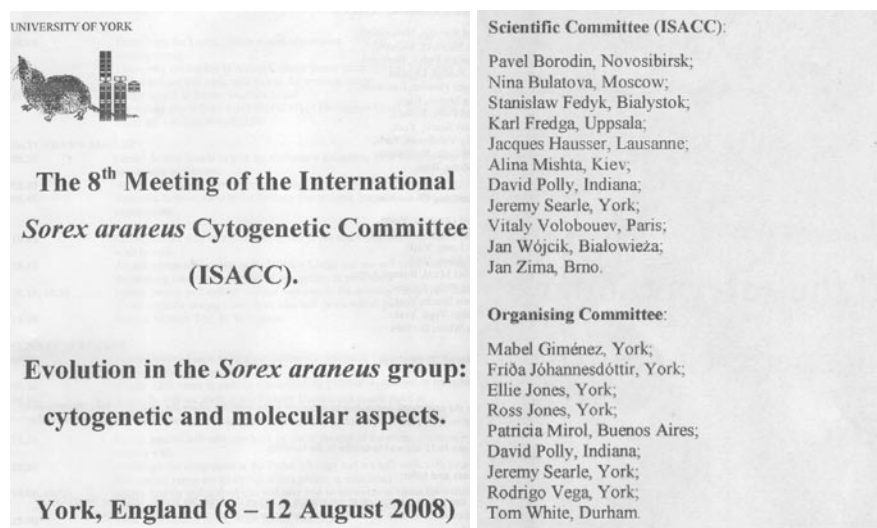


Informational notes

**The 8th Meeting of the International *Sorex araneus* Cytogenetic Committee (ISACC)
Evolution in the *Sorex araneus* group: Cytogenetic and molecular aspects
York, England (8-12 August 2008).**



Scientific Committee (ISACC):

Pavel Borodin, Novosibirsk;
Nina Bulatova, Moscow;
Stanislaw Fedyk, Bialystok;
Karl Fredga, Uppsala;
Jacques Hausser, Lausanne;
Alina Mishta, Kiev;
David Polly, Indiana;
Jeremy Searle, York;
Vitaly Volobouev, Paris;
Jan Wójcik, Białowieża;
Jan Zima, Brno.

Organising Committee:

Mabel Giménez, York;
Friða Jóhannesdóttir, York;
Ellie Jones, York;
Ross Jones, York;
Patricia Mirol, Buenos Aires;
David Polly, Indiana;
Jeremy Searle, York;
Rodrigo Vega, York;
Tom White, Durham.

The 8th ISACC's meeting was held at York, Great Britain, on August 8-12, 2008. Professor Jeremy B. Searle, Department of Biology, University of York, with his crew, was the organizer of this outstanding scientific event which marked the coming of age of the initiative of the International *Sorex araneus* Cytogenetics Committee (ISACC). These meetings have continued every three years for already 21 years. He was who organised the first meeting in Oxford (30-31 August 1987) that focussed on the chromosomal variation in the common shrew, *Sorex araneus*. Through the regular meetings the international community of individuals working on chromosome variation in common shrews have been remarkably interactive and collaborative. The work promoted and fostered by ISACC has helped make the common shrew one of the foremost mammalian models for the study of chromosome variation. The meeting has moved from country to country (Britain, Switzerland, Czech Republic, Sweden, Poland, France, Russia), jumping between the centres of shrew research. Again in 2008, the meeting returned to Britain, thus starting probably a next cycle.

ISACC has achieved a lot in respect of the international coordination and stimulation of the common shrew research. Its bibliography counts hundreds of publications and the authors names (Zima, 2008: Abstracts of the ISACC 8th Meeting). One of the reasons for the success of ISACC is that it has had a very stable membership, and a membership have all contributed to its success through commitment and hard-work. Out of 10 ISACC current members, 7 were the organisers of all past eight meetings. In recent years, the centre of gravity of the field has certainly moved eastwards (Searle et al., 2007: *Rus. J. Theriology*. 6 (2), p. 124). This is ap-

appropriate: the majority of the species range of the common shrew is in Russia and it is easy to understand that so much research should be conducted there. The integrity into enthusiastic group of scientists became viable for Russian cytogenetic component of shrew research.

