

**N.D. Zelinsky Institute of Organic Chemistry
Russian Academy of Sciences**



**2nd German-Polish-Russian
Meeting on
Bacterial Carbohydrates**

**Moscow, Russia
September 10-12, 2002**

Sponsors of the Meeting

Russian Foundation for Basic Research

International Science and Technology Center

Bruker Daltonik GmbH

**Verein zur Förderung der Glycowissenschaften,
Universität Hamburg**

Dionex Corporation

Chemical Block Ltd

Glycosense AG

Gritvak

Petrovax Lab

Chembridge Corporation

Scientific Production Center

General Information

Meeting Venue

The Meeting will be held in the N.D. Zelinsky Institute of Organic Chemistry, Leninsky Prospekt 47, Moscow 119991, Russia.

Tel.: +7 095 9383613; Fax: +7 095 1355328.

Registration, Information, Contact, Internet

Registration of participants is on Monday, September 9, 2002 from 18:30 to 19:00 hrs in the Zelinsky Institute, room 422. The room will be open for information during coffee breaks and lunch time.

Any time participants may contact by mobile phone

Yuriy Knirel 8-910 4318792 or Anna Kondakova 8-910 4180118.

In room 434, delegates will find PC terminals providing the Internet access.

Projections

Participants who give lecture are requested to submit slides and Power Point e-files to Andrei Perepelov at least 30 minutes before the beginning of your session. The slide collection point is near projectors in the middle of the conference hall. Take the chance and check the slides yourself.

Posters

Total size of posters is 90 cm wide and 90 cm high. All posters have to be mounted on September 10 during lunch hours (13:20-14:30) and removed on September 12 during the last coffee break (16:50-17:15). Authors should be in front of the posters during lunch hours (13:20-15:00) on September 11 (posters A1-A12) and September 12 (posters B1-B11).

Registration Fee

Registration fee is EUR 150. Participants from the Eastern Europe may apply for waiving the registration fee.

Transport, Excursions

Meeting bus will connect hotel Academicheskaya and the Zelinsky Institute. The following is the time schedule:

Departure from hotel Academicheskaya

September 10-12 09:30

Departure from the Zelinsky Institute

September 9 and 12 21:00 and 22:00

September 10 and 11 17:30

Excursion to the Novodevichy (New-Maiden) Memorial Cemetery and the Novodevichy (New-Maiden) Convent for guests of Moscow is on Monday, September 9 from 15:00 to 18:00 hrs. Meeting bus departs from hotel Academicheskaya at 14:30 and picks up participants at hotel Sputnik at 14:45. After the Excursion, Meeting bus will bring participants to the Zelinsky Institute for registration and Welcome Party.

Guided Tour to the Kremlin and the Armory Museum for foreign guests is on Friday, September 13 from 10:30 to 13:00 hrs. Meeting bus departs from the Zelinsky Institute at 9:45 and from hotel Academicheskaya at 10:00. After the Tour, the bus will bring participants to the landing place on the Moscow-river for the Boat Tour.

Boat Tour on the Moscow-river is on Friday, September 13 from 13:30 to 16:30 hrs. The Tour starts and ends at the landing place near the Novospassky (New-Saviour) Bridge. Meeting bus for those who do not attend the Tour to the Kremlin departs from the Zelinsky Institute at 12:45 and from hotel Academicheskaya at 13:00. After the Tour, the buses will bring participants to hotels Academicheskaya and Sputnik. Those who like to go walking after the Tour may leave the boat on the way back at the landing place in downtown.

All excursions are included in the registration fee.

Meals

Lunch will be provided on September 10 to 12 from 13:20 to 14:30 hrs in the canteen situated on the underground floor in the Zelinsky Institute and on September 13 at the beginning of the Boat Tour on the Moscow-river.

Dinner will be provided on September 9 at 19:00 (Welcome Party) and September 12 at 18:30 (Meeting Dinner) in the canteen in the Zelinsky Institute.

The meals mentioned above are included in the registration fee. The rest of the days lunch and dinner are up to the individual delegate.

Breakfast is included in the room price in hotels Academicheskaya and Sputnik and can be served by request in hotel Orlyonok.

Meeting Program Overview

Monday, September 9, 2002

- 15:00-18:00** Excursion to the Novodevichy (New-Maiden)
Memorial Cemetery and the Novodevichy Convent
- 18:30-19:00** Registration
- 19:00-22:00** Welcome Party

Tuesday, September 10, 2002

- 10:00-11:40** Opening Ceremony and Session 1
- 11:40-12:00** Coffee break
- 12:00-13:20** Session 1 (continued)
- 13:20-14:30** Lunch, mounting of posters
- 14:30-15:50** Session 2
- 15:50-16:10** Coffee break
- 16:10-17:30** Session 2 (continued)

Wednesday, September 11, 2002

- 10:00-11:40** Session 3
- 11:40-12:00** Coffee break
- 12:00-13:20** Session 3 (continued)
- 13:20-15:00** Lunch, Poster session (Posters A1-A12)
- 15:00-16:10** Session 4
- 16:10-16:30** Coffee break
- 16:30-17:30** Session 4 (continued)

Thursday, September 12, 2002

- 10:00-11:40** Session 5
11:40-12:00 Coffee break
12:00-13:20 Session 5 (continued)
13:20-15:00 Lunch, Poster session (Posters B1-B11)
15:00-16:50 Session 6
16:50-17:15 Coffee break, removal of posters
17:15-18:30 Session 7 and Closing of the Meeting
18:30-22:00 Meeting Dinner

Friday, September 13, 2002

- 10:30-13:00** Guided Tour to the Kremlin and
the Armory Museum
13:30-16:30 Boat Tour on the Moscow-river with
buffet lunch aboard

Scientific Program

Tuesday, September 10, 2002

10:00-10:20 OPENING CEREMONY

10:20-13:20 SESSION 1

CHAIR: *Vladimir N. Shibaev, Otto Holst*

10:20 Tertiary structure of murein from
Gram-negative bacteria

Boris A. Dmitriev, Philip V. Toukach, Klaus-Jürgen Schaper,
Stefan Ehlers

*N.F. Gamaleya Institute of Epidemiology and Microbiology, Academy of
Medical Sciences of Russia, Moscow, Russia and Research Center Borstel,
Center for Medicine and Biosciences, Borstel, Germany*

