



Society for Invertebrate Pathology Newsletter

Volume 44 Issue 2

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**44th Annual Meeting of the Society for Invertebrate Pathology,
2011 International Congress on Invertebrate Pathology and Microbial Control
and
OECD Symposium on Disease in Aquatic Crustaceans
August 7-11, 2011 Halifax, Nova Scotia, Canada
www.smu.ca/sip**

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With annual meetings that span the globe, SIP brings together scientists who contribute greatly to research toward a sustainable global food supply and habitat protection with their studies of the basic underpinnings of insect pathology and the development and application of biologically safe pest control agents. Venues on five continents (so far!) ensure that members understand the research needs for different agricultural systems and ecosystems, and provide opportunities for invertebrate pathologists to meet face-to-face and collaborate on important research questions.

**SIP 2011 and OECD Symposium**

This year, meeting organizers Susan Bjornson, Martin Erlandson, and Christine Noronha, with the local arrangements and program committees are ready to host our annual meeting in the northeastern coastal city of Halifax in beautiful Nova Scotia, Canada. An excellent scientific program is being finalized and the maritime venue is ideal for the addition of the OECD special symposium on "Disease in aquatic crustaceans: problems and solutions for global food security" organized by Grant Stentiford. There is still time to register for both the symposium and the meeting by visiting the SIP website... check it out.... and see you there!

SIP 2012 Meeting: Buenos Aires, Argentina

SIP is heading south in 2012 and Alicia Siocco-Cap and her local arrangements team, including Claudia Lopez-Lastra, Corina Beron, and other hard-working team members are well on the way with preparations for the 45th annual meeting in Buenos Aires, Argentina. Travel for an invertebrate pathology short course provided Meetings Chair Lerry Lacey and I an opportunity to tour the venue in the Porto Madero area in the San Telmo district of the city. The meeting site is in beautifully renovated brick warehouses on the river (now the Universidad Catolica Argentina, which rents excellent, well-appointed space for conventions) and is surrounded by fine restaurants and a river walk, and is close to hotels.

Founders' Lecturer: Dr. Elisabeth Davidson

Our enthusiastic congratulations to this year's Founders' Lecturer, Dr. Elisabeth Davidson! Betty will pay tribute to the late Dr. John Briggs, chosen as our Founders' Honoree. She is a former-vice president and president of SIP (1988-1992), as well as a former SIP Newsletter editor, and has delighted meeting participants in recent years with her SIP History presentations at annual meetings and her book "Big Fleas have Little Fleas".

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Recent months brought concerns about our members in New Zealand and Japan where damaging earthquakes have devastated coastal areas. Very fortunately, none of our members suffered terrible losses, but we send our best wishes to them as their countries struggle to overcome the losses and mourn those who lost their lives. During our efforts to canvass SIP members near the damaged sites, we discovered that an honored long-time member, Dr. Keio Aizawa of Japan, passed away in January. His obituary appears in this Newsletter, as does that of Dr. Joel Margalit, co-discoverer of *Bti*, who died in Israel.

I end this missive with some thanks for work well done and some introductions. First, Helen Roy, our excellent Membership Committee Chair has handed over the Chair position to Nina Jenkins. Not only are both very efficient at targeting membership issues, they have worked together to effect a smooth transition and continue to produce ideas and support each other's efforts. In addition, Kelli Hoover, now serving as SIP treasurer, has passed the position of Chair, Endowment & Financial Support Committee to Roma Gwynn. Roma is following in Kelli's successful footsteps in her efforts to gain financial support for the Society. Thank all of

you for your service... and for your efforts to benefit the Society. Your work is very much appreciated!

Finally, Surendra Dara, our talented and able Newsletter editor has asked to step down because of his other editorial responsibilities at the University of California Cooperative Extension. Surendra's artfully designed efforts have been fun to read and a go-to medium for SIP. Surendra, thank you for all you've done to make the Newsletter special and for stepping in when needed. Eric Haas-Stapleton at California State University, Long Beach has enthusiastically agreed to take on the role of Editor and is currently working with Surendra to complete the June Newsletter. He has already brought good ideas to the table and shown the necessary patience (and good humor) that constructing a newsletter requires - we very much look forward to working with him. Members, please support Eric's work by sending in newsworthy items; and, Eric, welcome aboard!



I've been going to SIP meetings for over 20 years now: time flies when you have fun! In that time I've learnt from the established masters in the field, seen new faces and dramatic ideas take off, and expanded my own expertise, from baculoviruses and Bt in IPM, through fungal control and into registration and commercial production. At each stage, SIP has connected me to people with advice and inspiration. More than all this, SIP is a community. We meet all over the world, renew old friendships and make new friends, and have some great parties: I'm sure looking forward to the dancing at the SIP meetings.

-Carrie Hauxwell
Queensland University of Technology, New South Wales

2011 International Congress on Invertebrate Pathology & Microbial Control OECD Symposium on Disease in Aquatic Crustaceans* & 44th Annual Meeting of the Society for Invertebrate Pathology

Halifax, Nova Scotia, Canada - August 7 - 11, 2011

Photo credit: Destination Halifax/Nova Scotia Tourism and Culture/W. Hayes

Welcome to Halifax! The 2011 International Congress on Invertebrate Pathology & Microbial Control, OECD Symposium on Disease in Aquatic Crustaceans & 44th Annual Meeting of the Society for Invertebrate Pathology will be held at Saint Mary's University in Halifax, Nova Scotia, Canada from August 7 to 11, 2011.