ABSTRACTS:

Comparative analysis of crossingover frequency and distribution in the dog and fox. Basset P. Hospital Preventive Medicine, Lausanne University Hospital (CHUV), 1011 Lausanne, Switzerland.

Chromosomal rearrangements and speciation in mammals: a brief overview. Basset P. Hospital Preventive Medicine, Lausanne University Hospital (CHUV), 1011 Lausanne, Switzerland.

Karyotypic relationships in the Insectivora. Biltueva L., Vorobieva N., Graphodatsky A. Institute of Cytology and Genetics, Novosibirsk, 630090, Russia.

Meiotic recombination in the common shrew and other mammals. Borodin P. Institute of Cytology and Genetics, Novosibirsk, 630090, Russia.

Cytogenetic results from the study of the hybrid zone between the Moscow and Seliger chromosome races of the common shrew. Bulatova N.Sh. A.N. Severtsov Institute of Ecology and Evolution, Russian Academy of Sciences, Moscow 119071, Russia.

Winter ecology and bioenergetics of soricine shrews: investigating the functional basis of Dehnel's effect. Churchfield S., Rychlik L., Taylor Jan R.E. Department of Anatomy and Human Sciences, Guy's Campus, King's College London, London SE1 1UL, U.K.

Invalidation of Stobnica chromosome race of the common shrew *Sorex araneus* L. Fedyk S., Wójcik J.M., Chętnicki W., Mączewski S. Institute of Biology, University of Białystok, Swierkowa 20B, 15-950 Białystok, Poland.

Spermatocytes with unsynapsed trivalents avoid pachytene arrest and progress up to I and II meiotic divisions in mouse Robertsonian heterozygotes. Garagna S., Vasco C., Zuccotti M., Page J., Manterola M., Donoso R.F. Dipartimento di Biologia Animale, University of Pavia, Piazza Botta 9, 27100 Pavia, Italy.

Sixty years of *Sorex* research in Lausanne (and its vicinity). Hausser J. Department of Ecology and Evolution, Lausanne University, Biophore Building, CH-1015 Lausanne, Switzerland.

Testing the role of chromosomal rearrangements in speciation through the molecular analysis of chromosomal hybrid zones of the *Sorex araneus* group. Horn A., Banaszek A., Basset P., Borodin P., Bulatova N., Jadwiszczak K., Jones R., Polyakov A., Ratkiewicz, Searle J., Shchipanov N., Yannic G., Hausser J. Department of Ecology and Evolution, Lausanne University, Biophore Building, CH-1015 Lausanne, Switzerland.

The phylogeography of the Common Shrew (*Sorex araneus*) in Britain. Jóhannesdóttir F., White T.A., Thompson A.J., Jones R.M., Searle J.B. Department of Biology, University of York, PO Box 373, York YO10 5YW, U.K.

Seasonal changes of expression of doublecortin (DCX) as a measure of neurogenesis in the common shrew (*Sorex araneus*). Michalski A., Bartkowska K., Taylor J., Turlejski K. Nencki Institute of Experimental Biology, PAS, 3 Pasteur St., 02-093, Warsaw, Poland.

Ctenomys: A small mammal living underground. Mirol P. Museo Argentino de Ciencias Naturales, CONICET, Angel Gallardo 470, Ciudad de Buenos Aires, Argentina.

WART rearrangement in a male complex heterozygote of the common shrew (*Sorex araneus* L.) from the Moscow-Seliger hybrid zone. Pavlova S.V., Kolomiets O.L., Bulatova N.Sh., Searle J.B. A.N. Severtsov Institute of Ecology and Evolution, Russian Academy of Sciences, Moscow 119071, Russia.