10:50 Computer simulation of the tertiary structure
of murein from *Escherichia coli* W7

Philip V. Toukach, Boris A. Dmitriev, Otto Holst, Stefan Ehlers
*N.D. Zelinsky Institute of Organic Chemistry, Russian Academy of
Sciences, Moscow, Russia and Research Center Borstel, Center for
Medicine and Biosciences, Borstel, Germany*

11:10 Implication for vaccine development of
variations in the chemical components
of bacterial surface carbohydrates

Gerald Pier

*Channing Laboratory, Brigham and Women's Hospital, Harvard
Medical School, Boston, MA, USA*

11:40-12:00 COFFEE BREAK

12:00 Anion exchange chromatography of carbohydrates with pulsed amperometric and mass-selective detection

Joachim Weiss
Dionex Corporation, Idstein, Germany

12:30 Molecular genetics and biosynthesis of *Yersinia* LPS

Mikael Skurnik
Institute of Biomedicine, University of Turku, Turku, Finland

13:00 Genetics of core LPS biosynthesis in *Serratia marcescens*

Miguel Regué, Núria Coderch, Juan M. Tomás
Department of Microbiology, Faculty of Pharmacia and Department of Microbiology, Faculty of Biology, University of Barcelona, Barcelona, Spain

13:20-14:30 LUNCH, MOUNTING OF POSTERS

14:30-17:30 SESSION 2 CHAIR: <i>Andrzej Gamian, Anatoly I. Usov</i>

14:30 Progress in serological classification of further strains from genus *Proteus* and determination of epitopes and new serogroups

Zygmunt Sidorczyk, Krystyna Zych, Katarzyna Kolodziejska, Dominika Drzewiecka, Agnieszka Zablotni
Department of General Microbiology, Institute of Microbiology and Immunology, University of Lodz, Lodz, Poland

14:50 Serological specificity, cross reactivity and potential biological role of *Proteus vulgaris* O-antigens

Antoni Rozalski, A. Torzewska, B. Bartodziejska, D. Babicka, I. Kwil
Department of Immunobiology of Bacteria, Institute of Microbiology and Immunology, University of Lodz, Lodz, Poland

15:10 Serological and biological activities of *Proteus mirabilis* lipopolysaccharides

Wieslaw Kaca, Elzbieta Literacka, Rafal Fudala, Barbara Wachowicz
Laboratory of Bacterial Cell Structure, Centre of Microbiology and Virology, Polish Academy of Sciences, Lodz, Poland and Institute of Microbiology and Immunology, University of Lodz, Lodz, Poland

15:30 The effects of *Proteus mirabilis* lipopolysaccharides on human blood serum proteases

Katarzyna Bednarska, Wieslaw Kaca
Laboratory of Bacterial Cell Structure, Centre of Microbiology and Virology, Polish Academy of Sciences, Lodz, Poland

15:50-16:10 COFFEE BREAK

16:10 Structure of antigenic polysaccharides from γ -proteobacteria of the genus *Shewanella*

Evgeny L. Nazarenko
Pacific Institute of Bioorganic Chemistry, Far East Branch of Russian Academy of Sciences, Vladivostok, Russia

16:30 Structure of the polysaccharide antigens
of marine microorganisms of the genus
Pseudoalteromonas

Nadezhda A. Komandrova
*Pacific Institute of Bioorganic Chemistry, Far East Branch of Russian
Academy of Sciences, Vladivostok, Russia*

16:50 Further structural studies on
Citrobacter lipopolysaccharides

Ewa Katzenellenbogen, Nina A. Kocharova, George V. Zatonsky,
Andrzej Gamian, Yuriy A. Knirel
*L. Hirschfeld Institute of Immunology and Experimental Therapy, Polish
Academy of Sciences, Wroclaw, Poland and N.D. Zelinsky Institute of
Organic Chemistry, Russian Academy of Sciences, Moscow, Russia*

17:10 Investigation of the chemical structure of
the O-antigen isolated from non-serotypable
Klebsiella pneumoniae

Sven Müller-Loennies, Katja Mertens, Uwe Mamat
*Research Center Borstel, Center for Medicine and Biosciences, Borstel,
Germany*

Wednesday, September 11, 2002

10:00-13:20 SESSION 3

CHAIR: *Zygmunt Sidorczyk, Evgeny Vinogradov*

10:00 The cell wall of mycobacteria

Otto Holst
*Research Center Borstel, Center for Medicine and Biosciences, Borstel,
Germany*

10:30 The mycobacterial cell wall:
A focus for new drug targets

Gurdyal S. Besra

School of Biosciences, University of Birmingham, Birmingham, UK

11:00 Synthesis and use of photoprobes to study
mycobacterial cell wall assembly

Mark R. Guy

School of Biosciences, University of Birmingham, Birmingham, UK

11:20 Studies on capsular polysaccharides
of *Mycobacterium avium*

Manon Wittkowski

*Research Center Borstel, Center for Medicine and Biosciences, Borstel,
Germany*

11:40-12:00 COFFEE BREAK

12:00 The role of MALDI-TOF mass spectrometry
in the area of carbohydrate research

Uwe Rapp

Bruker Daltonics, Bremen, Germany

12:30 Characterization of lipopolysaccharide by
Fourier transform ion cyclotron resonance mass
spectrometry, FT-ICR-MS

Buko Lindner

*Research Center Borstel, Center for Medicine and Biosciences, Borstel,
Germany*

13:00 Structural characterization of hydroxycarotenoid
and glyceroglycolipid produced by
Aureobacterium sp.

