ESCMIID
Assembly of Members 2002
Minutes

Education
ESCMIID School of Clinical
Microbiology and
Infectious Diseases 2003

Features
Bioterrorism – Are we Prepared?

Features
Smallpox: An Old Scourge
on the Brink of Eradication
or Resurgence
SMALLPOX

The image on this issue's title page shows an electron microscopic picture of smallpox viruses growing in the cytoplasm of an infected chick embryo cell. Mature virions are brick-shaped, immature forms are also visible. Magnification approximately 25,000-fold. Micrograph from F.A. Murphy, School of Veterinary Medicine, University of California, Davis.

After the September 11 terrorist attacks in New York City, smallpox, a disease no longer considered a threat to mankind, once again became a concern for public health departments in Europe and around the world. If used as a biological weapon, smallpox represents a serious threat to civilian populations because of its case-fatality rate of 30% or more among unvaccinated persons and the absence of specific therapy. Although smallpox has long been feared as the most devastating of all infectious diseases, its potential for devastation today is far greater than at any previous time. Routine vaccination was discontinued more than 25 years ago in most countries. In a now highly susceptible, mobile population, smallpox would be able to spread widely and rapidly throughout Europe and the world.

Smallpox was globally eradicated in 1977 by an international vaccination campaign, one of the greatest medical achievements ever. In 1980, the World Health Assembly recommended that all countries cease vaccination. The virus which was stored at two facilities, the Institute of Virus Preparations in Moscow, Russia, or the Centers for Disease Control and Prevention (CDC) in Atlanta, GA, was to be destroyed on June 30, 1999. This, however, did not occur.

REFERENCES


ESCMID EXECUTIVE COMMITTEE

R. Finch, President, Nottingham, UK
M. Struelens, President-elect, Brussels, B
S.R. Norrby, Secretary General, Stockholm, S
A. Voss, Treasurer, Nijmegen, NL
C. Carbon, Education Officer, Paris, F
G. Cornaglia, Professional Affairs Officer, Clinical Microbiology, Verona, I
P. Francioli, ECCMID Programme Director, Lausanne, CH
H. Giamarellou, Professional Affairs Officer, Infectious Diseases, Athens, GR
R. Hakenbeck, Scientific Affairs Officer, Kaiserslautern, D
C.E. Nord, Past President, Stockholm, S

Ex Officio Members:
G.C. Schito, President 12th ECCMID 2002, Genova, I
I. Gould, President 13th ECCMID 2003, Glasgow, UK
E. Bouza, CMI Editor-in-Chief, Madrid, E
P. Schoch, Managing Director, Basel, CH
Dear Colleagues,

The Editorial Team hopes that you have had a good summer. Since the appearance of the first issue of ESCMID News for 2002, many activities within our Society have occurred. The present issue of ESCMID News gives you all this information. On April 24–27, 2002 the 12th European Congress of Clinical Microbiology and Infectious Diseases was held in Milan. The congress gathered 4800 participants and was a great success both from the scientific and social points of view. At the congress the ESCMID Awards were presented and a detailed report is given in this issue as well as an interview with the recipient of the Award for Excellence in Clinical Microbiology and Infectious Diseases, Professor Didier Raoult. The announcement for ESCMID Awards, Fellowships and Research Grants 2003 can also be found in this issue. The next congress will take place in Glasgow on May 10–13, 2003, and the scientific programme is currently being finalised. The European Symposium on Bioterrorism, held in Stockholm on June 10–11, 2002 with participants from 26 countries was a great success. The 15 lectures are now available on www.escmid.org. The symposium summarised the state of art in a scientific field that must be accepted in modern medicine, bioterrorism. At the symposium, several speakers discussed the use of smallpox as a bioterrorist weapon. The Editorial Team has therefore decided to include an article on smallpox in this issue. The first ESCMID School of Clinical Microbiology and Infectious Diseases was organized in Lausanne on June 6–12, 2002 with morning plenary sessions and afternoon group discussions. The school was very much appreciated among the 27 participants. The European Committee on Antibiotic Susceptibility Testing (EUCAST) has been reorganized and has started new projects which are described in this ESCMID News.