Could variation in dispersal create “tension zone”? Simulation studies of the Moscow-Seliger hybrid zone. Shchipanov N. A.N. Severtsov Institute of Ecology and Evolution, Russian Academy of Sciences, Moscow 119071, Russia.

Contact zone between three races of *Sorex araneus* in Ryazan region (centre of the European part of Russia). Sheftel B.I., Demidova T.B., Krysanov E.Yu., Alexandrov D.Yu., Didorchuk M.V., Kotyukov Yu.V., Searle J.B. A.N. Severtsov Institute of Ecology and Evolution, Russian Academy of Sciences, Moscow 119071, Russia.

Recombination map of the common shrew. Torgasheva A. Institute of Cytology and Genetics, Novosibirsk, 630090, Russia.

A network of chromosome races of *Sorex araneus*. White T.A., Searle J.B. Department of Biology, University of York, PO Box 373, York YO10 5YW, U.K.

Unusual structure of *Sorex granarius* telomeres. Zhdanova N. Institute of Cytology and Genetics, Novosibirsk, 630090, Russia.

Population-genetic parameters of *Sorex araneus* and *Sorex minutus* in relation to natural and anthropogenic barriers. Zima J. Jr., Obornik M., Sedláček F. Department of Zoology, Faculty of Sciences, University of South Bohemia, Ceske Budejovice, 370 05, Czech Republic.

The bibliography of comparative cytogenetics and evolutionary biology of the common shrew (*Sorex araneus*) and related species. Zima J. Institute of Vertebrate Biology, Academy of Sciences of the Czech Republic, Kvetna 8, CZ-603 65 Brno, Czech Republic.

Presented by N. Sh. Bulatova, November 6, 2008.

The Chromosome Dynamics Gordon Conference

May 24-29, 2009, Lucca (Barga), Italy.

Application deadline: May 3, 2009.

<http://www.grc.org/programs.aspx?year=2009&program=chromosome>

The Chromosome Dynamics Gordon Conference covers a broad range of topics from higher order chromosome organization to mechanisms of chromosome replication and segregation to the biophysical properties of single DNA and protein molecules. This GRC evolved from a meeting that focused on bacterial plasmid replication and segregation - the Bacterial Plasmid GRC - and has expanded its scope to encompass new topics. Today the biennial Chromosome Dynamics GRC attracts participants engaged in both prokaryotic and eukaryotic systems.

Unlike many excellent specialty meetings where experts in DNA metabolism, cell cycle progression, or gene expression delve in to the intricacies of their special realms, the Chromosome Dynamics GRC takes a different tack. It includes participants with very different specialties and methodologies who, while presenting cutting-edge work in their respective fields, recognize

the interrelatedness of seemingly distant approaches to the common goal of understanding the mechanisms that organize genomes. Lively crosstalk between researchers from these diverse disciplines makes this a favorite conference for many participants.

Breakout work on chromosomes from viruses to man has been announced at past meetings. Highlights included new biochemistry and cell biology of condensins and cohesins, mechanisms of centromere specification, single-molecule studies of chromatin remodeling proteins, mechanisms of triplet repeat expansion in diseases like Fragile X Syndrome, and new roles for RNA in controlling epigenetic gene regulation.

TOPICS AND SPEAKERS:

Keynote Lecture: Protection of Human Telomeres

(Titia de Lange)

High Resolution Views of Chromosome Dynamics

(Daniela Rhodes / John Marko / James Berger / Sunney Xie / David Sherratt / Carlos Bustamante)

Moving Chromosomes, With and Without Spindles

(Rebecca Heald / Joe Pogliano / Suckjoon Jun / Dyche Mullins / Takashi Toda / Hironori Funabiki)

Chromosome/Genome Structure and Organization

(Genevieve Almouzni / Jessica Tyler / Toshi Tsukiyama / Reid Johnson / Sergei Mirkin / Susan Gasser)

Telomeres and Centromeres

(Ginger Zakian / Joachim Lingner / Jan Karlseder / Rachel O'Neill / Aaron Straight / Gary Karpen)