Satoshi Fukuoka, Yusuke Ajiki, Takahiko Ohga, Yasuhiro Kawanami, Ken Izumori
National Institute of Advanced Industrial Science and Technology, AIST Shikoku, Institute for Marine Resources and Environment, Takamatsu, Japan and Yamagata Research Institute of Technology, Shonai Branch, Mikawa, Yamagata, Japan

13:20-15:00 LUNCH, POSTER SESSION 1 (A1-A12)

15:00-17:30 SESSION 4
CHAIR: *Leon V. Backinowsky, Paul Kosma*

15:00 Structural analysis of the lipopolysaccharides from *Klebsiella* and *Serratia*

Evgeny Vinogradov
Institute for Biological Sciences, National Research Council, Ottawa, Canada

15:30 Structural studies of the lipopolysaccharide core and the O-polysaccharide repeating units of *Pseudomonas aeruginosa*

Olga V. Bystrova
N.D. Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences, Moscow, Russia

15:50 Extracellular polysaccharides and polysaccharide-containing biopolymers from *Azospirillum* species: properties and the possible role in interaction with plant roots

Svetlana A. Konnova, Vladimir V. Ignatov
Institute of Biochemistry and Physiology of Plants and Microorganisms, Russian Academy of Sciences, Saratov, Russia

16:10-16:30 COFFEE BREAK

16:30 Mass spectrometrical analysis of lipid A
from *Pseudoalteromonas haloplanktis*

Yuri N. Elkin, Buko Lindner, Svetlana V. Tomshich, Ulrich Zähringer
*Pacific Institute of Bioorganic Chemistry, Far East Branch of Russian
Academy of Sciences, Vladivostok, Russia and Research Center Borstel,
Center for Medicine and Biosciences, Borstel, Germany*

16:50 Structural elucidation of lipid A from
phytopathogenic and extremophile bacteria by
means of NMR spectroscopy and mass spectrometry

Antonio Molinaro
*Department of Organic Chemistry and Biochemistry, University of
Naples, Naples, Italy*

17:10 Structures of lipids A from marine
proteobacteria of the *Marinomonas* genus

Inna N. Krasikova, N.V. Kapustina, V.V. Isakov, E.V. Tikhonova,
T.F. Solov'eva
*Pacific Institute of Bioorganic Chemistry, Far East Branch of Russian
Academy of Sciences, Vladivostok, Russia*

Thursday, September 12, 2002

10:00-13:20 SESSION 5 CHAIR: <i>Alexander S. Shashkov, Ulrich Zähringer</i>

10:00 Synthesis and biosynthetic pathways of
nucleotide-activated *glycero-D-manno*-heptoses

Bernd Kneidinger, Alla Zamyatina, Paul Messner, Paul Kosma
*Institute of Chemistry, University of Agricultural Sciences of Vienna,
Vienna, Austria*

10:30 Synthesis of glycoconjugates

Wiesław Szeja, Anna Kasprzycka, Gabriela Pastuch, Ilona Wandzik

Department of Chemistry, Silesian Technical University, Gliwice, Poland

11:00 A rhamnogalacturonan fragment as a precursor for enzymatic glycosylations

Christian Vogel, Sven Kramer, Birte Nolting

Department of Chemistry, University of Rostok, Rostok, Germany

11:20 Preparation of sialyl-oligosaccharides employing trans-sialidase from *T. cruzi*

Björn Neubacher, A.C. Frasch, D. Schmidt, J. Thiem

Department of Chemistry, University of Hamburg, Hamburg, Germany

11:40-12:00 COFFEE BREAK

12:00 Transglycosylating activity of glycosidases in the enzymatic synthesis

Kirill N. Neustroev, E.V. Eneyskaya, K.A. Shabalin, A.A.

Kulminskaya, S.M. Shishlyannikov, L.V. Backinowsky, A.I. Zinin, N.E. Nifantiev

Petersburg Institute of Nuclear Physics, Gatchina, Leningrad Region, Russia

12:30 Glycosyl hydrolases of marine microorganisms. Occurrence, properties and ecophysiological role

Tatiana N. Zvyagintseva, I.Y. Bakunina, S.A. Alekseeva, V.V. Sova, J.V. Burtseva, S.P. Yermakova, O.I. Nedashkovskaya, M.V. Pivkin, V.V. Mikhailov

Pacific Institute of Bioorganic Chemistry, Far East Branch of Russian Academy of Sciences, Vladivostok, Russia

13:00 The complexes of lipopolysaccharide
with chitosan

Irina M. Yermak, V.N. Davydova, V.I. Gorbach, T.F. Solov'eva
*Pacific Institute of Bioorganic Chemistry, Far East Branch of Russian
Academy of Sciences, Vladivostok, Russia*

13:20-15:00 LUNCH, POSTER SESSION 1 (B1-B12)

15:00-16:50 SESSION 6

CHAIR: *Boris A. Dmitriev, Wieslaw Kaca*

15:00 Galactans of red algae and regular
polysaccharides of bacteria:
structural similarity and differences

Anatoly I. Usov
*N.D. Zelinsky Institute of Organic Chemistry, Russian Academy of
Sciences, Moscow, Russia*

15:30 Conformational behaviour of fucoidan
fragments: substituent pattern dependence

Alexey G. Gerbst, A.A. Grachev, D.E. Tsvetkov, A.S. Shashkov,
N.E. Nifantiev
*N.D. Zelinsky Institute of Organic Chemistry, Russian Academy of
Sciences, Moscow, Russia*

15:50 The teichoic acids of the genus *Actinomadura*

Natalia V. Potekhina
*Faculty of Biology, M.V. Lomonosov Moscow State University, Moscow,
Russia*

16:10 Epitope mapping of lipopolysaccharide-specific monoclonal antibodies

Oliver Kooistra

Research Center Borstel, Center for Medicine and Biosciences, Borstel, Germany

16:30 Molecular characterization of transposon-induced lipopolysaccharide mutants of *Legionella pneumophila*

Christian Lück, Jürgen Helbig

Institute of Medical Microbiology and Hygiene, Technical University of Dresden, Dresden, Germany

16:50-17:15 COFFEE BREAK, REMOVAL OF POSTERS

17:15-18:20 SESSION 7
CHAIR: *Yuriy A. Knirel*

17:15 Immortal music and deadly germs (Death of famous composers by bacterial infections - with musical examples)