The ESCMID homepage www.escmid.org has been renewed and contains all-important information about our Society. We recommend that our members visit the new homepage. The Society is seeking applicants for the position as the Editor of our journal Clinical Microbiology and Infection. Professor Emilio Bouza, the present Editor of CMI, will retire on January 1, 2004. The advertisement for the position is given in this edition. The ESCMID News concludes as usual with brief news items and forthcoming events in microbiology and infectious diseases. The Editorial Team hopes that you enjoy reading the Newsletter.

Carl Erik Nord
Past President
President Publication Committee
Dear Colleagues,

The 12th ECCMID in Milan was a most successful Congress. More than 4800 delegates enjoyed an outstanding programme to which world-class keynote lecturers and award recipients added significantly to the high standard of the many symposia. There were more than 60 countries represented in the programme, and the delegates came from all corners of the world as well. On behalf of the Executive Committee, I extend my thanks to all those who put so much effort into the organisation of this event. A particular mention of the Programme Committee, our Professional Conference Organisers, AKM, and the Italian Host Societies under the Presidency of Professor Gian-Carlo Schito is appropriate. Plans for the 13th ECCMID in Glasgow are now well advanced, and I can assure you that the scientific programme will be equally attractive.

In my Opening Address at the Milan Congress I indicated that ESCMID is “on the move”. The Society has achieved much and is going from strength to strength. Many of you will have had the chance to explore the Society’s redesigned website, which will be a major vehicle for communication and education to members and non-members alike. The first ESCMID School was held in July 2002 in Lausanne and was very well received. The programme covered a broad range of topics in Clinical Microbiology and Infectious Diseases, delivered by an outstanding Faculty and was geared towards specialists in training. Administration of another School is planned for next year. In June the Society organised a very successful and informative Symposium on Bioterrorism, which was well attended and included many key individuals from Europe, Russia and the United States. The slide material has been posted on our website for those who were unable to attend.

It is also encouraging to note the spirit of co-operation that is emerging between the various European authorities responsible for determining susceptibility and EUCAST. Fresh moves are being made to identify a solution to the issues of harmonisation in susceptibility testing. If achieved, this will have an enormous impact on surveillance, clinical usage and antibiotic policy development within Europe and beyond. Let us hope that agreement can be reached.

A particularly pleasing development has been various successes in promoting the scientific profile of the Society. As many of you are aware the Society’s Study Groups are regular contributors to the Scientific Programme of the annual ECCMID. The strength of these Study Groups has been further identified and incorporated in a joint Expression of Interest by the Society and the Eijkman Winkler Institute in Utrecht, The Netherlands, with a proposal to establish a Network of Excellence under the European Commission Framework 6 Initiative. The bid can be viewed on the European Commission’s website. If successful, this will be an important step for the Society in ensuring sustained contribution to the research agenda in Europe, concerning antibiotic resistance.

Other important areas where ESCMID is active are related to the collaboration with the European Union of Medical Specialists (UEMS) and their Sections of Infectious Diseases and Medical Biopathology. The latter incorporates Clinical Microbiology, a discipline that is not uniformly represented throughout the European countries. As a first step, the Society has recently conducted a questionnaire to determine the recognition of the specialty of Clinical Microbiology in Europe and through the UEMS is supporting the training needs of Specialists within the discipline by working towards the harmonisation of training curricula. This has followed the successful profiling and agreement of Specialist Training in Infectious Diseases through the UEMS Infectious Diseases Section. The Society is also strongly supporting and collaborating in the establishment of a European Board to accredit Continuing Medical Education in Infectious Diseases and Clinical Microbiology. Indeed, the recent ECCMID was the first European meeting to successfully test the system and gain European CME approval for the benefit of delegates.