Travel to Halifax by air & land

Halifax Stanfield International Airport (YHZ) is a full-service airport that accommodates domestic, regional and international flight service. You can travel by air to Halifax on direct flights from many Canadian, U.S., European, and Caribbean destinations. Air carriers serving Halifax include: Air Canada, Air St. Pierre, Air Transat, American Airlines, Continental Airlines, Delta Airlines, Icelandair, Porter Airlines, Sunwing Airlines, Thomas Cook, United Airlines, US Airways, and Westjet Airlines.

The TransCanada Highway (Highway 102) enters Nova Scotia from the neighboring province of New Brunswick, providing a connection to all points in the United States and Canada. Car travel around the province is made available through several highways that cut through the interior of the province and other, more scenic ocean routes that are located around the perimeter of the province.

Ground transportation (from the airport to SMU/ The Lord Nelson)

The airport is located about 35 km (22 mi) from downtown Halifax and takes about 30 to 45 minutes to drive from the airport to Saint Mary's University by car. There are several types of ground transportation to take you into the city: limousine (approx. \$53 CDN), taxi (\$53 CDN), and Airporter Shuttle

(approx. \$18 one-way, \$36 return). The shuttle will stop at most major hotels in downtown Halifax (including The Lord Nelson Hotel & Suites, for those staying off campus) but does not stop at the university campus. If you are staying on campus, you may take the Airporter Shuttle to the Lord Nelson Hotel, and then a taxi to the Loyola Residence on the Saint Mary's University campus. We recommend that delegates staying at SMU take a taxi directly from the airport. Car rental companies (Alamo/National, Avis, Budget, Dollar/Thrifty, Enterprise, Hertz) are also available at the airport. For further information, visit the Halifax Stanfield International Airport website (<http://hiala.ca>).

Saint Mary's University (SMU) is located at 923 Robie Street, Halifax (<http://www.smu.ca>). Delegates who are staying on-campus should check in at the front desk of the *Loyola Residences* (open 24h). Check-in is after 15:00 and check-out by 11:00 on the day of departure. Early arrivals or late departures can be accommodated with sufficient advance notice.



Saint Mary's University

The Lord Nelson Hotel & Suites is located at 1515 South Park Street, Halifax (<http://www.lordnelsonhotel.ca>). Delegates who stay at the hotel must arrange their own transportation to the meeting venue. The hotel is within walking distance (1.3 km/0.8 mi) from SMU. The city is well equipped with busses and taxis for convenient travel.

Registration deadlines

The deadline for early registration has passed (June 3) but delegates can still register online:

Late Registration: June 4 to August 5 (online – go to www.smu.ca/sip for details)

Walk-in registration: After August 5 (cash only)

Full abstracts will be available to delegates on the meeting website and a condensed version will be distributed at registration. Extra BBQ, banquet and excursion tickets will be available for purchase at registration and T-shirts will be available while supplies last. **Please note, the registration desk can only accept cash for these payments.**

On-line registration is strongly encouraged until August 5, 2011. The registration fee includes access to the scientific and social program, a condensed program/abstract book, mixer (Sunday evening), BBQ with entertainment (Tuesday evening), banquet dinner (Thursday evening), refreshments during the conference and transportation to and from the special events described above. Hot breakfast is included with on-campus accommodations only. All lunches and one dinner (Monday evening) are included in the registration fee. Non-members who wish to benefit from the lower membership registration fee must submit a membership application and dues prior to registration (available at www.sipweb.org).

Cancellation policy: Refunds for cancellations will be provided before July 4, 2011 (less 25%) or July 22, 2011 (less 50%). Refunds cannot be made after July 22, 2011.

Registration Desk Hours & Locations

OECD Special Registration (for OECD delegates only- see below for full meeting registration site)

Saturday 06 August	18:00 – 21:00 Location: Sobey Building Lobby
Sunday 07 August	07:00— 12:00
2011 Congress Delegates	
Sunday 07 August	16:00 – 21:00 Location: McNally Theatre Auditorium
Monday 08 August	07:00 – 17:00
Tuesday 09 August	07:00 – 13:00
Wednesday 10 August	07:00 – 13:00
Thursday 11 August	07:00 – 13:00

Scientific Program

The 2011 International Congress will begin with an evening welcome mixer on Sunday, August 07, 2011 (McNally Theatre Auditorium) followed by a full scientific program Monday through Thursday. A special OECD-funded symposium entitled "Diseases of Crustaceans: Problems and Solutions for Global Food Security" will be held throughout the day on Sunday, prior to the evening welcome mixer (see special registration times and locations for this event). The meeting this year will offer the following symposia and workshops:

Special OECD Symposium (Sunday, August 7th):
"Disease in Aquatic Crustaceans: Problems and Solutions for Global Food Security"
Organizer: Dr. Grant Stentiford



Bacterial Division Symposium: "Resistance to *Bt* crops"
Organizers: Juan Ferre and Juan Luis Jurat-Fuentes

Fungus Division Symposium: "Fungal associations with mites and ticks"
Organizer: Ingeborg Klingen

Microbial Control Division: "Microbial Pest Control Agents in IPM systems"
Organizer: Stefan Jaronski

Microsporidia Division Symposium:
"Microsporidian-Induced Effects on the Host"
Organizer: Steven Valles and Dörte Goertz

Nematode Division Symposium:
"Entomopathogenic nematodes as model systems for biological studies"
Organizers: Glen Stevens, Ed Lewis

Virus Division Symposium: "Pathology of Insect-Virus Interactions"
Organizers: Bryony Bonning and Eric Haas-Stapleton

Special Virus Division Symposium, in Honour of Basil Arif: "Viruses of Forest Insect Pests"
Organizers: Peter Krell and Kelli Hoover