Ernst T. Rietschel

Research Center Borstel, Center for Medicine and Biosciences, Borstel, Germany

18:20-18:30 CLOSING OF THE MEETING

18:30-22:00 MEETING DINNER

Poster Presentations

A1. A lipopolysaccharide vaccine against shigellosis

Vyacheslav L. Lvov, V.I. Shmigol, S.I. Elkina, M.E. Golovina,
P.G. Aparin

Institute of Immunology, Moscow, Russia

A2. Immunochemical studies on the O-antigens of *Proteus mirabilis* O23 and *Proteus vulgaris* O23

Beata Bartodziejska, A.V. Perepelov, D. Babicka, S.N. Senchenkova,
W. Kaca, A. Rozalski, Y.A. Knirel

Department of Immunobiology of Bacteria, Institute of Microbiology and Immunology, University of Lodz, Lodz, Poland and N.D. Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences, Moscow, Russia

A3. Immunochemical studies on the O-specific polysaccharide of *Proteus penneri* 90, 103, 128 classified to a new proposed *Proteus* serogroup O73

Dominika Drzewiecka, K. Zych, F.V. Toukach, N.P. Arbastky, A.S. Shashkov, Y.A. Knirel, Z. Sidorczyk

Department of General Microbiology, Institute of Microbiology and Immunology, University of Lodz, Lodz, Poland and N.D. Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences, Moscow, Russia

A4. Structure of the O-polysaccharide of *Proteus myxofaciens* from a new proposed *Proteus* serogroup O60

Z. Sidorczyk, A.N. Kondakova, K. Zych, A.S. Shashkov, S.N. Senchenkova, Dominika Drzewiecka, Y.A. Knirel

Department of General Microbiology, Institute of Microbiology and Immunology, University of Lodz, Lodz, Poland and N.D. Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences, Moscow, Russia

A5. Structure of the O-polysaccharide and classification of *Proteus penneri* 28 into *Proteus* serogroup O31

Z. Sidorczyk, A.N. Kondakova, Krystyna Zych, S.N. Senchenkova, B. Bartodziejska, A.S. Shashkov, Y.A. Knirel, A. Rozalski
Department of General Microbiology, Institute of Microbiology and Immunology, University of Lodz, Lodz, Poland and N.D. Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences, Moscow, Russia

A6. Structure of the O-polysaccharide and classification of *Proteus penneri* 31 into *Proteus* serogroup O19

Z. Sidorczyk, A.N. Kondakova, Krystyna Zych, A. Zablotni, S.N. Senchenkova, A.S. Shashkov, Y.A. Knirel
Department of General Microbiology, Institute of Microbiology and Immunology, University of Lodz, Lodz, Poland and N.D. Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences, Moscow, Russia

A7. Structure of the O-polysaccharide of a serologically separate *Proteus mirabilis* strain TG 332 from a new proposed serogroup O50

Z. Sidorczyk, Katarzyna Kolodziejska, A.N. Kondakova, K. Zych, S.N. Senchenkova, A.S. Shashkov, Y.A. Knirel
Department of General Microbiology, Institute of Microbiology and Immunology, University of Lodz, Lodz, Poland and N.D. Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences, Moscow, Russia

A8. Chemical and biological studies on the O-antigens of *Proteus mirabilis* O9 and O18

Rafal Fudala, K. Bednarska, A.N. Kondakova, S.N. Senchenkova, A. Rozalski, Y.A. Knirel, W. Kaca
Department of Immunobiology of Bacteria, Institute of Microbiology and Immunology, University of Lodz, Lodz; Laboratory of Bacterial Cell Structure, Centre of Microbiology and Virology, Polish Academy of Sciences, Lodz, Poland and N.D. Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences, Moscow, Russia

A9. Structure of the O-polysaccharide of *Proteus mirabilis* O38 containing N-linked D-aspartic acid and 2-acetamidoethyl phosphate

Anna N. Kondakova, A.I. Gremyakov, S.N. Senchenkova,
A.S. Shashkov, R. Fudala, W. Kaca

N.D. Zelinsky Institute of Organic Chemistry, Moscow, Russia; Department of Immunobiology of Bacteria, Institute of Microbiology and Immunology, University of Lodz, Lodz, and Laboratory of Bacterial Cell Structure, Centre of Microbiology and Virology, Polish Academy of Sciences, Lodz, Poland

A10. Effect of structural alteration of lipopolysaccharides on the biological activity of *Azospirillum*

Yuliya P. Fedonenko, S.A. Konnova, V.V. Ignatov

Institute of Biochemistry and Physiology of Plants and Microorganisms, Russian Academy of Sciences, Saratov, Russia

A11. Studies on the enterobacterial lipopolysaccharides containing sialic acid

Andrzej Gamian, J. Rybka, A. Korzeniowska-Kowal

L. Hirsfeld Institute of Immunology and Experimental Therapy, Polish Academy of Sciences, Wroclaw, Poland

A12. Immunochemical studies of a sphingosine-containing lipopolysaccharide isolated from a clinical strain

Malgorzata Mieszala, J. Wawrzynczyk, A. Gamian

L. Hirsfeld Institute of Immunology and Experimental Therapy, Polish Academy of Sciences, Wroclaw, Poland

B1. Synthesis of glycosylcerebrosides – potential antituberculosis agents

Sergei D. Maltsev

N.D. Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences, Moscow, Russia

B2. ECA-antibodies in antisera against R-mutants of *Yersinia enterocolitica* O:3

K. Kasperkiewicz, M. Skurnik, L. Brade, D. Bitter-Suermann, A.S. Swierzko, Artur Muszynski, J. Radziejewska-Lebrecht
Department of Microbiology, University of Silesia, Katowice, Poland

B3. Characteristics of *Pseudomonas syringae* lipopolysaccharides and their role in solving the systematic, taxonomy and pathogen-host specialisation problems

Galina M. Zdrovenko
D.K. Zabolotny Institute of Microbiology and Virology, National Academy of Sciences of Ukraine, Kiev, Ukraine

B4. Immunological aspects of *Ralstonia solanacearum* lipopolysaccharides: structure-function relationships

Lyudmila Varbanets
D.K. Zabolotny Institute of Microbiology and Virology, National Academy of Sciences of Ukraine, Kiev, Ukraine

B5. Biological activity of initial and modified lipopolysaccharides of *Ralstonia solanacearum*

Natalia Vinarskaya
D.K. Zabolotny Institute of Microbiology and Virology, National Academy of Sciences of Ukraine, Kiev, Ukraine

