New Program Announcement • SSI/ISID Infectious Diseases Research Fellowship

The Swiss Society of Infectiology (SSI) and the International Society for Infectious Diseases (ISID) have come together to create the SSI/ISID Infectious Disease Fellowship Program beginning in 2002.

The purpose of this new Fellowship Program is to support infectious disease physicians and scientists from developing countries through multidisciplinary clinical and laboratory research training at select biomedical institutions in Switzerland. The objectives of the Fellowship Program are:

- to train promising young physicians and scientists from developing countries for clinical and research positions in infectious diseases,
- to foster partnerships between Fellows and infectious disease leaders in Switzerland, and
- to increase scientific research capacity in low income/high disease burden countries.

Opportunities for training and research in a variety of areas ranging from basic studies of the mechanism of disease to studies in public health, epidemiology, diagnostics, therapeutics or vaccine development, are available through this program.

The term of the Fellowship is for one year. The anticipated start date of the 2002 Fellowships is the fall of 2002.

A financial stipend of up to 36,000 SF per year (approximately $21,000 USD) will be given to Fellows to cover travel costs and living expenses. The program intends to award two fellowships in its first year.

Further details on research topics, training sites, and the application procedure will be available in October and posted on the ISID web site (http://www.isid.org).

Plan now to attend the 10th International Congress on Infectious Diseases in Singapore, March 11 to 14, 2002!

Abstract Deadline: November 1, 2002

Use the Electronic System now to submit abstracts: http://www.isid.org
My studies commenced in January and ran through May 2001, under the invitation of Professor Michael H. Gelb of the University of Washington, Seattle. It was a great opportunity for me to work with scientists from various departments. I participated in the study of several biochemical pathways in trypanosomes (*T. brucei, T. cruzi* and *Leishmania*) that appear to be good targets for development of new drugs to treat diseases caused by these organisms (trypanosomiasis).

**Background**

African trypanosomiasis occurs in 36 countries in sub-Saharan Africa and there has been a resurgence in recent years with approximately 300,000 cases reported every year. Human African trypanosomiasis is caused by *Trypanosoma brucei gambiense* or *Trypanosoma brucei rhodesiense*. The cattle form of trypanosomiasis, known as nagana, is caused by *T. brucei brucei*. The organism’s evasion of the host’s immune system by changing the variant surface glycoprotein (VSG) has been a major obstacle to vaccine development. Chemotherapy of trypanosomiasis is the only means of control and relies on a few, extremely toxic drugs (1). These problems have motivated the search for novel drug targets in *T. brucei* in an effort to come up with better drugs to treat African trypanosomiasis. Eukaryotic polypeptides synthesized with one of at least three types of cysteine-containing carboxyl-terminal sequences are candidates for post-translational modification reactions including isoprenylation, proteolytic cleavage, and methyl-esterification. In the isoprenylation process, proteins containing a CaaX box (where C is cysteine, an aliphatic amino acid, and X any amino acid) at their C-termini are first S-alkylated at cysteine with either farnesyl pyrophosphate (15-C) or geranylgeranyl pyrophosphate (20-C) to produce a prenylated thioether. Following this step, the three terminal amino acids are cleaved by a membrane-bound protease, and finally a membrane bound enzyme (PPMT) catalyzes the S-adenosylmethionine-dependent addition of a methyl group to the newly exposed (-carboxyl group of the cysteine residue. This final reaction in the pathway is reversible and has been found to be essential in yeast. The genes encoding yeast (4) and mammalian PPMT have been cloned. Many of the prenylated proteins are small GTPases, including Ras, Rac, Rab, and Rho, that have roles in cellular signal transduction and intracellular vesicle trafficking (2). Protein prenylation has been detected in *T. brucei*. Blocking farnesylation with inhibitors of farnesyltransferase is lethal in *T. brucei* (3). Inhibitors such as S-farnesylthiosalicylic acid (FTS), which affect Ras membrane association, inhibit Ras-dependent cell growth (5). In the present study, we demonstrated the activity of PPMT in *T. brucei* microsome preparations and showed that inhibitors of PPMT inhibit growth of *T. brucei* blood form in culture, at concentrations that do not affect 3T3 cell growth.