Cross-Divisional Symposium (Virus/ Diseases of Beneficial Invertebrates Divisions): "Viruses of Aquatic Invertebrates"
Organisers: Karyn Johnson and Grant Stentiford

Cross-Divisional Symposium to honor both Lerry Lacey and Harry Kaya
Organizers: Ed Lewis and Steven Arthurs

Cross-Divisional Workshop (Bacteria/Microbial Control Divisions):
"Industry Innovation in Biocontrol"
Organizer: Kenneth E. Narva, Dow AgroSciences

Microsporidia Division Workshop:
"Microsporidia of Marine Crustacea"
Organizer: Dörte Goertz

Virus Division Workshop: "Virus Taxonomy"
Organizer: Peter Krell

Special Presentation (prior to the SIP Business Meeting, Thursday, August 11, 2011):
"Pioneer Women in Invertebrate Pathology and Their Influence on the Field"
Presenter: Dr. Elizabeth (Betty) Davidson

Information for presenters

All scientific sessions will be held in campus lecture halls. All presentations will be loaded on-site at the registration desk. Please bring your presentation on a CD or USB drive. Presentation rooms are equipped with PC computers and projection equipment. No other form of projection will be available.

Oral presentations must be supported by PowerPoint 2007. Presentations are to be loaded at registration. Due to time constraints and computer compatibility issues, presenters will not be permitted to use their own laptop (PC or MAC) in meeting rooms to deliver their presentations. Ensure that you have chosen a standard font to ensure compatibility. PowerPoint files will load faster if the graphics file size is kept to a minimum.

Please bring your oral presentation (and a back up copy) on a CD or memory stick (USB) to the conference for uploading on Saturday, August 6th (OECD symposium speakers) or Sunday, August 7th. For your personal convenience, conference delegates and guests will have access to the internet (and their presentations) via PC computers, located throughout in the Atrium Learning Commons and elsewhere on campus (there will be no speaker ready room). Wireless access is also available for those that prefer to use their own laptops on campus to check their presentations and access the internet.

Posters will be displayed in Loyola Conference Hall. Posters should be set up on Monday and will remain posted for the duration of the conference.

Social program

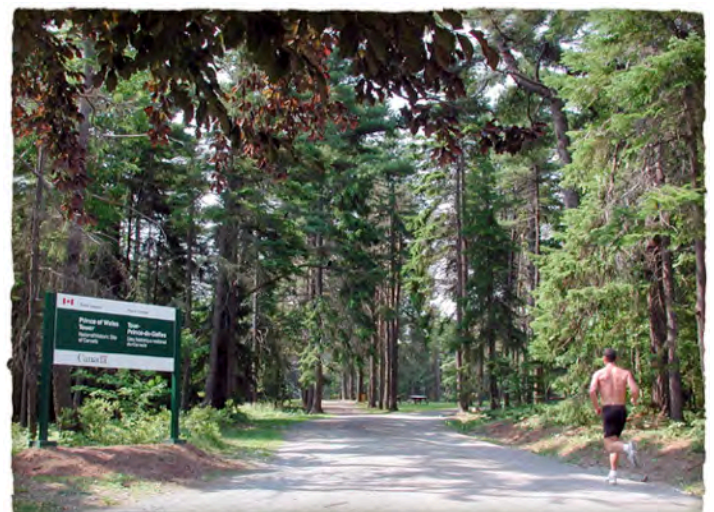
Mixer: The welcome mixer will be held in the McNally Theatre Auditorium on campus from 18:00 to 21:00 on the evening of Sunday, August 7.

Excursion: Peggy's Cove (Tuesday, August 9): Peggy's Cove is an idyllic fishing village and one of most popular stops in Atlantic Canada. The tour will include a scenic and informative tour through part of Halifax and neighbouring seaside communities, and a visit to Acadian Maple where you will learn about Canada's maple syrup industry.



Peggy's Cove

5K walk/run (Point Pleasant Park, Halifax): Participants will be provided relevant information at the registration desk on arrival. The run will take place in Point Pleasant Park, a 75 ha (185 ac) forested park that is within walking distance of the University Campus.



Point Pleasant Park

BBQ: Halifax Citadel National Historic Site (Tuesday, August 9):

The BBQ will be held following the excursion at the Citadel, a 19th-century bastion fortification complete with defensive ditch, ramparts, musket gallery, powder magazine and signal masts. Located atop a small hill in the heart of the city, the citadel overlooks Halifax Harbour.

Note: The BBQ will be held outdoors. Please dress accordingly. We recommend a hooded, weatherproof jacket and/or umbrella.

Banquet: Pier 21 National Historic Site (Thursday, August 11):

Also known as Canada's Immigration Museum, this national historic site and museum pays tribute to the 1.5 million immigrants, war brides, displaced people, evacuee children and Canadian military service personnel who passed through its doors between 1928 and 1971. This national centre commemorates Canada's rich culture and diversity.

Companion, pre- & post-conference tours: Please refer to our meeting website (www.smu.ca/sip) for a list of suggested activities.



Citadel National Historic Site



Pier 21

Other useful information

Banking and Currency Exchange. It is recommended that you purchase Canadian Funds prior to departure or upon arrival at the Halifax Stanfield International Airport. Many vendors will accept American Dollars but bear in mind that they may not offer optimal exchange rates. Saint Mary's University has two bank machines (ATMs) that dispense Canadian currency to those with compatible banking cards (Interac, PLUS, Cirrus). Bank machines are operational 24 hours each day. ATMs are also available at several banks in downtown Halifax (within walking distance of the University). Major credit cards are accepted in most hotels, restaurants and shops.