B6. A new higher branched sugar from *Erwinia carotovora* ssp. *atroseptica* GSPB 9205

Alexander S. Shashkov, Sof'ya N. Senchenkova
N.D. Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences, Moscow, Russia

**B7. Structure of lipid A from marine proteobacterium
*Pseudoalteromonas haloplanktis***

Natalia V. Kapustina, Inna N. Krasikova, V.V. Isakov, T.F. Solov'eva
*Pacific Institute of Bioorganic Chemistry, Far East Branch of Russian
Academy of Sciences, Vladivostok, Russia*

**B8. Structural investigations on cell wall anionic polymers of
Streptomyces sp. MB-8, the causative agent of potato scab**

Elena M. Tul'skaya, A.S. Shashkov, I.B. Naumova, A.A. Stomakhin
*Faculty of Biology, M.V. Lomonosov Moscow State University, Moscow,
Russia*

**B9. A polymer with a backbone of 3-deoxy-D-glycero-D-
galacto-non-2-ulopyranosonic acid in the cell wall of plant
pathogenic streptomycetes**

Galina M. Streshinskaya, A.S. Shashkov, L.N. Kosmachevskaya,
I.B. Naumova
*Faculty of Biology, M.V. Lomonosov Moscow State University, Moscow,
Russia*

**B10. Structural studies on exopolysaccharides produced by
Lactobacillus casei subspecies *rhamnosus* KL 37C and GG strains**

Agnieszka Korzeniowska-Kowal, T. Lipinski, C. Jones, M. Strus,
P.B. Heczko, J. Rybka, A. Gamian
*L. Hirszfeld Institute of Immunology and Experimental Therapy, Polish
Academy of Sciences, Wroclaw, Poland*

**B11. Production of glycosyl hydrolase by marine bacteria
and perspectives of their application**

Irina Y. Bakunina, Tatiana N. Zvyagintseva, S.A. Alekseeva, E.P.
Ivanova, O.I. Nedashkovskya, V.V. Mikhailov
*Pacific Institute of Bioorganic Chemistry, Far East Branch of Russian
Academy of Sciences, Vladivostok, Russia*

List of Participants

Anisimov, Andrei P.

State Research Center for Applied
Microbiology
P.O. Box 13, Obolensk 142279
Serpukhov District
Moscow Region, Russia
Tel.: +7 0967 360061
Fax: +7 0967 360061
Email: a-p-anisimov@yandex.ru

Backinowsky, Leon V.

Zelinsky Inst. of Organic Chem.
Leninsky pr. 47
Moscow 119991, Russia
Tel.: +7 095 9383686
Fax: +7 095 1355328
Email: leon@ioc.ac.ru

Bartodziejska, Beata

Inst. of Microbiol. and Immunol.
University of Lodz
Banacha st. 12/16
Lodz 90-237, Poland
Tel.: +48 42 6354527
Fax: +48 42 6784932

Bartholomew, James

Science Applications Intern. Corp.
6350 Walker Lane, Ste. 110
Alexandria, VA 22310, USA
Tel.: +1 703 8228819
Fax: +1 703 8228875
Email: bartholomewj@saic-trsc.com

Bednarska, Katarzyna

Centre of Microbiol. and Virol.
Lodowa st. 106
Lodz 93-232, Poland
Tel.: +48 42 671245
Fax: +48 42 671230
Email: kated@cmiwpan.lodz.pl

Besra, Gurdyal S.

School of Biosciences
University of Birmingham
Edgbaston, Birmingham
B15 2TT UK
Tel.: +44 121 4158125
Fax: +44 121 4145925
Email: g.besra@bham.ac.uk

Bushneva Olga A.

Institute of Physiology
Komi Science Centre
Pervomaiskaya st. 50
Syktyvkar 167982, Russia
Fax: +7 8212 241001
Email: bushneva@physiol.komisc.ru

Bystrova, Olga V.

Zelinsky Inst. of Organic Chem.
Leninsky pr. 47
Moscow 119991, Russia
Tel.: +7 095 9383613
Fax: +7 095 1355328
Email: olgabv@ioc.ac.ru

Danilov, Leonid L.

Zelinsky Inst. of Organic Chem.
Leninsky pr. 47
Moscow 119991, Russia
Tel.: +7 095 9383611
Fax: +7 095 1355328

De Castro, Cristina

Dept. of Org. Chem. and Biochem.
University of Naples Federico II
Via Cynthia 4
Naples 80126, Italy
Tel.: +39 081 674123
Fax: +39 081 674393
Email: decastro@unina.it

Dentovskaya, Svetlana V.
State Research Center for Applied
Microbiology
P.O. Box 13, Obolensk 142279
Serpukhov District
Moscow Region, Russia
Tel.: +7 0967 360061
Fax: +7 0967 360061
Email: dentovskaya@yandex.ru

Dmitriev, Boris A.
Gamaleya Institute of
Epidemiol. and Microbiol.
Gamaleya st. 18
Moscow 123098, Russia
Tel.: +7 095 2146276
Fax: +7 095 1936183
Email: murein@narod.ru

Druzhinina, Tatiana N.
Zelinsky Inst. of Organic Chem.
Moscow 119991, Russia
Tel.: +7 095 1377570
Fax: +7 095 1355328
Leninsky pr. 47
Email: druzh@ioc.ac.ru

Drzewiecka, Dominika
Inst. of Microbiol. and Immunol.
University of Lodz
Banacha st. 12/16
Lodz 90-237, Poland
Tel.: +48 42 6354469
Fax: +48 42 6354932
Email: domkam@biol.uni.lodz.pl

Elkin, Yuri N.
Pacific Inst. of Bioorganic Chem.
Pr. 100-letiya Vladivostoka 159
Vladivostok 690022, Russia
Fax: +7 4232 314050
Email: piboc@stl.ru

Fedonenko, Yuliya P.
Inst. of Biochem. and Physiol. of
Plants and Microorganisms
Pr. Entuziastov 13
Saratov 410015, Russia
Tel.: +7 8452 943828
Fax: +7 8452 947303
Email: room308@ibppm.saratov.su