**Results**

In this study, preliminary investigations have shown that PPMT activity exists in *T. brucei*. The selectivity in growth inhibition by the inhibitors of PPMT suggests an apparent difference in behavior between *T. brucei* and mammalian enzymes. Further research will determine the substrate specificity and localization of *T. brucei* PPMT. The gene that encodes *T. brucei* PPMT was cloned and expressed using the baculovirus expression system, and studies are underway to determine whether the recombinant enzyme is similar to the native one.

Many thanks to the staff in the departments of Chemistry, Biochemistry, and Pathobiology (division of allergy and infectious diseases), University of Washington, Seattle WA, and the International Society for Infectious Diseases, who supported this research through the fellowship program. It was a golden opportunity for me to learn more technologies than I can enumerate.
The past year has been an exciting one for ProMED-mail. Our Spanish-language list, ProMED-ESP, a collaborative effort with API, the Pan American Society for Infectious Diseases was inaugurated this summer. The list, which already has subscribers from at least 15 countries, translates ProMED-mail postings that are relevant to its subscriber base from English to Spanish. In addition, it provides information on outbreaks that are reported in Spanish and translates them into English for possible posting to the main English-language ProMED-mail. As a result of this list, we anticipate an increase in the number of reports of outbreaks from Latin America on ProMED-mail as the Spanish-language list becomes more popular. This collaborative effort between ISID and API will serve as a model of how we can work with regional infectious disease societies to increase the number of languages in which ProMED-mail is read.

Just as the number of ProMED-mail subscribers has increased, ProMED-mail has expanded its staff of expert moderators and editors by hiring a new Associate Managing Editor, Dr. Stuart Handysides. Dr. Handysides, the former editor of Communicable Disease Report, Communicable Disease and Public Health, and Eurosurveillance Weekly, brings a wealth of experience to ProMED-mail and particular expertise in the monitoring of outbreaks within Europe.

We have laid the groundwork for a number of new initiatives that will result in the availability of more information that is relevant to our subscribers. We will have a registration process in which subscribers will be able to let us know if there are specific areas of interest about which they wish to be informed and, equally importantly, areas which are not of interest. The goal of this is to have subscribers receive e-mail only on those topics that they find relevant. ProMED-mail and the International Journal of Infectious Diseases are working together so that each can use the resources of the other. The IJID will be published electronically in the near future, and selected articles from the journal will be linked to appropriate ProMED-mail postings, allowing ProMED-mail subscribers to access these articles on line. The IJID will publish summaries of selected ProMED-mail postings.

ISID and ProMED-mail are creating an on-line electronic library that will serve as a resource for ProMED-mail subscribers who want background information on specific diseases. This will nicely complement the outbreak reporting and will be accessible as links within ProMED-mail postings.

The ability to receive reports of outbreaks in real-time and rapidly provide our subscribers with those that are of interest will be improved as we undergo a change in our website. Since its inception in 1994, the mechanism by which people submitted reports to ProMED-mail was via e-mail. One of the features that we will be moving toward is web-based submission of outbreak reports to ProMED-mail. This will enable subscribers who come across a report of a disease outbreak on the Internet to submit the report to ProMED-mail without having to access their e-mail account. All told, there will be a number of new developments that will improve the quality and increase speed with which our subscribers receive informative reports of outbreaks of emerging diseases.

The Gorgas Course in Clinical Tropical Medicine

The University of Alabama at Birmingham (UAB) in Birmingham, Alabama, USA and the Universidad Peruana Cayetano Heredia (UPCH) in Lima, Peru together have developed an innovative approach that will allow physicians the opportunity to acquire skills in clinical tropical medicine: The Gorgas Course in Clinical Tropical Medicine.

This annual 9-week diploma course will next be given from January 28 through March 29, 2002. The course is limited to 28 participants and includes 360 contact hours (in English), daily ward rounds on a 36-bed tropical and infectious diseases unit, examination of patients in an outpatient clinic, and teaching trips to field clinics in the Andes mountains (Cuzco) and in the Amazon jungle (Iquitos).

Additional information may be obtained visiting our Web Page: www.gorgas.org
SYMPOSIA. The following symposia are being organized.

Please note that not all topics have been confirmed and that they are subject to change.