The pilot scheme promoting affiliation to ESCMID of Specialist Societies in Clinical Microbiology and Infectious Diseases in Europe will be analysed and reviewed later this year. If considered successful, the scheme could be extended for the mutual benefit of Specialist Societies across Europe. ESCMID recognises the major strengths that lie within the National Societies and that these deserve support, and, where possible and appropriate, be shared with the broader professional and scientific community. Finally, the strategy of seeking co-operation among the societies organising major congresses in Europe is very much alive. At the last ECCMID I reported to the European Council and Assembly of Members on progress to date (see Minutes in this issue). The key issues have been identified and following the Milan meeting I have encouraged the development of some firm proposals involving ISC, FESCI and ISID which, upon finalisation, will be carefully considered by our Executive.

Thank you for your continued support in these exciting and challenging times.

Roger Finch
ESCMID President
Assembly of Members 2002

Minutes

THE ASSEMBLY OF MEMBERS IN THE YEAR 2002 WAS HELD DURING THE 12TH ECCMID.

1 WELCOME
Roger Finch opened the Assembly and welcomed the 62 attending members asking them to sign in at the entrance. He observed that the invitation to the Assembly had been correctly sent out as stated in the Statutes. The proposed agenda was accepted without objection.

2 PRESIDENT’S ADDRESS AND REPORT
For a summary of the Society’s activities in the previous year Roger Finch referred to his report, which appeared in the Final Programme of 12th ECCMID. He reiterated that the main goals of the Society are to promote science and education in the fields of Clinical Microbiology and Infectious Diseases and to support the professional affairs of its membership. In all these fields advancements have been made during the past year. To avoid redundancies with the other Officers’ reports only one achievement was mentioned at this point: The ongoing re-engineering of EUCAST under the leadership of Gunnar Kahlmeter looks most promising. In the new system the national breakpoint committees will have strict ownership; EARSS participation will be sought; and links with NCCLS will hopefully be established.

3 REVISION OF THE STATUTES
Carl Erik Nord further clarified the proposed revisions of the Statutes as published in ESCMID News 1-2002. A question from the floor by Martin Wood, UK, related to §4 and the reason why the elected country representatives in the European Council are not mentioned. According to Carl Erik Nord this omission is erroneous as it contradicts the Bylaws and should be corrected. The Assembly unanimously approved the proposed changes of the Statutes, including the mention of the elected country representatives in the European Council.

4 SECRETARY GENERAL’S REPORT
ESCMID has, according to current figures presented by Ragnar Norrby, 2413 regular members. The best-represented country is Germany with 191 members; about 84% of the membership is European.
In addition to the regular members ESCMID has currently 555 addresses of affiliated members on file. They are from the British Infection Society and the Swiss Society of Infectious Diseases who are participating in the pilot affiliation to ESCMID until the end of 2002. In general, these membership figures are considered a healthy foundation for ESCMID despite the fact that in some countries marketing efforts to recruit more members seem to be necessary.

5 ESCMID AWARDS
The ESCMID Award Committee with Carl Erik Nord, Sweden, as President and J.C. Desenclos, France, R. Hakenbeck, Germany and C. Vandebroucke, the Netherlands, as members selected the ESCMID Awardedees and ESCMID Research Fellows for the current year.

i) The ESCMID Award for Excellence in Clinical Microbiology and Infectious Diseases 2002 was given to Didier Raoult, Professor at the Marseille School of Medicine, France, in recognition of his outstanding scientific contributions in the field of emerging infections. This award (EUR 10,000) was sponsored by AstraZeneca.