Fudala, Rafal
Inst. of Microbiol. and Immunol.
University of Lodz
Banacha st. 12/16
Lodz 90-237, Poland
Tel.: +48 42 6354527
Email: rafalfu@hoga.pl

Fursova, Nadezhda K.
State Research Center for Applied
Microbiology
P.O. Box 13, Obolensk 142279
Serpukhov District
Moscow Region, Russia
Tel.: +7 0967 360061
Fax: +7 0967 360061
Email: n-fursova@yandex.ru

Fukuoka, Satoshi
National Institute of Advanced
Industrial Science and Technology
2217-14, Hayashi-cho
Takamatsu 761-0395, Japan
Tel./Fax: 81 87 8693559
Email: fukuoka-s@aist.go.jp

Gamian, Andrzej
Hirszfild Inst. of Immunology
and Experimental Therapy
Weigla st. 12
Wroclaw 53-114, Poland
Tel.: +48 71 3371172
Fax: +48 71 3371382
Email:
gamian@immuno.iitd.pan.wroc.pl

Gerbst, Alexey G.
Zelinsky Inst. of Organic Chem.
Leninsky pr. 47
Moscow 119991, Russia
Tel./Fax: +7 095 1358784
Email: algerbst@mail.ru

Golovchenko, Viktoria V.
Institute of Physiology
Komi Science Centre
Pervomaiskaya st. 50
Syktyvkar 167982, Russia
Tel.: +7 8212 241001

Gremyakova, Tat'yana A.
International Science and
Technology Center
Luganskaya st. 9
P.O. Box 25
Moscow 115516, Russia
Tel.: +7 095 7976074
Fax: +7 095 7976014
Email: gremyakova@istc.ru

Guy, Mark Robert
School of Biosciences
University of Birmingham
Edgbaston, Birmingham
B15 2TT UK
Tel.: +44 121 4158125
Fax: +44 121 4145925
Email: M.Guy@bham.ac.uk

Holst, Otto
Research Center Borstel
Parkallee 22
D-23845 Borstel, Germany
Tel.: +49 4537 188472
Fax: +49 4537 188419
Email: oholst@fz-borstel.de

Illarionov, Petr
School of Biosciences
University of Birmingham

Edgbaston, Birmingham
B15 2TT UK
Tel.: +44 121 4158125
Fax: +44 121 414592
Email: p.illarionov@bham.ac.uk

Jansson, Per-Erik
Karolinska Institute
Clinical Research Centre
Huddinge Hospital, NOVUM
Huddinge, S-141 86, Sweden
Tel.: +46 8 58583821
Fax: +46 8 58583820
Email:
pererik.jansson@kfc.hs.sll.se

Kaca, Wieslaw
Centre of Microbiol. and Virol.
Lodowa st. 106
Lodz 93-232, Poland
Tel.: +48 42 671230
Email: wkaca@cmiwpan.lodz.pl

Katzenellenbogen, Ewa
Hirszfeld Inst. of Immunology
and Experimental Therapy
Weigla st. 12
Wroclaw 53-114, Poland
Tel.: +48 71 3371172
Fax: +48 71 3371382
Email:
katzenel@immuno.iitd.pan.wroc.pl

Knirel, Yuriy A.
Zelinsky Inst. of Organic Chem.
Leninsky pr. 47
Moscow 119991, Russia
Tel.: +7 095 9383613
Fax: +7 095 1355328
Email: knirel@ioc.ac.ru

Kocharova, Nina A.

Zelinsky Inst. of Organic Chem.
Leninsky pr. 47
Moscow 119991, Russia
Tel.: +7 095 9383613
Fax: +7 095 1355328
Email: koch@ioc.ac.ru

Kochetkov, Nikolay K.

Zelinsky Inst. of Organic Chem.
Leninsky pr. 47
Moscow 119991, Russia
Tel.: +7 095 1376148
Fax: +7 095 1355328
Email: kochet@ioc.ac.ru

Kolodziejska, Katarzyna

Inst. of Microbiol. and Immunol.
University of Lodz
Banacha st. 12/16
Lodz 90-237, Poland
Tel.: +48 42 63544469
Tel.: +48 42 63544932

Komandrova, Nadezhda A.

Pacific Inst. of Bioorganic Chem.
Pr. 100-letiya Vladivostoka 159
Vladivostok 690022, Russia
Fax: +7 4232 314050
Email: piboc@stl.ru

Kondakova, Anna N.

Zelinsky Inst. of Organic Chem.
Leninsky pr. 47
Moscow 119991, Russia
Tel.: +7 095 9383613
Fax: +7 095 1355328
Email: kondak@ioc.ac.ru

Konnova, Svetlana A.

Inst. of Biochem. and Physiol. of
Plants and Microorganisms
Pr. Entuziastov 13
Saratov 410015, Russia
Tel.: +7 8452 943828

Fax: +7 8452 947303

Email: room308@ibppm.saratov.su

Kononov, Leonid O.

Zelinsky Inst. of Organic Chem.
Leninsky pr. 47
Moscow 119991, Russia
Tel.: +7 095 9383610
Fax: +7 095 1355328
Email: kononov@ioc.ac.ru

Kooistra, Oliver

Research Center Borstel
Parkallee 22
D-23845 Borstel, Germany
Tel.: +49 4537 188464
Fax: +49 4537 188612
Email: okoois@fz-borstel.de

Korzeniowska-Kowal, Agnieszka

Hirszfeld Inst. of Immunology
and Experimental Therapy
Weigla st. 12
Wroclaw 53-114, Poland
Tel.: +48 71 3371172
Fax: +48 71 3371382
Email:
akorzen@immuno.iitd.pan.wroc.pl

Kosma, Paul

Institute of Chemistry
Univ. of Agricultural Sciences
Muthgasse 18
Vienna A-1190, Austria
Tel.: +43 1 360066055
Fax: +43 1 360066059
Email: pkosma@edv2.boku.ac.at

Krasikova, Inna N.