Time zone. Canada is a large country with 4½ time zones. Nova Scotia and most of the neighboring Atlantic Provinces (New Brunswick, Prince Edward Island and most of mainland Labrador) conform to Atlantic Standard Time (AST), which is 4 hours behind Greenwich Mean Time (GMT).

Weather. Situated on the eastern shore of Nova Scotia, Halifax tends to have a mild summer climate. Average August temperatures in Halifax are 13/23°C (55/73°F). Halifax weather conditions are known to change quickly and it is advised that travelers come equipped to deal with windy and rainy conditions. Under such conditions, you may find that a weather proof jacket (with hood) and/or umbrella to be welcome items. The BBQ will be held outdoors and although a tent will be provided, it is advisable to bring some protective clothing.

We look forward to seeing you in Halifax!

Susan Bjornson
Chair, Local Organizing Committee
Email: susan.bjornson@smu.ca

Martin Erlandson
Chair, Scientific Program Committee
Email: martin.erlandson@agr.gc.ca

Founders Lecture Award



Dr. Elizabeth W. Davidson, Founders' Lecturer

Dr. Elizabeth W. Davidson received the Bachelor of Science from Mount Union College, Ohio, and the Master of Science and PhD in Entomology at Ohio State University. She initially intended to do her MS research on toxicology but when her alfalfa weevils became infected, she was sent to Dr. John Briggs to find the cause. Dr. Briggs kindly showed her how to culture the fungus, and had it identified by his German colleague, Dr. Erwin Muller-Kogler, as *Beauveria bassiana*. This event changed her career, and she used *Beauveria* for her MS research and American foulbrood in honeybees for her PhD research, working with Dr. Briggs. She then did a postdoctoral year with Dr. Fred Hink on insect cell culture, a year teaching at the University of Rochester, and in 1973 moved with her husband, Joseph Davidson, to Arizona State University where she is Research Professor in the School of Life Sciences. Over the years at ASU she has enjoyed international collaborations working on diseases of mosquitoes with the World Health Organization Tropical Disease Research group, on control of the silverleaf whitefly with the US Department of Agriculture, and on biological control of invasive crayfish with the Arizona Game and Fish Department. In 1996, a field trip with a colleague at ASU led to another change of direction in her research to exploration of diseases of amphibians. This research, in collaboration with scientists worldwide, is currently exploring the impact of a fungus, *Batrachochytrium dendrobatidis*, and viruses on amphibian decline.

Dr. Davidson has been a member of SIP since its first meeting at OSU in 1968. She has served as Secretary, Newsletter Editor, Vice President and President, and is currently the chair of the History Committee. She has hosted two meetings in Arizona, at Tempe in 1974 and in Flagstaff in 1991.

2011 Founders' Honoree

In memory of Dr. John D. Briggs (1926-2002)

Dr. Davidson's lecture will highlight Dr. Briggs' career and accomplishments, as well as his impact on the Society and the field of invertebrate pathology.

Dr. Briggs received the Bachelor of Science and PhD degrees from the University of California, Berkeley, under the direction of Dr. Edward Steinhaus. He was employed as Associate Entomologist at the Illinois Natural History Survey from 1955-1959, and then became Head of Entomology at the International Minerals and Chemical Corporation, Wasco, CA, where



Dr. John D. Briggs

Founders Lecture Award

he was involved with developing the first US commercial *Bacillus thuringiensis* product, Thuricide®. In 1962, he joined the Department of Entomology, Ohio State University (OSU), where he served as Professor, and Associate Dean of the newly formed College of Biological Science in 1967-1969. In 1965, Dr. Briggs became director of the World Health Organization (WHO) Collaborating Center for the Biological Control of Vectors at OSU, and served WHO for many years in other capacities. He was also Coordinator of Life Sciences in the Second Indonesian University Development Project. Additionally he collaborated with laboratories in Nigeria, Mexico, Czechoslovakia, and several other countries. He retired from Ohio State in 1992, but continued to be active in the community and invertebrate pathology.

Dr. Briggs was present at the founding meeting of the Society for Invertebrate Pathology in 1967 and hosted the first meeting of the Society at Columbus, Ohio, in 1968. He served the Society as Vice President and President (1970-1974), representative to the American Institute of Biological Sciences, chair of the committee

for travel to SIP meetings, and produced the plaques presented to the Founders' Lecturers.

Dr. Briggs is remembered perhaps most fondly for mentoring scientists who continue to contribute to the field of invertebrate pathology. These include Dr. John Kramer (Cornell University, retired), Dr. W. Fred Hink (Ohio State University, deceased), Dr. Ann Cali (Rutgers University), Dr. Carol McKechnie Reeves, Dr. Eldon L. Reeves, Dr. Douglas Streett (US Department of Agriculture), Dr. Albert Pye (BioLogic), Dr. Faith Harriet Gray, Dr. Goro Kuno (US Communicable Disease Centers), and Dr. Elizabeth Davidson (Arizona State University). In March, 2002, four of these former graduate students, along with Jim Harper as representative of SIP, and David Denlinger, Chair of the OSU Department of Entomology, presented Dr. Briggs with an award honoring his many years of service.



After a valued year in the *Mark Goettel* lab at the Lethbridge Research Center in Canada (2003-2004), I got more acquainted with SIP activities and became an SIPer. The 37th SIP meeting in Helsinki, Finland was my first. I found this interdisciplinary scientific community to be kind, sincere and the companionship of a big family. In addition to promoting knowledge of insect pathology, the most important scientific outcome of participating in SIP meetings has been the opportunity to discuss the research being presented. Although I had previously read their papers or book chapters, speaking with the authors showed their insights in to insect pathology. Thus, I recommend that the new people just getting involved with insect pathology to participate in SIP meetings. Participating in tours of the SIP social programs, meeting people from or seeing different areas and countries has helped me to become more familiar with different cultures around the world as well.

