science by Hajime-Hoshi and Gunshiro Mothizuki**

**H. Faillard:**

**The Early History of Sialic Acids**

**May 19**

**Chairmen: H. Paulsen and A. Hasegawa**

**8:30 H. Ogura:**

**Synthesis of Sialic Acid Glycosides**

**9:00 E. Zbiral:**

**Synthesis of Sialic Acid Analogues and their Behavior towards Enzymes  
of the Sialic Acid Metabolism**

**9:30 M. Sugimoto, M. Numata, and T. Ogawa:**

**Recent Aspects in Ganglioside Synthesis**

**10:30 Y. A. Knirel:**

**New Sialic Acid-like Sugars: Components of Bacterial  
Lipopolysaccharides**

**11:00 A. Venot and R. M. Ratcliffe:**

**Synthesis of Sialyl Le(a) and Le(x) Glycosides**

**11:15 K. G. I. Nilsson and B.-M. E. Gudmundsson:**

**Synthesis of CMP-Neu5Ac and Neu5Ac( $\alpha$ 2-3)Gal( $\beta$ 1-3)Gal NAc( $\alpha$ )-OEt with Immobilised Cytidin-5'-Monophosphosialate Synthase and  $\beta$ -D-Galactoside ( $\alpha$ 2-3)Sialyltransferase**

**11.30 Posters**

**Chairmen: H. Egge and T. Osawa**

**14:30 H. J. Jennings, F. E. Ashston, J.-R. Brisson, A. Gamian, F. Michon, and R. Roy:**

**Sialic Acid-Containing Bacterial Polysaccharides**

**15:00 B. D. Livingston, R. D. McCoy, J. L. Jacobs, M. C. Glick, and F. A. Troy:**

**Structure, Synthesis, Function of Polysialosyl-Containing Glycoproteins on Cells of Neural Origin**

**15:30 J. H. Krauss, G. Reuter, R. Schauer, and H. Mayer:**

**Sialic Acids in the Lipopolysaccharides of Purple Nonsulfur Bacteria**

**15:45 J. P. Kamerling, J. B. L. Damm, K. J. Hard, and J. F. G. Vliegthart: Analysis of N,O-Acylneuraminic Acid-Containing Carbohydrate Chains in N-Glycoproteins**

**16:30 M. Sekine, K. Nakamura, M. Suzuki, F. Inagaki, T. Yamakawa, and A. Suzuki:**

**Genetic Control of Globoglycolipid Expression in Mouse Kidney**

**16:45 P. Vischer, C. Hagemeyer, and E. Buddecke:**

**Investigations on the Biosynthesis of Sialic Acid in Aortic Tissue and Cultured Arterial Wall Cells**

**17:00 Posters**

**May 20**

**Chairmen: H. Rahmann and A. Kobata**

**8:30 E. U. Lee, J. Weinstein, J. C. Paulson:**

**Expression of  $\beta$ -Galactoside  $\alpha$ 2,6 Sialyltransferase in Chinese Hamster Ovary Cells Alters Terminal Glycosylation Sequences of N-Linked Carbohydrate Groups**

**9:00 D. H. Van den Eijnden and W. E. C. M. Schiphorst:**

## **Specificity and Inhibition of Sialyltransferases**

**9:30 J. Roth:**

**Subcellular Distribution of Sialyltransferase and Sialic Acid Residues**

**10:30 G. Tettamanti, R. Ghidoni, and M. Trinchera:**

**The Intracellular Routes of Ganglioside Metabolism**

**11:00 C. Scholtissek:**

**Myxovirus Sialidases: Structure, Specificity, Biosynthesis, Genetics and Function**

**11:30 Posters**

**Chairmen: E. Buddecke and Y. Suzuki**

**14:30 A. Lepers, R. Cacan, and A. Verbert:**

**Study of the Mechanism of CMP-NeuAc Transport in Normal and CMP-NeuAc Carrier Deficient CHO Cells Using Plasma Membrane Permeabilization Technique**

**14:45 A. Varki, A. Manzi, S. Diaz, and H. Higa:**

**Acetylation and De-Acetylation of Sialic Acids in the Rat Liver**

**15:00 L. Shaw and R. Schauer:**

**The Biosynthesis of N-Glycoloylneuraminic Acid Occurs by Hydroxylation of the CMP-Glycoside of N-Acetylneuraminic Acid**

**15:15 R. Schauer and G. Reuter:**

**Metabolism of O-Acetylated Sialic Acids**

**Chairman: Graf von Brockdorff**

**16:00 E. Friese:**

**Support of German Science by Hajime Hoshi and Gunshiro Mochizuki**

**16:45 Films and Information on Berlin**

**Chairmen: E. Buddecke and Y. Suzuki**

**20:00 Y. Suzuki, E. Nanba, A. Tsuji, and K. Omura:**

**Molecular Heterogeneity of Protective Protein in Galactosialidosis**

**20:15 E. R. Vimsr, L. Lawrisuk, J. Galen, and J. B. Kaper:**

**Cloning and Molecular Analysis of Neuraminidase Genes from *Vibrio cholerae* and *Salmonella typhimurium***

20:30 S. Tsuiki and T. Miyagi:

Isolation and Properties of Rat Liver Sialidase

21:00 K. Sandhoff, D. Klein, G. Pohlentz, and G. Schwarzmann:

Gangliosides as Substrates for Sialidases and Sialyltransferases

21:30 M. Cantz, B. Ulrich-Bott, and M. Lieser:

Lysosomal Sialidase Deficiency

May 21

Chairmen: K. Decker and I. Yamashina

8:30 Y. Nagai, Y. Sanai, and H. Nakaishi:

Role of Oncogenes in Ganglioside Biosyntheses

9:00 V. Schirmmacher and P. Altevogt:

Sialic Acids in Cancer Metastasis: Experimental Studies

9:30 T. Osawa:

Inhibition of Tumor Metastasis with Sialic Acid Derivatives

10:30 D. Roelcke:

Immunology of Sialic Acids on the Erythrocyte Surface

11:00 A. Kobata:

Structures of Sialic Acid-Containing N-Glycans in Cancer Cells

11.30 Posters

Chairmen: W. Reutter and K. Tomita

14:00 K. Jann, B. Jann, H. Hoschutzky, and T. Moch:

Sialic Acid Specific Recognition Protein of Pathogenic Escherichia coli

14:30 I. Yamashina:

Monoclonal Antibodies Directed Against Sialylated Oligosaccharides  
from Malignant Tissues

15:00 A. P. Corfield, S. A. Wagner, R. Roe, W. van Dijk, and J. R. Clamp:

CMP-Sialic Acid Hydrolase. A Cell Surface Enzyme Implicated in  
Colorectal Cancer

15:15 M. Saito, H. Nojiri, S. Kitagawa, T. Ogawa, H. Ogura, M. Ito, and Y.  
Nagai:

Gangliosides and their Structurally-Related Synthetic Sialoglyco  
Compounds Play Crucial Roles in Both the Differentiation-Induction



and the Determination of Differentiation–Directions of Human Myelogenous Leukemia Cells

Chairmen: Y. Nagai and R. Schauer

16:00 K. Zenita, K. Hirashima, K. Shigeta, N. Hiraiwa, and R. Kannagi:  
VH Gene Expression in the Monoclonal Antibodies Directed to  
Gangliosides Having Various Sialic Acid Linkages

16:15 R. J. Wieser and F. Oesch:  
The Biological Activity of the Plasma Membrane Glycoproteins Involved  
in Contact–Dependent Inhibition of Growth is Dependent upon the  
Degree of Sialylation

16:30 I. U. Pardoe and A. T. H. Burness:  
The Role of Sialic Acid in the Attachment of Encephalomyocarditis  
Virus to Human Erythrocytes

16:45 S. D. Rosen, S.–I. Chai, D. True, M. S. Singer, and T. A. Yednock:  
In vivo Desialylation of High Endothelial Venules Inactivates  
Attachment Sites for Blood–Bjorne Lymphocytes

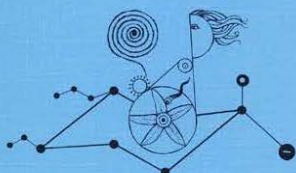
17:00 ROUND TABLE DISCUSSION

Recent progress and future trends in sialic acid research

\*The poster presentations: SYNTHESIS 15, ANALYSIS and STRUCTURE 16, BIOSYNTHESIS 9, CLONING 2, DEGRADATION 14, ROLE IN MALIGNANCY 13, BIOLOGICAL PHENOMENA 25: in total 94.

Because it was held as a part of grand opening ceremony of a new building in refurbishing "Japan and Germany Center" (former Japan Embassy), this Japan and Germany Sialic Acids Symposium was great success in this sense. By effort of Professor Schauer, proceedings were published as "SIALIC ACIDS 1988". Participants gathered from various European countries other than Japan and Germany. This Japan and Germany sialic acids symposium was not publicly opened, but the following international sialic acids symposia were held on the basis of this symposium afterwards in Europe at first and then various countries in the world. In Japan, it was held in 2006, as "Sialoglycoscience 2006" (Fifth International Conference), in Mishima, July 30, 2006.