Pacific Inst. of Bioorganic Chem.
Pr. 100-letiya Vladivostoka 159
Vladivostok 690022, Russia
Fax: +7 4232 314050
Email: innakras@piboc.dvo.ru

Lindner, Buko
Research Center Borstel
Parkallee 10
D-23845 Borstel, Germany
Tel.: +49 4537 188233
Fax: +49 4537 188632
Email: blindner@fz-borstel.de

L'vov, Vjacheslav L.
Institute of Immunology
Kashirskoe sh. 24-2
Moscow 123098, Russia
Tel.: +7 095 1118249
Fax: +7 095 1177906
Email: atvt@glasnet.ru

Lück, Christian
Institute of Medical Microbiology
and Hygiene
Fiedlerstrasse 42
D-01307 Dresden, Germany
Tel.: +49 351 4586580
Fax: +49 351 4586310
Email: christian.lueck@mailbox.tu-
dresden.de

Maltsev, Sergei D.
Zelinsky Inst. of Organic Chem.
Leninsky pr. 47
Moscow 119991, Russia
Tel.: +7 095 9383611
Fax: +7 095 1355328
Email: smalru@yahoo.com

Mieszala, Malgorzata
Hirsfeld Inst. of Immunology and
Experimental Therapy
Weigla st. 12
Wroclaw 53-114, Poland
Tel.: +48 71 3371172
Fax: +48 71 3371382
Email:
mieszala@immuno.iitd.pan.wroc.pl

Molinaro, Antonio
Dept. of Org. Chem. and Biochem.
University of Naples Federico II
Via Cynthia 4
Naples 80126, Italy
Tel.: +39 081 674123
Fax: +39 081 674393
Email: molinaro@unina.it

Müller-Loennies, Sven
Research Center Borstel
Parkallee 22
D-23845 Borstel, Germany
Tel.: +49 4537 188467
Fax: +49 4537 188419
Email: sml@fz-borstel.de

Muszynski, Artur
Department of Microbiology
University of Silesia
Jagiellonska 28
Katowice 40-032, Poland
Tel.: +48 32 2009357
Fax: +48 32 2009361
Email: amuszyns@us.edu.pl

Naumova, Irina B.
Faculty of Biology
Lomonosov Moscow State Univ.
Vorobiev Gory
Moscow 119899, Russia
Tel.: +7 095 9395601
Email: i_naumova@mail.ru

Nazarenko, Evgeny L.
Pacific Inst. of Bioorganic Chem.
Pr. 100-letiya Vladivostoka 159
Vladivostok 690022, Russia
Fax: +7 4232 314050
Email: elnaz@piboc.dvo.ru

Neubacher, Björn
Department of Chemistry
University of Hamburg

Martin-Lüther-King Platz 10
D-20146 Hamburg, Germany
Tel.: +49 40 428382827
Email:
fc9y056@public.uni-hamburg.de

Neustroev, Kirill N.
Petersburg Inst. of Nuclear Physics
Orlova Roscha
Gatchina 188300, Russia
Tel.: +7 81271 32014
Fax: +7 81271 32303
Email: neustk@omrb.pnpi.spb.ru

Nifantiev, Nikolay E.
Zelinsky Inst. of Organic Chem.
Leninsky pr. 47
Moscow 119991, Russia
Tel./Fax: +7 095 1358784
Email: nen@ioc.ac.ru

Ovodov, Yury S.
Institute of Physiology
Komi Science Centre
Pervomaiskaya st. 50
Syktyvkar 167982, Russia
Tel.: +7 8212 241001
Email: ovoys@physiol.komisc.ru

Ovodova, Raisa G.
Institute of Physiology
Komi Science Centre
Pervomaiskaya st. 50
Syktyvkar 167982, Russia
Tel.: +7 8212 241001
Email: ovoys@physiol.komisc.ru

Perepelov, Andrei V.
Zelinsky Inst. of Organic Chem.
Leninsky pr. 47
Moscow 119991, Russia
Tel.: +7 095 9383613
Fax: +7 095 1355328
Email: perepel@ioc.ac.ru

Pier, Gerald
Channing Laboratory
Harvard Medical School
181 Longwood Ave
Boston, MA 02115, USA
Tel.: +1 617 5252269
Fax: +1 617 5252210
Email: gpier@channing.harvard.edu

Pobedinskaya, Diana D.
International Science and
Technology Center
Luganskaya st. 9
P.O. Box 25
Moscow 115516, Russia
Tel.: +7 095 7974761
Fax: +7 095 7976014
Email: pobedinskaya@istc.ru

Polle, Andrey Y.
Institute of Physiology
Komi Science Centre
Pervomaiskaya st. 50
Syktyvkar 167982, Russia
Tel.: +7 8212 241001

Potekhina, Natalia V.
Faculty of Biology
Lomonosov Moscow State Univ.
Vorobievsky Gory
Moscow 119899, Russia
Tel.: +7 095 9395601
Email: potekhina@hotmail.ru

Rapp, Uwe
Bruker Daltonics
Fahrenheitstr. 4
D-28359 Bremen, Germany
Tel.: +49-421-2205-241
Fax: +49-421-2205-103
UR@bdal.de

Regué, Miguel
Department of Microbiology
University of Barcelona
Av Joan XXIII s/n
Barcelona, 08028 Spain
Tel.: +34 93 4024496
Fax: +34 93 4024498
Email: regue@farmacia.far.ub.es

Rietschel, Ernst T.
Research Center Borstel
Parkallee 22
D-23845 Borstel, Germany
Tel.: +49 4537 188201
Fax: +49 4537 188406
Email: erietschel@fz-borstel.de

Rozalski, Antoni
Inst. of Microbiol. and Immunol.
University of Lodz
Banacha st. 12/16
Lodz 90-237, Poland
Tel.: +48 42 6354464
Fax: +48 42 6784932
Email: rozala@biol.uni.lodz.pl

Senchenkova, Sof'ya N.
Zelinsky Inst. of Organic Chem.
Leninsky pr. 47
Moscow 119991, Russia
Tel.: +7 095 9383613
Fax: +7 095 1355328
Email: sen@ioc.ac.ru

Senior, Suzanne
School of Biosciences
University of Birmingham
Edgbaston, Birmingham
B15 2TT UK
Tel.: +44 121 4158125
Fax: +44 121 4145925
Email:
suzannesenior@hotmail.com