-Reza Talaei, University of Tehran Karaj, Iran

Announcements

The annual meeting of working group S-1024, "Discovery of Entomopathogens and Their Integration and Safety in Pest Management Systems" convened at the University of Arizona January 29-31, 2011. Organizers Patricia Stock and Dawn Gouge and Chair, David Shapiro-Ilan, themed the meeting "**Incorporating molecular studies into microbial control programs**" featuring Bruce Tabashnik as Plenary Guest Speaker. Approximately 30 state representatives and participants gathered to discuss various issues in insect pathology and present state reports. This meeting ended the 5-year project and an application for a new 5-year project is in progress.



S-1024 meeting participants, University of Arizona, Tucson.



The S-1024 meeting ended on a hopeful note! Jarrod Leland and double desert rainbow.



The 2010 Annual Meeting of SIP was a great learning experience, as well as an excellent opportunity for networking. To represent my country and participate in the SIP program was the experience of a lifetime. It helped me increase my professional knowledge, improve my community practice, optimize some pathology techniques and translate it into reality in my career, to serve my country and inspire my ambitious colleagues. This educational experience allowed me to exchange ideas with colleagues and share new insights and research results. This was beneficial to me and my team back home for improving our research and developing infrastructure. This kind of scientific conference offers a unique opportunity for personal contact between researchers that would probably never occur otherwise.

-Nataila Munteanu, Institute of Zoology, Moldova

IN MEMORIAM: Keizo Aizawa (1927-2011)

Dr. Keio Aizawa, an Honorary Member of the Society for Invertebrate Pathology, passed away from complications of lung cancer on January 10th, 2011 at the age of 83 in Fukuoka City, Japan. Dr. Aizawa was born on February 13th, 1927 in Okaya, Nagano Prefecture of central Honshu, Japan. He began training as an insect pathologist in 1947 at the Tokyo University of Agriculture with Dr. Naoto Ishimori, who discovered a cytoplasmic polyhedrosis virus in the silkworm, and studied insect immunity with Dr. S. Metalnikov in the Institute of Pasteur, Paris before the Second World War. After graduating in 1950, he joined the Division of Silkworm Pathology at the Sericultural Experiment Station, Ministry of Agriculture and Forestry in Tokyo and soon became a chief of the silkworm virology laboratory. Because of his expertise in silkworm diseases, Dr. Aizawa was sent in 1958 to work for 15 months in France with Dr. C. Vago at the Station de Recherches Cytopathologique, INRA-CNRS. Upon his return to Japan in 1959, Dr. Aizawa was awarded his Ph.D. from Tokyo University for his work on *Bacillus thuringiensis*, insect cell culture and the microbial control of insect pests. Five years later, he established the Laboratory of Insect Pathology and Microbial Control at the Institute of Biological Control of Kyushu University where he worked on several nucleopolyhedrosis viruses of lepidopteron insects and the now-famous *aizawai* variety of *B. thuringiensis*. It was not surprising that in 1968 he received the Japan Prize of Agricultural Science from the Japanese Society of Agronomy.



Dr. Aizawa directed the efforts of his research group toward developing *B. thuringiensis* as a novel microbial insecticide and in 1981 saw it registered in Japan for use in commercial agriculture and sericulture. Dr. Aizawa was a valued member of the Japanese Society for Virology for more than four decades, organized the 34th Annual Meeting of the Society for Virology meeting in Fukuoka and served as President of this society in 1986. He was awarded Honorary Member status in the Japanese Society for Virology (1998) and the Society for Invertebrate Pathology (1992). After 25 years as full professor, Dr. Aizawa retired in 1990 from Kyushu University and was awarded professor emeritus. The same year he was awarded the Louis Pasteur Prize by the Executive Committee of the International Sericultural Commission for his conspicuous contributions to developing sericulture worldwide.

During his tenure as professor and director of the institute, Dr. Aizawa was an avid enthusiast and collector of antique sericology books published during the Endo Period. Dr. Keio Aizawa is remembered by his students and young scientists as the father and prominent pioneer of invertebrate pathology and microbial control in Japan. We honor his lifelong commitment to preserving the academic tradition of the Sericultural Experiment Station for the younger generation of invertebrate pathologists around the world.

-Takeshi Kawarabata



After the 2001 SIP Annual Meeting in Japan, the Organizing Committee built a monument made of basalt in honor of the Symposium on the grounds of the Biotechnology and Food Research Institute, Fukuoka Industrial Technology Center, Kurume. Carved in the handwriting of Keio Aizawa on the monument is a short sentence with the four characters: *on-ko-chi-shin*. The source of this sentence is the Analectes of Confucius and it is commonly interpreted as “acquire new knowledge by inquiring into the old”. The back of the monument has a low relief of a sporangium of the *B. thuringiensis* serovar *sotto* strain T84A1.