ii) The ESCMID Young Investigator Awards for Research in Clinical Microbiology and Infectious Diseases 2002 were given to Heike Bantel, MD, postdoctoral researcher in the Department of Immunology and Cell Biology, University of Münster, Germany, in recognition of her outstanding scientific contributions in the field of the molecular basis of infective agent-induced apoptosis, and to Mark C. Enright, PhD, Royal Society University Research Fellow, Department of Biology and Biochemistry, University of Bath, UK, in recognition of his outstanding scientific contributions to the development of a novel molecular typing procedure and its application to bacterial genetics, virulence and epidemiology. These awards (EUR 11,500 each) were sponsored by Pharmacia.

iii) The ESCMID Research Fellowships 2002 were awarded to:
- Annarita Mazzariol, PhD, Department of Pathology, Microbiology Section, University of Verona, Verona, Italy
- Stéphane Mesnage, PhD, Laboratory for Molecular Research on Antibiotics, University of Paris, France
- Donald Morrison, PhD, Scottish MRSA Reference Laboratory, Microbiology Department, Stobhill Hospital, Glasgow, Scotland
- Eva Ruzić-Sabljic, MD, Institute of Microbiology and Immunology, University of Ljubljana, Medical Faculty, Ljubljana, Slovenia
- Didem Törümküney Akbulut, PhD, Department of Microbiology and Clinical Microbiology, Istanbul Faculty of Medicine, Istanbul, Turkey
These fellowships (EUR 4000 each) were sponsored by ESCMID.
The three awardees were honoured during the 12th ECCMID on separate occasions in conjunction with award lectures. The five fellows received their prizes during the Assembly. Carl Erik Nord and Roger Finch congratulated all recipients on behalf of the Society on their well-deserved awards.

6 FINANCIAL REPORT
Andreas Voss, Treasurer, presented the preliminary profit and loss account for the year 2001. The total expenses were DEM 1,126,285 with the Executive Office, CMI Editorial Office, ESCMID News, Website and Executive Committee meetings being the major cost factors. The total income amounted to DEM 1,653,183 with the 11th ECCMID 2001, membership fees and CMI subscriptions being
the most important sources of revenues. In 2001 ESCMID had thus a positive balance of DEM 526,898. By December 31, 2001 ESCMID’s total assets and liabilities were DEM 2,635,088 and DEM 753,068, respectively, corresponding to a proven capital of DEM 1,882,020. This was the last report in DEM. From 2002 on ESCMID’s account will be kept in EUR.

7 ACCEPTANCE OF THE ACCOUNT AND FORMAL APPROVAL (VOTE)
Roger Finch asked for a vote of approval of the financial report by hand. It was approved unanimously.

8 REPORT OF THE PROFESSIONAL AFFAIRS OFFICER, CLINICAL MICROBIOLOGY
Giuseppe Cornaglia, the Professional Affairs Officer for Clinical Microbiology, reported on his initiatives and projects in collaboration with other professional organisations.

i) ESCMID has a good and mutually supporting relationship with EARSS. ESCMID’s role is to provide scientific input.

ii) With the UEMS Section for Medical Biopathology, which includes the field of Clinical Microbiology, a good working relationship has been established. A joint task force was set up to create an accreditation board for CME in the field of Clinical Microbiology.

iii) A questionnaire concerning the recognition of and training in Clinical Microbiology across Europe has been created and sent to all specialists and elected country representatives of the ESCMID European Council. The objective is to review the current status and to make recommendations to the Biopathology Section of UEMS.

9 REPORT OF THE PROFESSIONAL AFFAIRS OFFICER, INFECTIOUS DISEASES
Helen Giamarellou, the Professional Affairs Officer for Infectious Diseases, was the ESCMID representative in the UEMS Section of Infectious Diseases. She confirmed that the Society supports efforts of achieving recognition of Infectious Diseases as a medical specialty in those European countries where this is not yet the case (Austria, Belgium, Finland, Germany, Luxembourg and Spain). ESCMID further actively supported UEMS in setting up a CME accreditation board. She concluded her report with the strong recommendation that training in the specialty of Infectious Diseases should only be possible after an adequate training period in internal medicine.