**Practical Issues in Emerging Infections**
Emergence of Nipah Virus: How it Happened – Will we have Another Epidemic?
Enterovirus 71: How and Why Epidemics Occur
Crisis on the Border: Rift Valley Fever Outbreak in Saudi Arabia and Yemen
Containing Hemorrhagic Fever Epidemics: The Ebola Experience in Uganda

**Partnerships for Containing Antimicrobial Resistance: The WHO Global Strategy in Action in Low-Resource Countries**
The Role of WHO in Coordinating a Global Response to Antimicrobial Resistance
National Public Health Strategies to Reduce Irrational Use of Antimicrobials and Decrease Antimicrobial Resistance
Drug Policy and Essential Drugs: What is their Impact in Preventing and Controlling Antimicrobial Resistance?
International Societies and Antimicrobial Resistance: Bridging Global Policy and Local Actions

**New Strategies for the Management of Bone, Joint, and Prosthetic Infections—New Approaches to Old Problems**
Physiopathology and Novel Medical Therapeutic Modalities of Prosthetic Joint Infections
Diabetic Foot Infection
Evidence-Based Approach to the Use of Local and Oral Antibiotics in Chronic Osteomyelitis
Where Zebras Tread: Management of Chronic Tropical Osteomyelitis

**Mechanisms of Antibiotic Resistance**
Multiple Antibiotic Resistance: Bacterial Advantages and Risks in the Clinical Settings
Overcoming Resistance in Gram-positive Pathogens: The Role of Antibiotic Combinations
Understanding the Bacterial Cell Wall: New Enzymatic Pathways, New Resistances, and New Targets for Antibiotics
Diversity of Beta-Lactamases: What is the Future for Inhibitors?

**Infection Control in Low-Resource Settings: Recognizing the Need**
Nosocomial Infections and Infection Control: Contrasting Perspectives from Developed vs. Developing Countries
Minimizing Surgical Site Infections in Low-Resource Settings
The Contribution of Infection Control to Managing Antibiotic Resistance
Relative Contributions of Technology and Behavior Changes for Infection Control Outcomes

**Vaccine Preventable Diseases**
Polio Eradication
Influenza Immunization—A Program in Taiwan
Hib Immunization—Gambia Experience
Japanese Encephalitis
Measles Elimination

**The Global Threat of Dengue—Desperately Seeking Solutions**
A Global Perspective of the Dengue Threat
New Developments and Challenges in the Diagnosis of Dengue
Determinants of Dengue Viral Virulence
Strategies for Development of Vaccines Against Dengue
Prospects for Prevention of Dengue by Genetic Immunization

**Problems and Progress in Malaria Treatment and Prevention in South East Asia**
Non-Pharmacological Methods to Prevent Malaria: What Really Works in Low-Resource Settings
New Agents for Malaria Treatment and Prophylaxis
Chloroquine-Resistant Vivax: Epidemiology and Treatment Options
How Close is an Effective Malaria Vaccine?

**HIV in the Asian Pacific Region**
Epidemiology of HIV and AIDS in the Asian Pacific Region
Accessibility of Care and Treatment of HIV and AIDS in the Asian Pacific Region
Antiretroviral Therapy in Resource-Limited Settings: The Thai Experience
Managing Opportunistic Infections in Resource-Limited Areas

**Emerging Infections: The Strategy for Identifying New Pathogens**
The Role of Electronic Microscopy
The Role of Culture
The Role of Serology
The Role of Molecular Biology

**Complete Genome Sequencing: What does it Teach Us?**
Genomic Evolution of Intracellular Bacterial Parasites and Symbionts
*Neisseria meningitidis*
*Mycoplasma*
*Rickettsia conorii* Versus *Rickettsia prowazekii*
New Trends in Fungal Infections
Emerging Invasive Fungal Infections in Children and Adults
Preventive Strategies vs. Pre-Emptive Therapy: Fungal Infection in the Surgical ICU
Management of Penicillinosis in Southeast Asia
Management of Fungal Infection in HIV Patients Without Access to HAART

The Potential Global Impact of the Pneumococcal Conjugate Vaccines
Efficacy and Effectiveness of Pneumococcal Conjugate Vaccines—Global Perspectives
Carriage, Transmission and Spread of S. pneumoniae—The Impact of Conjugate Vaccines
The Global Acceptance and Availability of Pneumococcal Conjugate Vaccines for the First Decade of the 21st Century