Chromosome Pairing and Cohesion

(Terry Orr-Weaver / Abby Dernburg / Yoshinori Watanabe / Marc Gartenberg)

Chromosome Segregation

(Frank Uhlmann / Barbara Funnell / Kerry Bloom / Jeff Errington / David Rudner / Stuart Austin)

Chromosome Topology and Replication

(Susan Lovett / Pat Higgins / Stephen P. Bell / Jorge Schwartzman / Marco Foiani / Alan Grossman / Stephen D. Bell)

Chromosome Repair and Rearrangement

(Ken Kreuzer / Ted Weinert / Sigal Ben-Yehuda / Lorraine Symington / Jim Haber / Steve Kowalczykowski)

The 17th International Chromosome Conference

June, 23-26 2009, Boone, North Carolina, USA

Deadline for abstract submission: March 23, 2009.

Deadline for early registration: April 23, 2009.

<http://rydberg.biology.colostate.edu/icc2009/ImpDatesC.html>

PRELIMINARY PROGRAM

Plenary speakers:

Scott Hawley, Stowers Institute for Medical Research, Kansas City, KS, USA;

Jennifer Graves, Australian National University, Canberra, Australia

Sessions & Session Leaders

Centromeres & Neocentromeres: Andy Choo, Murdoch Childrens Research Institute, Parkville, Victoria, Australia

Telomeres: Susan Bailey, Colorado State University, Ft. Collins, CO, USA

Chromatin & Chromatin Structure: Andrew Belmont, University of Illinois, Urbana-Campaign, IL, USA

Heterochromatin & Repeated Sequences: Paul Fransz, University of Amsterdam, Amsterdam, The Netherlands

Chromosome & Genome Evolution: Bikram Gill, Kansas State University, Manhattan, KS, USA

Advances in Imaging & Molecular Technology: Christina Cardoso, Max Delbrück Center for Molecular Medicine, Berlin, Germany

Nuclear Architecture: Ana Pombo, Imperial College, London, UK

Epigenetics & Gene Expression: Jim Birchler, University of Missouri, Columbia, MO, USA

Polyploidy, Aneuploidy, & Chromosome Aberrations: Chris Pires, University of Missouri, Columbia, MO, USA

Specialized Chromosomes (B, sex, artificial): Andreas Houben, Leibniz Institute of Plant Genetics & Crop Plant Research, Gatersleben, Germany

Chromosomes in Genome Sequencing and Analysis: Hans de Jong, University of Wageningen, Wageningen, The Netherlands

Meiosis & Recombination: Stephen Stack, Colorado State University, Ft. Collins, CO, USA

International Conference “Chromosome 2009”

31 August - 6 September 2009, Novosibirsk, Russia

Registration Deadline: July 1, 2009.

<http://www.bionet.nsc.ru/meeting/chromosome2009/en/organizing.html>

The topics of the conference have been selected in order to cover developments in the various fields of chromosomes research. The special focus will be on exchange of knowledge and experience on all issues related to new methods of chromosomes investigation. The goal of the Conference is to bring together geneticists and cytologists to share the latest scientific and clinical results and to develop a spirit of close cooperation.

PROGRAM

Planned Conference Themes:

Section 1. Heterochromatin regions of chromosomes.

Section 2. Chromosome mapping.

Section 3. Dosage compensation mechanisms.

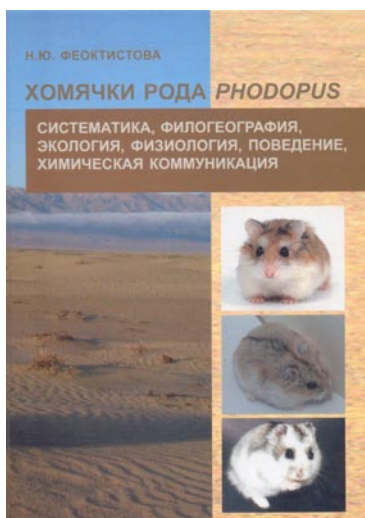
Section 4. Cell division mechanisms.