IN MEMORIAM: Joel Margalit (1933- 2011)

Dr. Joel Margalit (Yoel Margalith) passed away on April 1, 2011 at the age of 78 at his home in Omer, Israel. Joel was born in Yugoslavia, and survived the concentration camps of Bergen-Belzen and Terezienstadt during World War II. He immigrated to Israel in 1948, and served in the Israeli Army-Medical Research Institute in 1952-1957. He later received the BSc, MSc and PhD degrees from Hebrew University in Jerusalem where he studied development and behavior of fleas and flies. After completion of his PhD in 1971, he spent the years of 1972-1974 as Visiting Professor at Universities in the USA, and in 1975 became Associate Professor in the Department of Biological Sciences, Southern Illinois University. In 1976 he returned to Israel, first to the Israel Institute for Biological Research and later to Ben-Gurion University of the Negev, Beer Sheva where he remained for the rest of his career. At Ben-Gurion University, Joel mentored several students who became active members of the invertebrate pathology community.

Joel Margalit is best known for the discovery of *Bacillus thuringiensis israelensis* in soil samples collected from the Negev desert in 1976, in collaboration with Leonard Goldberg. *Bacillus thuringiensis israelensis* has become a commercial product used in many countries to control mosquitoes and black flies, vectors of malaria, yellow fever, onchocerciasis, and other serious illnesses. As a result of this discovery, Joel became active in the World Health Organization Working Group on Biological Control of Vectors of Disease, and consulted with agencies worldwide on control of mosquito and blackfly vectored diseases. He received many honors from organizations in Mexico, Canada, USA, and Europe, including the prestigious Tyler Prize for Environmental Achievements in 2003. He retired from Ben-Gurion University in 2003.

Joel was preceded in death by his wife, Miriam, and is survived by his children, Ehud and Yael.



-Elizabeth W. Davidson
Arizona State University
Mitch Harman

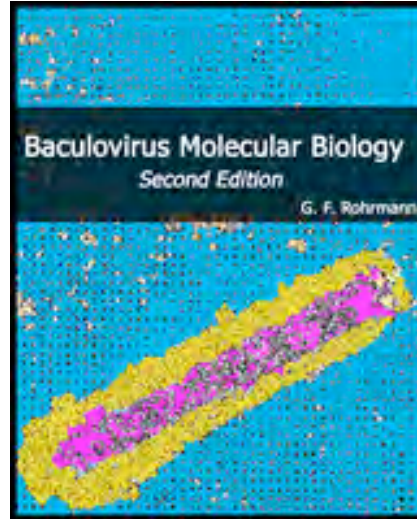
Book Review

Book Title: *Baculovirus Molecular Biology*,
Second Edition

Book Author: George F. Rohrmann

The application of cell culture and molecular biology methodologies to the study of baculoviruses has resulted in an explosion of information on this group of insect pathogens. The quantity of the corresponding literature on baculoviruses has reached a level difficult to master. Fortunately, a comprehensive resource on the molecular and cellular biology of baculoviruses is available for free as an online publication of Bookshelf, the publishing arm of the U.S. National Center for Biotechnology Information (NCBI) National Library of Medicine (NLM). This publication, *Baculovirus Molecular Biology* (<http://www.ncbi.nlm.nih.gov/books/NBK49500/>), was written by George Rohrmann, Professor in the Department of Microbiology at Oregon State University and a pioneer in the field of baculovirus molecular biology. Professor Rohrmann has recently released the 2nd edition of the book, which was e-published in January of this year and is an update of the 1st edition published in 2008.

In his preface, Rohrmann explains that *Baculovirus Molecular Biology* grew out of an effort to completely annotate all the genes of *Autographa californica* multiple nucleopolyhedrovirus (AcMNPV), the primary model for baculovirus research. The ease and appeal of online publication motivated Professor Rohrmann to organize the information and references from the annotation into an e-book, with chapters containing expanded treatments of the roles of these genes in the baculovirus life cycle. Individual chapters of the book are accessible through a hyperlinked table of contents on the home page of the book. Each of the chapter hyperlinks can be expanded into an additional set of hyperlinks for each section within a chapter, which allows the user to identify and go straight to the text on a specific topic. Within the text, references and figures are hyperlinked. The figures are also available as downloadable PowerPoint files, and the text for each chapter can be downloaded as a PDF. There are also additional hyperlinks for navigating within the e-book from one chapter or section to another. A reference list follows each chapter, with each reference followed by a hyperlink to its NCBI PubMed database entry when such is available. Finally, the contents of the book can be searched using the NLM Bookshelf search function, which returns sections of the book and figures/tables containing the search terms.



The first chapter covers the classification and taxonomy of baculoviruses, including the current structure of family Baculoviridae. Recent information on the relationship of baculoviruses to other groups of invertebrate viruses with large double-stranded DNA genomes is presented. Chapter 2 contains a comprehensive overview of the structural composition of the viral occlusions and the occlusion-derived virions within that serve as the means of infection of host larvae. Chapter 3 outlines the baculovirus replication cycle, including primary infection of host midgut cells, the production of the budded virion phenotype and its role in the spread of infection beyond the midgut, the production of viral occlusions, and the dissemination of viral occlusions after death of the host. Differences in the replication cycle among viruses of the different genera of Baculoviridae are also described, as are latent and persistent baculovirus infections. The next three chapters cover transcription of viral genes during the early phase of infection, replication of viral DNA, and transcription of viral genes during the late phase of infection, respectively. The host and viral proteins and viral nucleotide sequence elements involved in baculovirus transcription and DNA replication are discussed, as are related topics such as the shutdown of host gene expression, proposed mechanisms of DNA replication and processing and the hyperexpression of the very late genes encoding baculovirus polyhedrin and p10. Rohrmann's discussion of the mechanisms of baculovirus genome replication, based on his ground-breaking work in this area, are particularly insightful. Chapter 7 deals with both the impact of baculovirus infection