10 EDUCATION OFFICER’S REPORT
According to Claude Carbon, the major educational project in the reporting period was the preparation of the 1st ESCMID School, which is to take place from July 6–12, 2002 in Lausanne. The programme covers most of the relevant topics in Clinical Microbiology and Infectious Diseases and is thus of particular interest to young MD’s at the end of their specialty training. Furthermore, in 2001 the Society sponsored two postgraduate education courses providing EUR 10'000 each. It was requested to allocate at least EUR 8,000 for attendance grants to allow young participants with limited resources to attend the courses:

i) Management of Nosocomial Infections – Implications of Antibiotic Resistance, 30 March–1 April, 2002, in Antalya, Turkey, organised by ESGAP, ESGARS and ESGNI

ii) Training Course in Hospital Epidemiology, November 7–10, 2002, in Bruges, Belgium, organised by SHEA, CDC and ESGNI

Proposals by national societies, study groups or individual ESCMID members for postgraduate courses run under the auspices of ESCMID are encouraged. They should focus on basic topics of interest to CM and/or ID specialists and take place in 2002 or later.

11 SCIENTIFIC AFFAIRS OFFICER’S REPORT
Firstly, Regine Hakenbeck, the Scientific Affairs Officer, initiated discussion on the revised Guidelines for ESCMID Study Groups which is now available on ESCMID’s website. In 2001 establishment of a new study group dedicated to fungal infections under the leadership of David Denning, UK, was approved (EFISG – European Fungal Infection Study Group). Information about its objectives and structure is published on ESCMID’s website. A major initiative to which ESCMID has committed itself is the planned submission of an Expression of Interest, together with the Eijkman-Winkler Institute in Utrecht, for an EU Network of Excellence on Antibiotic Resistance under the 6th Framework Programme. The ESCMID membership and its Study Groups will be asked to participate at a later stage.

12 PROPOSAL FOR A SINGLE EUROPEAN CONGRESS ON CLINICAL MICROBIOLOGY AND INFECTIOUS DISEASES
In addressing the issue of European congress organisation in the field of Clinical Microbiology and Infectious Diseases Roger Finch first referred to his previous analysis published in ESCMID News 1-2001 and reiterated the conclusion made during the Assembly of Members in 2001: A process of convergence shall be established in promoting a concept of a single world-class annual European congress in the infection disciplines. In the meantime, several discussions with the organisers of other large congresses in Europe, i.e. with ISC, FESCI and ISID, have taken place to explore the possibility of a joint congress.

In view of the differing nature of the various organisations the issues to be solved are difficult and complex:

- liability to membership and statutes
- maintenance of the identity of ECCMID
- congress format (integrated or sequential)
- composition and responsibilities of the organising and programme committees
- existing PCO contracts
- protection of ESCMID’s financial interest related to the increasing portfolio of activities
- selection of partner organisation, schedule of recurrence

Roger Finch then alluded to the congress calendar shown below, mentioning that it will be up to future discussions with the respective organisations to find the optimal agreements for joint congresses in Europe. Progress on this issue will be reported in ESCMID News.

Discussion:
Hartmut Lode, Berlin, expressed his appreciation of the fair and neutral re-
port on a controversial and difficult issue. He reminded the audience that ESCMID and ECCMID have existed for almost 20 years and that there is no need for other similar European organisations. He encouraged ESCMID to further develop ECCMID, which is now the leading congress in Europe. Michel Glauser, Lausanne, asked about the exact intention of the Executive. Roger Finch answered that the situation is still being explored and that a resolution is being sought for announcement in the not too distant future. Laurent Gutmann, Paris, also encouraged the Executive to focus on the quality of ECCMID and on nothing else. The rest will follow automatically.