# SIALIC ACIDS 1988



**PROCEEDINGS**  
of the  
Japanese-German Symposium on Sialic Acids

May 18-21, 1988

Japanisch-Deutsches Zentrum Berlin

R. Schauer, T. Yamakawa (Eds.)

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Sialic acids represent a group of about 30 acidic sugars which differ in their substitution patterns at the amino and the hydroxyl functions. They are found in all higher animals and sometimes in microorganisms, mainly as components of oligosaccharides, glycoproteins, gangliosides, and polysaccharides. In these Proceedings from the Japanese-German Symposium on Sialic Acids (Japanisch-Deutsches Zentrum Berlin, May 18-21, 1988) the most recent progress made in the chemical synthesis, structural analysis, metabolism and biological role of sialic acids and their derivatives is described. The latest trends in this field of research are genetic aspects, regulation of cellular and molecular recognition, the role of sialic acids in tumor biology and their application in the treatment of diseases.

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## **The 13th Symposium on Sialic Acids**

(the Fourth international Conference)

Sponsored by Sialic Acids Society

as FUJI'90 POST-SYMPOSIUM (Satellite Symposium of XVth

International Carbohydrate Symposium Aug.12-17, 1990

Yokohama)

August 18-21, 1990

Fuji Training Center, The Fuji Training Institute, Susono City, Shizuoka

1990 August 18 (Sat)

13:30-14:00 Opening Remarks

Prof. T. Suami

Prof. J. Yoshimura

Prof. P. J. Garegg

14:00-15:50 Moderators; H. Paulsen, H. Ogura

R. Schauer:

The use of synthetic oligosaccharides in the study of the galactose receptor of macrophages

R. R. Schmidt:

New aspects of glycosylation reactions

E. Zbiral:

Sialic acid analogues as useful probes for structure activity relationships

16:20-17:50 Moderators; P. Sinay, T. Ogawa

D. Horton:

Stereochemical regulation in synthesis of polyfunctional carbocycles by chirality transfer from unsaturated sugar derivatives

R. U. Lemieux:

The synthesis and immunochemical properties of extensively deoxygenated derivatives of the H-type 2 blood group determinant

August 19 (Sun)

9:00-10:10 Moderators; F. W. Lichtenthaler, S. Nishiyama

J. Thiem:

Combined classical and chemoenzymic glycosylations

P. Kovac:

New strategies in the synthesis of  $\beta$ -D-galactooligosaccharides. A synthetic heptasaccharides reveals the 'Groove-binding' character of a monoclonal antibody

10:40–11:50 Moderators; L. Anderson, S. Ogawa

V. Pozsgay:

Recent results in the synthesis of oligosaccharides related to cell-wall glycans

L. Hough:

From sugars to alkaloids morpholines and spiroacetals

August 20 (Mon)

9:00–10:10 Moderators; D. Horton, T. Machinami

G.D. Daves, Jr.:

Glycals and C-glycosides synthesis

S. Czernecki:

Recent results in stereo-controlled synthesis of C-glycosides and C-nucleosides

10:40–11:50 Moderators; A.C. Richardson, E. Kaji

G. Descotes:

Radical functionalization of the anomeric center of carbohydrates and synthetic applications

F. W. Lichtenthaler:

Recent results in stereo-controlled synthesis of C-glycosides and C-nucleosides

13:00–14:50 Moderators; R.U. Lemieux, A. Hasegawa

L. Anderson:

Improvements in the synthesis of trehalose-based mycobacterial lipids

A. C. Richardson:

Synthesis of phenolic glycosides as chromogenic substrates for the assay of glycosidases

H. Paulsen:

Synthesis of structures of the inner core region of lipopolysaccharides

\*Based on this international conference, published was "Carbohydrate-Synthetic Methods and Applications in Medicinal Chemistry" Edited by H. Ogura, A. Hasegawa and T. Suami from KODANSHA-VCH. .

A summary of this meeting can be found in "Search for Physiological Active Substances Starting from Sialic Acids as a Leading Compound". [Haruo Ogura, YAKUGAKU ZASSHI, 114(5)] 277-303 (1994) ]

# FUJI '90 POST-SYMPOSIUM

“Recent Progress of Synthetic Methods in Carbohydrates and Their Applications to Medicinal Chemistry”

## Abstracts



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# Carbohydrates

Synthetic Methods and  
Applications in  
Medicinal Chemistry

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Edited by  
H. Ogura, A. Hasegawa and T. Suami

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KODANSHA

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## **The 14th Symposium on Sialic Acids**

on November 29, 1996, at Keio Plaza Hotel

Organized by Sialic Acids Society (Convener Haruo Ogura)

### **Program**

Tamio Yamakawa (Society President):

Opening address

Yoshitaka Nagai (Institute of Mitsubishi Life Sciences):

Recent progress of sialic acid-related study

## **The 15th Symposium on Sialic Acids**

on November 21, 1997, at University of Tokyo, Sanjyokaikan Hall.