on the progression of host cells through the cell cycle and the induction of apoptosis (programmed cell death) by baculovirus infection. This is followed by a description of host response and susceptibility to viral infection in Chapter 8. Baculoviruses have been used as natural, environmentally friendly insecticides, and three prominent examples are presented in Chapter 9. Chapter 10 returns to the topic of baculovirus very late gene expression, a key feature in the development of baculoviruses as heterologous gene expression vectors, and includes a discussion of the factors contributing to the high levels of very late gene expression by baculoviruses. Chapter 11 is a new addition that discusses the connections between baculoviruses and errantiviruses, which are retrotransposons that encode an envelope protein. Evidence is presented that the errantivirus envelope protein gene is derived from the baculovirus budded virion envelope F protein by recombination. A comprehensive annotation of the open reading frames in the AcMNPV genome is presented in Chapter 12, followed by a list in Chapter 13 of particularly noteworthy baculovirus genes for which homologues do not exist in the AcMNPV genome. A glossary of baculovirus terms is followed by two appendices: one lists the fully sequenced baculovirus genomes (organized by genus) and the other lists the scientific and common names of hosts infected by sequenced baculoviruses.

Baculovirus Molecular Biology is an invaluable aid to anyone working with baculoviruses and a very well-organized introduction and reference for other invertebrate pathologists. This book is clearly the product of an enormous amount of time and effort by Professor Rohrmann. The current state of information on baculovirus genes and processes are presented side-by-side with theoretical considerations and models where knowledge of gene functions and mechanisms is incomplete. Many chapters begin with concise introductions to the topics that are discussed, such as gene transcription in Chapter 4, DNA replication in Chapter 5, and the cell cycle and apoptosis in Chapter 7. Although much of the information in this e-book derives from studies on AcMNPV, Rohrmann has tied in information from studies of other baculoviruses, including unpublished data from a project to inactivate every gene in the *Bombyx mori* NPV genome. The free access to this publication and the ease with which one can navigate through it makes this reviewer wish that all such books were published in this form.

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If you have authored or edited a book and would like a review published in the newsletter, please contact the Book Review Editor, Harry Kaya (hkkaya@ucdavis.edu).



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New Books

A Roadmap to the Successful Development and Commercialization of Microbial Pest Control Products for Control of Arthropods

Author: Willem J. Ravensberg of *Koppert Biological Systems*

Publisher: Springer

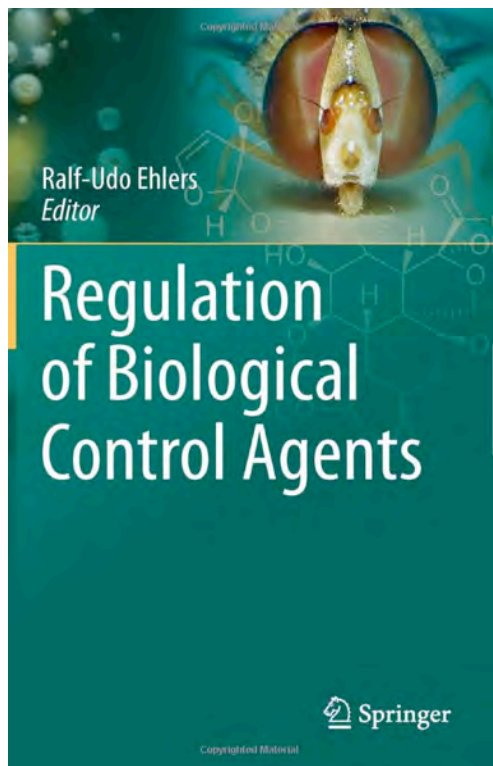
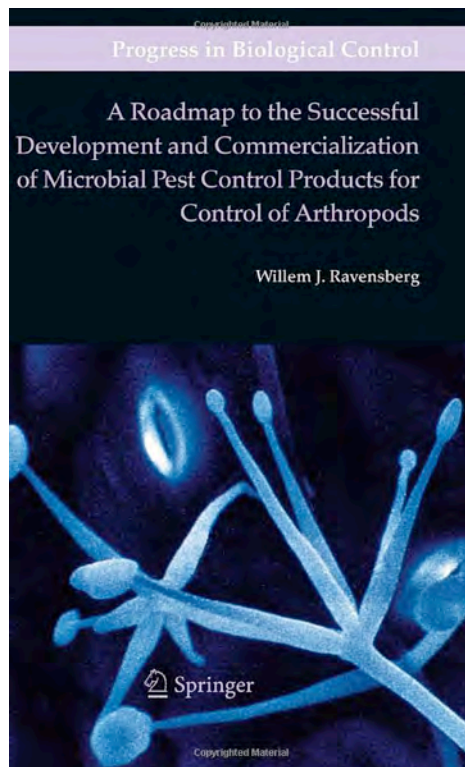
Publication date: February 3, 2011 (1st edition)

ISBN-13: 978-9400704367

Price: \$179 USD

Pages: 408

A rational and structured roadmap is presented for the development and commercialization of microbial pest control products, based on entomopathogenic bacteria, fungi, viruses and nematodes, for the control of arthropod pests. The emphasis lies on strain screening, product development, up to successful commercialization, from a bio-industry's viewpoint.



Regulation of Biological Control Agents

Editor: Ralph-Udo Ehlers of *Christian-Albrechts-University Kiel*

Publisher: Springer

Publication date: February 3, 2011 (1st edition)

ISBN-13: 978-9048136636

Price: \$209 USD

Pages: 429

This book presents a comprehensive compilation of registration requirements for biological control agents (viruses, bacteria, fungi, active substances of natural origin and semiochemicals) in OECD countries. It also reviews data requirements for invertebrate agents (insect, mites and nematodes) and proposes an approach for harmonizing the regulation process from an academic research viewpoint.