Section 5. Chromosomes organization in the nucleus.

Section 6. Particularized chromosome structures.

Section 7. Chromatin structure.

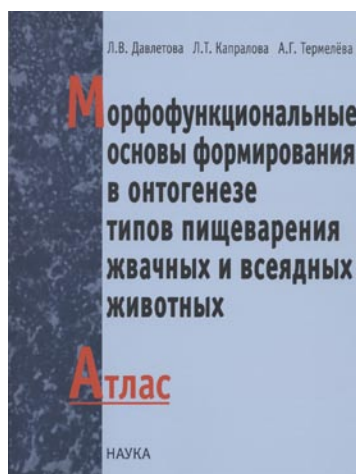
Section 8. Evolution and comparative analysis of chromosomes.

Recent publications

Feoktistova N.Yu. Dwarf hamsters (*Phodopus*: Cricetinae): systematics, phylogeography, ecology, physiology, behaviour, chemical communication. Moscow: KMK Scientific Press Ltd. 2008. 414 p. + color plate. ISBN 978-5-87317-483-6.

The genus *Phodopus* (Rodentia, Cricetidae) includes three species of Palaearctic hamsters: roborovskii or desert hamster (*Ph. roborovskii*), djungarian hamster (*Ph. sungorus*), and Campbell's hamster (*Ph. campbelli*). The two latter species are widely used as laboratory animals for photoperiodism, thermoregulation, basal metabolism studying as well as carcinogenesis, radioactivity resistance and many others aspects of physiology and biomedicine. Furthermore, the genus is of the great interest for study of microevolution. The dwarf hamsters form a monotypic group which seems to be the oldest clade of Old World' hamsters subfamily (Cricetinae). Within the group two species – *Ph. sungorus* and *Ph. campbelli* – may interbreed (their hybrids are partially fertile) in laboratory but are allopatric. On the other hand, *Ph. campbelli* and *Ph. roborovskii* are partially sympatric but never breed. The book represents the original data (resulted from 17 years of studying) of the dwarf hamsters water and energy metabolism, skin glands morphology and function, hair structure, behaviour and chemical communication, seasonal changes in reproduction and hormonal activity state, phylogeography and genetic diversity as well as a review of recently known data of these and some other (morphology, karyology, phylogeny, distribution, feeding preferences, parental activity, spatial population structure etc.) aspects of the species biology. The broad adaptive means of Old World' hamsters are discussed in summarizing of our knowledge of these cute animals.

Presented by N. Sh. Bulatova, October 7, 2008.



L.V. Davletova, L.T. Kapralova, A.G. Termeleva. 2008. Morphofunctional grounds of the formation in ontogenesis of types of digestion in ruminant and omnivorous animals: the atlas. Moscow: Nauka. 80 p. ISBN 978-5-02-035589-7.

For the first time, the atlas is compiled in Russian which accumulates the rich illustrative materials on the formation and growth of sheep and pig gastrointestinal tract, liver and pancreas during embryonic development. It demonstrates morphofunctional grounds of the formation of various historically originated types of digestion in ruminant and omnivorous domestic animals. The study is based on anatomical, histological, biochemical methods and plastic reconstruction of organs and

has been conducted following the united methodical program ever published as “Methodical Recommendations” of the same authors (Davletova et al., 1986). The figures and their descriptions are given on the basis of previous publications and dissertations of the authors and summarize the half hundred year’s investigations on several breeds of domestic sheep and pigs under the classical evolutionary-morphological approach. Materials on wild relatives and hybrids between the wild and domestic animals reflecting the influence of domestication on the development of digestive organs will be presented in the next atlas. The book might be ordered from the A.N. Severtsov Institute of Ecology and Evolution, Russian Academy of Sciences via e-mail address: admin@sevin.ru.

Presented by N. Sh. Bulatova, October 7, 2008.