13 PUBLICATION COMMITTEE
CHAIRMAN'S REPORT
In his report Carl Erik Nord first referred to Clinical Microbiology and Infection (CMI). ESCMID's official Journal developed well in the past year under the editorship of Emilio Bouza. Six supplements published in 2001 have made it profitable year with the CMI account nearly in balance. The current Editor-in-Chief will step down at the end of 2003. A call for candidates will be published in CMI, the Lancet, ESCMID News and on the website in order to select a new Editor-in-Chief in February 2003 followed by a transition period from July – December. In the meantime the Society will set up a central editorial office in Paris, review its basic editorial policy and adopt an online manuscript submission and tracking system. This year three regular issues of ESCMID News in the new format will appear. The ESCMID homepage underwent a major revision with a new design and content. Carl Erik Nord closed his report with the call to use the Newslet-ter and the homepage in an interactive way, i.e. to make use of the information provided and at the same time to send us manuscripts and notes for publication and dissemination.

14 CMI EDITOR-IN-CHIEF'S REPORT
According to Emilio Bouza the number of manuscripts received is steadily increasing. In 2001 30% more papers were published than in 2000. He thus recommended that the Society consider increasing the number of pages in the near future.

Discussion:
Jos van der Meer, Nijmegen, asked about the impact factor of CMI. Emilio Bouza responded that the impact factor can only be calculated once the Journal has been indexed for two years. According to Carl Erik Nord the members will be informed in detail about impact factors in the summer issue of ESCMID News.

15 12TH ECCMID 2002
PRESIDENT’S REPORT
Gian Carlo Schito expressed his satisfaction that the Congress started well with some 4800 registered participants from 87 different countries. The scientific programme seems to be highly valued. He thanked the Executive and the delegates for their support.

16 REPORT OF THE ECCMID PROGRAMME DIRECTOR
The ECCMID Programme Director, Patrick Francioli, also thanked the participants for their compliments and mentioned the support from the Programme and Education Committee as well as from the centralised congress organisation with the Executive Office and AKM Congress Service providing continuity. He further acknowledged the support from 9 societies sponsoring joint symposia at this year's ECCMID. The scientific programme comprised 10 keynote or plenary lectures, 75 symposia (of which 19 were arranged by the industry), 21 oral and 15 meet-the-expert sessions as well as 1 educational workshop. Out of 1650 submitted free communications 1300 were selected for oral (128) or poster (1172) presentation. For the first time a 1-hour time slot was introduced in the early afternoon for concise symposia or workshops, which provided additional flexibility in creating a diversified programme.

17 ENDORSEMENT OF THE EXECUTIVE’S PERFORMANCE (VOTE)
Roger Finch asked for a vote by hand for the discharge of the Executive Committee. This was approved unanimously.

18 ANY OTHER BUSINESS
- Roger Finch informed the Assembly that the Executive is considering changing the approach of selecting congress venues for the 16th ECCMID 2006 and beyond. Whereas up to now the national societies have been called for bids, the Executive will, in the future, select the best venues in Europe on the basis of strategic criteria, e.g. congress facilities, easy access, hotel accommodation, prices and political/geographical location. This might mean that ECCMID will eventually move around Europe and be hosted in turn by a relatively limited number of cities.
- After giving a short preview of the 13th ECCMID 2003 in Glasgow Roger Finch handed over the 'challenge cup', a silver plate with the engraved ESCMID logo and list of all ECCMID venues since 1983 (Bologna), to the next Congress President, Ian M. Gould from Aberdeen, UK.