New Understandings in the Pathophysiology and Treatment of Bacterial Meningitis
The Changing Pneumococcal Surface: Invasion and Virulence
Bacterial Translocation of the Brain—Blood Barrier
Present and Future of Adjuvant Therapy for Bacterial Meningitis
Fluid Restriction and Intracranial Pressure During Bacterial Meningitis: To Restrict Fluids or Not
Current Antimicrobial Therapy for Bacterial Meningitis

Melioidosis
Pathogenesis and Host Interactions
Molecular Detection of Burkholderia pseudomallei
Other than Humans-Melioidosis in Animals
Treatment of Melioidosis—Where Are We Now?

New Frontiers in the Management of Chronic Hepatitis C: Therapeutic Innovations and Clinical Benefits
Diagnosis and Monitoring of HCV Infection
The Efficacy of Antiviral Therapy for Prevention of Hepatocellular Carcinoma and Improvement of Mortality
Which Treatment for Patients with HCV Infection and Compensated Cirrhosis
Mechanisms of Antiviral Treatment and Possible Reasons for Failure in Chronic Hepatitis C Virus Infection

Acute Bacterial Respiratory Infections in Children—Preventable by Vaccines or Not?
Global Magnitude of the Problem with Emphasis on the Developing World
Towards Correct Etiologic Diagnosis of Acute Respiratory Tract Infections
Pneumococcal Polysaccharide Vaccines
What do Children Gain from Pneumococcal and Hib Conjugates?

Towards Controlling Antimicrobial Use and Resistance in Low Income Countries
Epidemiology of Antimicrobial Resistance in Low-Income Countries
Factors Involved in the Emergence and Diffusion of Antimicrobial Resistance in Low-Income Countries
Detecting Antibiotic Resistance in Low-Resource Settings
Rational Antibiotic Use in Low-Resource Settings: Practices and Policies that Work
APUA Country-specific Antibiotic Regulation Strategy: Lessons Learned in Latin America and the Caribbean and the Importance of the Guadalajara Declaration

New Challenges in Tuberculosis Control
The Role of Molecular Epidemiology in the Evaluation of Tuberculosis Control Efforts
Management of MDR-TB in a Low-Resource National Program
Treatment of Latent TB Infection for TB Control in HIV-Endemic Settings
Beyond National Programs: The Role of Private and Non-Profit Organizations in TB Control

Health Impact of Food Borne Pathogens
Non-typhoid Salmonella as a Food Borne Pathogen
The Public Health Impact of Campylobacter
An Emerging Food Borne Pathogen: Bovine Spongiform Encephalopathy
E. coli 0157:H7: Understanding a Potentially Deadly Food Borne Disease

Sexually Transmitted Diseases
Hot Zones: The Global Resurgence of STDs
M. genitalium: A “New Pathogen”
New Understandings in Interactions Between Herpes and HIV
Foreskin Controversies

Recent Advances in the Treatment of Chronic Hepatitis B Infection
Present and Future Treatments of Chronic Hepatitis B Infection: An Update
Antiviral Therapy for Hepatitis B Virus Infection in Liver Transplantation
Hepatitis B Virus Mutations and Antiviral Treatment
Treatment Options for HBV-Associated Decompensated Liver Diseases
Immune Therapy of Hepatitis B Virus Chronic Infection

Appropriate Use of Antibiotics and its Impact on Resistance Development
Public Health Perspective: Globalization of Antimicrobial Resistance—Epidemiological Challenges
Infectious Disease/Population Dynamics Perspective: Consequence of Action and Inaction
PK/PD Perspective: Does Dose Matter?
Physician’s Perspective: Life at the Sharp End of Prescribing

Sponsored by Bayer AG
“The Appropriate Use of Fluoroquinolones in the Hospital and the Community” on March 12, 18:00hrs

Sponsored by GlaxoSmithKline
“Hepatitis Disease Management—Integrating Prevention, Diagnostics and Therapeutics” March 11, 13:00-16:00hrs