Shaikhutdinova, Rima Z.
State Research Center for Applied
Microbiology
P.O. Box 13, Obolensk 142279
Serpukhov District
Moscow Region, Russia
Tel.: +7 0967 360061
Fax: +7 0967 360061
Email:
shaikhutdinova@yandex.ru

Shashkov, Alexander S.
Zelinsky Inst. of Organic Chem.
Leninsky pr. 47
Moscow 119991, Russia
Tel.: +7 095 9383660
Fax: +7 095 1355328
Email: shash@ioc.ac.ru

Shibaev, Vladimir N.
Zelinsky Inst. of Organic Chem.
Leninsky pr. 47
Moscow 119991, Russia
Tel.: +7 095 1377570
Fax: +7 095 1355328
Email: shiba@ioc.ac.ru

Sidorczyk, Zygmunt
Inst. of Microbiol. and Immunol.
University of Lodz
Banacha st. 12/16
Lodz 90-237, Poland
Tel.: +48 42 6354467
Fax: +48 42 6784932
Email: zsidor@biol.uni.lodz.pl

Sizova, Olga V.
Zelinsky Inst. of Organic Chem.
Leninsky pr. 47
Moscow 119991, Russia
Tel.: +7 095 9383613
Fax: +7 095 1355328
Email: olgooha@yahoo.com

Skurnik, Mikael
Dept. of Medical Biochemistry
and Molecular Biology
University of Turku
Kiinamylynkatu 10
Turku 20520, Finland
Tel.: +358 2 3337441
Fax: +358 2 3337229
Email: mikael.skurnik@utu.fi

Streshinskaya, Galina M.
Faculty of Biology
Lomonosov Moscow State Univ.
Vorobievsky Gory
Moscow 119899, Russia
Tel.: +7 095 9395601

Szeja, Wieslaw
Department of Chemistry
Silesian Technical University
Gliwice 44-100, Poland
Tel.: +48 32 2371654
Fax: +48 32 2371614
Email: szeja@polsl.gliwice.pl

Toukach, Philip V.
Zelinsky Inst. of Organic Chem.
Leninsky pr. 47
Moscow 119991, Russia
Tel.: +7 095 1359094
Fax: +7 095 1355328
Email: tou@ioc.ac.ru

Tsvetkov, Yury E.
Zelinsky Inst. of Organic Chem.
Leninsky pr. 47
Moscow 119991, Russia
Tel./Fax: +7 095 1358784
Email: tsvetkov@ioc.ac.ru

Tul'skaya, Elena M.
Faculty of Biology
Lomonosov Moscow State Univ.
Vorobievsky Gory

Moscow 119899, Russia
Tel.: +7 095 9395601

Usov, Anatoly I.
Zelinsky Inst. of Organic Chem.
Leninsky pr. 47
Moscow 119991, Russia
Tel.: +7 095 1376791
Fax: +7 095 1355328
Email: usov@ioc.ac.ru

Varbanets, Ludmila
Zabolotny Institute of
Microbiology and Virology
Zabolotny st. 154
Kiev 03143, Ukraine
Fax: +38 0044 2662379
Email: varbanets@serv.imv.kiev.ua

Vinarskaya, Natalia
Zabolotny Institute of
Microbiology and Virology
Zabolotny st. 154
Kiev 03143, Ukraine
Fax: +38 0044 2662379

Vinogradov, Evgeny
Institute of Biological Sciences
100 Sussex Drive
KIA OR6 Ottawa, Canada
Tel.: +1 613 9900397
Fax: +1 613 9529092
Email: evgenii.vinogradov@nrc.ca

Visser, Henk
Lawrence Berkeley National Lab.
Mailstop: Calvin Lab, Building 3
1 Cyclotron Road
Berkeley, CA 94703, USA
Tel.: +1 510 4864330
Fax: +1 510 4866059
Email: hvisser@lbl.gov

Vogel, Christian

Department of Chemistry
University of Rostock
Albert-Einstein-Str. 3a
D-18059 Rostock, Germany
Tel.: +49 381 4986430
Fax: +49 381 4986412
Email: christian.vogel@chemie.uni-
rostock.de

Voznyi, Yakov V.

Zelinsky Inst. of Organic Chem.
Leninsky pr. 47
Moscow 119991, Russia
Tel.: +7 095 9383644
Fax: +7 095 1355328
Email: voznyi@ioc.ac.ru

Weiss, Joachim

Dionex Corporation
Am Wörtzgarten 10
D-65510 Idstein, Germany
Tel.: +49 6126 991233
Fax: +49 6126 991272
Email: joachim.weiss@dionex.de

Wittkowski, Manon

Research Center Borstel
Parkallee 22 Germany
Tel.: +49 4537 188473
Fax: +49 4537 188419
Email: mwittko@fz-borstel.de

Yermak, Irina M.

Pacific Inst. of Bioorganic Chem.
Pr. 100-letiya Vladivostoka 159
Vladivostok 690022, Russia
Fax: +7 4232 314050
Email: iren@piboc.dvo.ru

Zähringer, Ulrich

Research Center Borstel
Parkallee 22
D-23845 Borstel, Germany
Tel.: +49 4537 188462
Fax: +49 4537 188612
Email: uzaehr@fz-borstel.de

Zdorovenko, Evelina L.

Zelinsky Inst. of Organic Chem.
Leninsky pr. 47
Moscow 119991, Russia
Tel.: +7 095 9383613
Fax: +7 095 1355328
Email: evelina@ioc.ac.ru

Zdorovenko, Galina M.

Zabolotny Institute of
Microbiology and Virology
Zabolotny st. 154
Kiev 03143, Ukraine
Tel.: +38 0044 2669966
Fax: +38 0044 2662379
Email: alz@i.com.ua

Zvyagintseva, Tatiana N.

Pacific Inst. of Bioorganic Chem.
Pr. 100-letiya Vladivostoka 159
Vladivostok 690022, Russia
Fax: +7 4232 314050
Email: piboc@stl.ru

Zych, Krystyna

Inst. of Microbiol. and Immunol.
University of Lodz
Banacha st. 12/16
Lodz 90-237, Poland
Tel.: +48 42 635 44 67
Fax: +48 42 678 49 33