Organized by Sialic Acids Society (Convener Haruo Ogura)

### **Program**

Tamio Yamakawa (Society President):

Opening address

Tatsuo Irimura (University of Tokyo):

Recent progress in carbohydrate chains and carbohydrate recognition molecules related to pathological conditions

## **The 16th Symposium on Sialic Acids**

on November 24, 1998, at Nagai Memorial hall

Organized by Sialic Acids Society (Convener Haruo Ogura)

### **Program**

Tamio Yamakawa (Society President):

Opening address

Masaki Saito (National Cancer Institute):

In search of biological functions of gangliosides as sialoglycolipids  
– Molecular cloning of GM3 synthetic sialyltransferase



## **The 17th Symposium on Sialic Acids**

on November 24, 1999, at Nagai Memorial Hall

Organized by Sialic Acids Society (Convener Haruo Ogura)

### **Program**

Tamio Yamakawa (Society President)

Opening address

Akemi Suzuki (RIKEN Frontier Research System):

Expression control of N-glycolylneuraminic acid

## **The 18th Symposium on Sialic Acids**

on November 22, 2000, at Nagai Memorial Hall

Organized by Sialic Acids Society (Convener Haruo Ogura)

### **Program**

Tamio Yamakawa (Society President):

Opening address

Yoshihiro Kawaoka (Inst. of Medical Sci., The University of Tokyo):

Host and receptor specificity of influenza virus

## **The 19th Symposium on Sialic Acids**

on November 22, 2001, at Nagai Memorial Hall

Organized by Sialic Acids Society (Convener Haruo Ogura)

### **Program**

Tamio Yamakawa (Society President):

Opening address

Taeko Miyagi (Miyagi Cancer Center):

Relation of sialidases and cancer or diabetes

## **The 20th Symposium on Sialic Acids**

on November 28, 2002, at Nagai Memorial Hall

Organized by Sialic Acids Society (Convener Haruo Ogura)

### **Program**

**Tamio Yamakawa (Society President):**

Opening address

**Makoto Kiso (Gifu University):**

Chemical approach to sialo-glycobiology

## **The 21st Symposium on Sialic Acids**

as GlycoTOKYO 2003 Symposium

on November 22, 2003, at Kitasato University Convention Hall

Organized by Sialic Acids Society and GlycoTOKYO

### **GLYCOCONJUGATE IN LIFE SCIENCE**

#### **Program**

13:00 Opening

13:05 2003 GlycoTOKYO Young Scientist Award Lecture

**Ichiro Matsuo (RIKEN) :**

Chemical study of ER-related asparagine linked glycans – Aiming at elucidation of quality control machinery of glycoproteins –

**Tsuyosi Miura (Noguchi Institute):**

Development of quick sugar chain synthesis using fluoros-tag method

13:50 **Eisuke Kaji (Kitasato University):**

Effective synthesis of sugar chains based on position-selective activation of sugar hydroxyl groups

14:20 **Hideji Ishida (Gifu University):**

Chemical approach to elucidation of pathological mechanism of self-immune neuronal diseases – Synthetic studies of Campylobacter Jejuni lipooligosaccharides

15:10 break

15:30 Takeshi Honda (Sankyo Co., Ltd.):

Synthesis and biological activities of novel inhibitors for influenza sialidase

16:20 Hisashi Narimatsu (AIST/Tsukuba University):

Novel understanding obtained by comprehensive analysis of human glycogenes – Application to drug discovery–

17:10 Haruki Yamada (Kitasato University/Kitasato Inst.):

Structures and pharmacological activities of glycoconjugates prepared from Japanese and Chinese medicines

17:40 Business meeting of Sialic Acids Society

18:00 Social gathering at main dinning room of Kitasato University

## **The 22th Symposium on Sialic Acids**

on November 6, 2004, at Kitasato University

Organized by Sialic Acids Society (Convener Haruo Ogura)

– WHAT ARE SIALIC ACIDS –

Program

14:00

Tamio Yamakawa (Society President):

Opening address

14:05–15:05

Roland Schauer (Kiel University):

Sialic acids: fascinating sugars in higher animals and man

15:05–16:05

Yasuo Suzuki (Shizuoka Prefectural University, CREST, JST; COE 21th Century):

Sialo–biology of influenza

16:05–17:30

**Chomei So (Kiyoken):**

**The medicine and food as same source and a bird's nest**

**17:30–19:30**

**Social gathering (Kitasato University main dinning room)**

**"Bird's nest dessert" offered by Chomei So**

## **The 23th Symposium on Sialic Acids**

**on December 3, 2005, at Kitasato University Convention Hall**

**Organized by Sialic Acids Society (Convener Haruo Ogura)**

### **Program**

**Tamio Yamakawa (Society President):**

**Opening address**

**Ken Kitajima (Nagoya University):**

**New function of polysialic acids chain length in the nervous system**

**Tatunori Seki (Juntendo University):**

**Neurogenesis still continues in adult brain: Polysialic acids express a new brain neurology**