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Immunomodulators and Combination Therapy for Hepatitis C
New Combination Regimens for Difficult-to-Treat Chronic Hepatitis C Patients
Which Patients Could Benefit from PEG Interferon plus Ribavirin Combination?
Pegylated Interferons in the Treatment of HCV/HIV Coinfected Patients
Pegylated Interferons and the Progression of Chronic Hepatitis C to Cirrhosis and Hepatocellular Carcinoma: The NTH HALT-C Trial

Ketolides as Potential Therapeutic Agents in Areas of High Prevalence of Antibiotic Resistance in S. pneumoniae
Prevalence of Resistance to Beta-Lactams, Macrolides and Fluoroquinolones in the Far East
What Drives Resistance?—Social, Economic, and Political Factors
How Pharmacokinetics Determine Outcome—Have we learned any Lessons?
Resistance and the NIMBY (Not In My Backyard) Syndrome—Making Surveillance Data Available Locally in the Electronic Age
Therapeutic Efficacy of New Agents Against Resistant Bacteria—How do Ketolides Compare?

Confronting Pediatric HIV/AIDS Globally
The Treatment of Pediatric HIV in Low-Resource Settings
Strategies for Initial Therapies and Late Modifications in Children Infected with HIV
Low Cost Antiretroviral Treatments to Prevent Maternal-to-Child Transmission of AIDS
Enabling AIDS Orphans to Achieve Healthy Productive Adulthood: Affordable Strategies that Work

The Global Extension of Care for Persons with HIV/AIDS
Challenges and Opportunities to the Global Implementation of HIV Prevention and Treatment Programs
Introducing Widespread HIV/AIDS Treatment: Mathematical Implications for the Emergence of Anti-Retroviral Resistance
Making HIV Prevention and Treatment Work on a National Scale: Lessons from Uganda
Successful Anti-Retroviral Treatment in a Low Resource Setting: How does it Happen?

Vaccination of New Millennium Babies
Poliomyelitis: Choosing the Right Vaccine for Safer Protection
Acellular Pertussis Combined Vaccines: Vaccines of the Future
MMR Vaccination: Current Situation and Perspectives
Vaccinating Children Against Influenza—Protecting Individuals and Communities

Immune Reconstitution and HIV Management
HIV Management: Immune Based Treatment Strategies
Discordant Immune Responses in HIV Infection
Markers of Immune Reconstitution and T-Cell Function
Psychoneuroimmunology, Behavioral Medicine and AIDS

Confirmed Speakers (September 2001)
Lamunu, Margaret, Uganda
Lee, May Ann, Singapore
Lepage, Philippe, Belgium
Leung, Nancy W.Y., China
Lev, Daniel, Switzerland
Lin, Tzou-Yien, Taiwan
Ling, Mui-Lin, Singapore
Loaareesuwan, Songchai, Thailand
Madani, Tariq Ahmed, Saudi Arabia
Mader, Jon T., USA
Mayer, Kenneth H., USA
Mulholland, Kim, Australia
Mwinga, Alwyn, Zambia
Odo, Carla, Costa Rica
Omata, Masao, Japan
Osborne, Connie, Switzerland
Paton, Nicholas, Singapore
Péchère, Jean-Claude, Switzerland
Perrillo, Robert P., USA
Plotkin, Stanley, USA
Raoult, Didier, France
Rappuoli, Rino, Italy
Relman, David, USA
Ruxurungtham, Kiat, Thailand
Sagnelli, Evangelista, Italy
Santantonio, Teresa, Italy

continued on page 7
SYMPOSIA UNDER DEVELOPMENT:
- Fungal Infections and Novel Antifungal Agents
- Pediatric Infections
- New Approaches to the Treatment of Sepsis
- Controversies in the Treatment of Lower Respiratory Tract Infections

PLENARIES
The following plenary addresses have been confirmed.