If you have authored or edited a book and would like it highlighted in the newsletter, please contact the Newsletter editor, Eric Haas-Stapleton (ehaas@csulb.edu).

Postdoctoral scholar position available to study Bee Viruses

Nor Chejanovsky at the Hebrew University of Jerusalem at the Volcani Center has a postdoc position available to study Bee Viruses and their impact on the decline of honey bee colonies, including Colony Collapse Disorder (CCD). The project is dedicated to study the interaction of bee viruses with honey bees at the molecular and organism levels, to define patterns of infection and virulence determinants. The methodological approach includes molecular techniques and bioassays.

The candidate should have a good background in molecular biology. Interested applicants can get more information at www.agri.gov.il/en/people/758.aspx and should contact Nor Chejanovsky, Entomology Department, The Volcani Center, Israel via e-mail: ninar@volcani.agri.gov.il



SIP Meetings have been playing an important role in my scientific life and career. I remember my first Meeting in Banff 1997 very well, which I attended as graduate student in the early stage of my PhD studies. It was fantastic to be accepted as a colleague by all these acknowledged scientists and being welcomed as a member of the great SIP family. And I became hopelessly attracted to the fascinating world of insect pathogens. Many meetings followed as I continued working on entomopathogenic microsporidia and I became more involved with the Society by taking various offices for the Microsporidia Division as well as the SIP Newsletter. The SIP meetings have always been full of inspiring reports of new research and fruitful discussions with colleagues in a typically very open atmosphere. New ideas arose during talks over a cup of coffee or a drink or when listening to an exciting presentation. But the meetings are, of course, also special because of their social program. Excursions and banquets have been highlights, not only enjoyed by scientists but also their companions. And I should not forget to mention the 5-K races as important part of the meeting (runners do not mind getting up early in the morning even after having a couple of beers the night before...); trophies, such as the wooden toucan from Foz do Iguacu and the SIP-Aztec Wheel from Guanajuato have their special place in my apartment. At times, it has been hard to obtain funding for travel to the meeting but it has always been worth some extra effort. SIP meetings gave me the opportunity to meet many colleagues, many of which became friends, they brought me (and several times my wife) to spectacular places of our planet, and provided excellent exchange on developments in invertebrate pathology.

-Gernot Hoch

HOKU - University of Natural Resources and Applied
LifeSciences, Austria

SIP Auction at Nova Scotia Meeting

Once again, we will hold a lively auction of goods and services during the barbecue event. Our *Auctioneer Extraordinaire*, will cajole you to loosen your wallets and somehow have a good time doing it. And chances are, you will get something unique and valuable out of the deal. Proceeds from the auction will benefit the Society, but all of the fun will be yours. If you wish to donate an item or a service, or have ideas for these, please contact Kelli Hoover at kxh25@psu.edu.



Alexander Keith's Nova Scotia Brewery: the oldest working brewery in North America

The Nova Scotia Loop

If you are planning an extended trip in Nova Scotia, consider taking a road trip around the southern tip of the peninsula. The Lighthouse Route from Halifax to Yarmouth follows the coastal contours of the northern Atlantic Ocean so you can explore coastal villages and more than twenty lighthouses. This 575 km (357 mi) route ends near the Bay of Fundy where the semidiurnal tides can change water levels up to 16.5 meters (54 feet) over a day. The Bay is also a spectacular site for birding and whale watching. The Evangeline Trail returns you to Halifax along the Fundy coast and through orchards of the Annapolis Valley (406 km; 252 mi). See novascotia.com for more information about this world-class road trip (recently reviewed by cnn.com).



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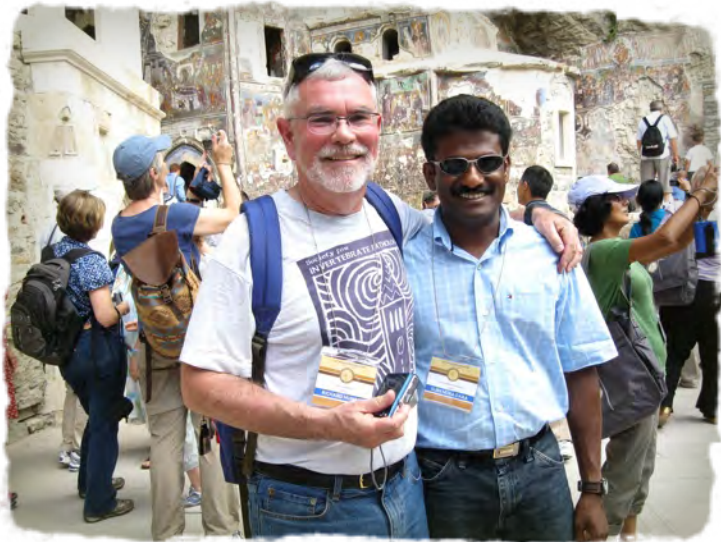
SIP 2010 in Trabzon



Worshipping the Sun god for victory in the 5K race!



Zhen Li perfecting the shot.



Richard Humber and Surendra Dara in the Sumela Monastery



Maestro of the lunch-time drum serenade

From the new Newsletter editor: I want to extend my warm appreciations to Surendra Dara and Lee Solter for their expert and kind guidance as I begin contributing as the new Newsletter editor. This an incredibly valuable publication to me and one that I have enjoyed reading over the years! I'm looking forward to maintaining the dynamism fostered by prior editors and integrating media that increase connections in SIP.

-Eric Haas-Stapleton