19 CLOSE OF THE MEETING
Roger Finch thanked the Assembly of Members for attending. He adjourned the meeting at 13.45 h.

Basel, August 6, 2002
Signed,

Roger Finch, President
Ragnar S. Norrby
Secretary General

Peter Schoch, Managing Director
Clinical Microbiology and Infection

Seeking a New Editor-in-Chief

The European Society of Clinical Microbiology and Infectious Diseases is seeking applicants for the position of Editor of the journal Clinical Microbiology and Infection. Clinical Microbiology and Infection is the monthly publication in English of the European Society of Clinical Microbiology and Infectious Diseases (ESCMID) and publishes peer-reviewed papers that present basic and clinical research relevant to diagnosis and therapy in the fields of microbiology, infectious diseases, immunology, epidemiology, infection control and prevention. The Journal has a worldwide website at http://www.blackwell-science.com/clm. The ESCMID Executive Committee is committed to selecting an Editor-in-Chief who will continue to build upon the Journal’s publications in the research fields of microbiology and infectious diseases. Candidates for the position would be expected to be a member of ESCMID if appointed, and are invited to send a letter of interest along with the candidate’s curriculum vitae, bibliography, prior experience and ideas for the Journal’s future to:

Peter Schoch, Managing Director
ESCMID Executive Office
P.O. Box 6
CH-4005 Basel
Switzerland

The letter and the documents should be sent to ESCMID no later than October 1, 2002. The Editor will be appointed by February 2003. After a transition period of 6 months, the new Editor will take office on January 1, 2004 for a maximum 5-year term.

For more information, contact Dr. Peter Schoch
phone +41-61-686 77 91
fax +41-61-686 77 98
e-mail Peter.Schoch@escmid.org.

Roger Finch
President, ESCMID

Carl Erik Nord
Chairman, ESCMID Publication Committee

Conchiglie by Roberto Rampinelli. Art exhibition in the Giorgio Cini Foundation, Venice, during the 3rd International Symposium on Nosocomial Infections Today, Nov 5–8, 2000. The exhibition and publication were dedicated to ESCMID and sponsored by Pharmacia.
ESCMID Awardees 2002

The ESCMID Awards for the year 2002 were presented during the 12th ECCMID 2002 in Milan.

**Award for Excellence in Clinical Microbiology and Infectious Diseases**

**DIDIER RAOULT, BORN 1952 IN DAKAR, SENEGAL**
MD, PhD, Professor at Marseille School of Medicine, France, former President of the Université de la Méditerranée in Marseille, and founder of the Rickettsia Research Unit, currently the largest laboratory in the world in the field of Rickettsial diseases, in recognition of his outstanding scientific contributions in the field of emerging infections.

**Research Interests:**
Didier Raoult's research focus is on Rickettsial diseases and intracellular bacteria. Decidedly multidisciplinary in his approach, he is engaged in both clinical and laboratory activities. Didier Raoult was involved in the definition of several new diseases and their causative agents, e.g. *Rickettsia africae* and African tick bite fever, *R. slovaca* and tick borne lymphadenopathy, *R. mongolotimonae* and its infection, Astrakhan fever and its causative rickettsia. He described the re-emergence of body louse transmitted diseases such as typhus and homeless endocarditis caused by *Bartonella quintana*, *R. massiliae*, *R. aeschlimani*, *Stenotrophomonas africane*, *Massilia timonae* and *Odyssela thessaloniki* were for the first time isolated and described by his laboratory. He was the first to grow *R. felis* and *Tropheryma whippelii* from patients with Whipple disease. For Q-fever endocarditis he developed a new treatment regimen based on doxycycline and hydroxychloroquine.

**HEIKE BANTEL, BORN 1968 IN HEIDENHEIM, GERMANY**
MD, Postdoctoral Researcher in the Department of Immunology and Cell Biology, University of Münster, Germany, in recognition of her outstanding scientific contributions in the field of infective agent-induced apoptosis and its molecular mechanisms.

**Research Interests:**
The main research topic of Heike Bantel is apoptosis induced by hepatitis C virus (HCV) and *Staphylococcus aureus* infections. She is currently investigating the role of caspase activation in these processes. She recently demonstrated that activation of these key enzymes of apoptosis correlates with the grade of HCV disease. Caspase activity may therefore represent a reliable marker for the early detection of liver damage, which may open up new diagnostic and therapeutic strategies in HCV infection. Furthermore, Heike Bantel was able to describe the signalling pathway of *S. aureus*-induced cytotoxicity. She found that bacterial alpha-toxin induces apoptosis in T-lymphocytes.