Plenary Lecture I
Molecular Biology of Prion Disease
Charles Weissmann (UNITED KINGDOM)

Plenary Lecture II
Infectious Diseases in the 21st Century: Old Challenges and New Opportunities
Francis Waldvogel (SWITZERLAND)

Plenary Lecture III
Helicobacter pylori
Martin J. Blaser (USA)

Plenary IV
Rotavirus: From Bench to Vaccine
Ruth Bishop (AUSTRALIA)

Plenary V
Challenges of Multi Drug Resistant Malaria
Nicholas J. White (THAILAND)

From the Executive Committee and Council
by Tim Brewer, ISID Program Director

This past July, the ISID Executive Committee and Council held a joint meeting in Amsterdam to review and evaluate current Society programs and to discuss the development of new projects. The focus of the meeting was on how the Society should grow to better serve the needs of its members. With the support of the Executive and Council, a number of recent steps have been taken by the Staff to make it easier for members and others to learn about the Society and its programs. These steps include redesigning the Society’s website to make it more accessible, easier to navigate, and to provide a more complete description of the Society’s programs. In addition to the changes in the web site, the Society has produced an informational brochure for distribution at meetings and by mail. This brochure describes the major programs of the Society, its publications, and the benefits individuals receive by being regular or corresponding members.

The Executive and Council explored ways to further meet the educational and professional development needs of individuals in infectious diseases and microbiology around the world. The Society has grown tremendously since its founding, both in the number of members and in the scope of its programs. The Leadership felt strongly that the Society should continue to expand its activities in the areas of education and professional development, and look for new opportunities or venues for training and support. Discussion on how to better use the Internet for disseminating information and fostering collaborations among individuals in different regions is an example of a new possible direction for the Society. A lively discussion on how to support current and new initiatives also took place.

The Executive and Council appointed new members to two standing Committees, the Nominations Committee and the Publications Committee. The Nominations Committee, chaired by the Secretary of the Society, will identify candidates for president-elect, as well as vacancies on the Executive and Council that will be filled at the 10th ICID in Singapore. The Society encourages all of its members to submit names of individuals who may be interested in serving on the Council to the Nominations Committee for consideration. The Committee will review potential candidates and propose a slate of nominees for the Council and membership to vote on at the 10th ICID.

New Executive and Council members were also appointed to the Publications Committee. The Editor-in-Chief of the Journal, Prof. Jonathan Cohen, also serves as an ex-officio member. Important issues facing this Committee include how best to move to an electronic online publication in addition to the current print journal and if and when to increase the number of issues per year. Both the Committee and Prof. Cohen are excited about the potential for sharing information and educational opportunities between the Journal and the Society’s outbreak reporting program, ProMED-mail. Together these two venues reach approximately 25,000 individuals in over 140 countries.

As the Society continues to evolve and grow, the Executive and Council realize that the structure of the Society may need to adapt to best meet the needs of its members. To that end, they formed a Bylaws Committee to review the current Society statutes and to advise the Executive and Council on whether these statutes need to be updated. This Committee will help the Society grow and adapt as needed to remain a vital resource for individuals in the field of infectious diseases.

The global burden of infectious diseases has been discussed a great deal recently in the lay press and public around the world. The impact of these diseases goes beyond the morbidity and mortality that they cause to effect the economic growth and stability of both regions and countries. The Society and its members have the opportunity to take on the challenge posed by infectious disease both in individuals and in the public health arena. It is a very exciting time to be in infectious diseases, and the Society and its leadership look forward to working with the members to continue to meet these challenges.

Confirmed Speakers
(September 2001)
- Seto, Wing Hong, China
- Shiffman, Mitchell, USA
- Singhi, Sunit, India
- Sirinavin, Sayomporn, Thailand
- Sirisantha, Thira, Thailand
- Supputtamongkol, Yupin, Thailand
- Takeda, Yoshifumi, Japan
- Targett, Geoff, United Kingdom
- Thomas, Howard C., United Kingdom
- Thomas, Philip A., India
- Tuomanen, Elaine, USA
- Turnidge, John, Australia
- Uplekar, Mukund, Switzerland
- Valtonen, Matti, Finland
- Waldvogel, Francis, Switzerland
- Watanabe, Haruo, Japan
- Weber, Jörg, Germany
- Weissmann, Charles, United Kingdom
- Wenzel, Richard, USA
- Werasit, Sittirai, Switzerland
- Whitty, Mike, Australia
- White, Nicholas J., Thailand
- Wise, Richard, United Kingdom
- Yuki, Nobuhiro, Japan
- Zeuzem, Stefan, Germany
Singapore Airlines Ad