**MARK C. ENRIGHT, BORN 1966 IN PORTSMOUTH, ENGLAND**
PhD, Royal Society University Research Fellow, Department of Biology and Biochemistry, University of Bath, UK, in recognition of his outstanding scientific contributions to the development of a novel molecular typing procedure and its application to bacterial genetics, virulence and epidemiology.

**Research Interests:**
Mark C. Enright’s research has centred on DNA sequencing for the characterisation of Gram-positive pathogens, leading recently to the development of Multilocus Sequence Typing (MLST) which he has used to study the epidemiology and population biology of *Streptococcus pneumoniae*, *Streptococcus pyogenes* and *Staphylococcus aureus*. His current research focus is on the epidemiology, drug resistance and pathogenesis of *S. aureus* and his most recent work, an MLST study of methicillin-resistant *S. aureus* (MRSA), will give valuable insight into how MRSA clones evolve, provide a sensible nomenclature for these strains and a robust, portable method for their identification and characterisation.
ESCMID Research Fellowships 2002

The ESCMID Research Fellowships 2002 were presented at the Assembly of Members 2002.

<table>
<thead>
<tr>
<th>Name</th>
<th>Date of Birth</th>
<th>Place of Birth</th>
<th>Degree</th>
<th>Institution</th>
<th>Research Interests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Didem Törümküney Akbulut</td>
<td>1972</td>
<td>Kocaeli, Turkey</td>
<td>PhD</td>
<td>Department of Microbiology and Clinical Microbiology, Istanbul Faculty of Medicine, Istanbul, Turkey</td>
<td>Molecular typing of Salmonella typhimurium and Salmonella enteritidis, phage typing of Staphylococcus aureus and Salmonella strains, identification of E. coli O157:H7 strains with PCR, determination of virulence factors of enteric pathogens, characterisation of antibiotic resistance genes in Salmonella.</td>
</tr>
<tr>
<td>Annarita Mazzariol</td>
<td>1967</td>
<td>Treviso, Italy</td>
<td>PhD</td>
<td>Department of Pathology, Microbiology Section, University of Verona, Verona, Italy</td>
<td>Serine- and metallo-β-lactamases, outer membrane permeability and AcrAB efflux systems in Enterobacteriaceae, epidemiology and molecular mechanisms of macrolides and ketolides resistance in Streptococcus pyogenes.</td>
</tr>
<tr>
<td>Stéphane Mesnage</td>
<td>1972</td>
<td>Argenteuil, France</td>
<td>PhD</td>
<td>Laboratory for Molecular Research on Antibiotics, University of Paris, France</td>
<td>Analysis of cell surface organisation in Bacillus anthracis, flowering control by vernalization in Arabidopsis thaliana, peptidoglycan biosynthesis in Gram-positive cocci and resistance to beta-lactam antibiotics.</td>
</tr>
<tr>
<td>Donald Morrison</td>
<td>1961</td>
<td>Isle of Lewis, Scotland</td>
<td>PhD</td>
<td>Scottish MRSA Reference Laboratory, Microbiology Department, Stobhill Hospital, Glasgow, Scotland</td>
<td>The epidemiology, evolution, resistance and pathogenicity of MRSA, development and application of typing methods to understand the origin, transmission and globalisation of MRSA clones and the resistance genes they carry.</td>
</tr>
<tr>
<td>Eva Ružič-Sabljić</td>
<td>1957</td>
<td>Rijeka, Croatia</td>
<td>MD</td>
<td>Institute of Microbiology and Immunology, University of Ljubljana/Medical Faculty, Ljubljana, Slovenia</td>
<td>Active in the field of Lyme borreliosis: differences in clinical manifestation in relation to interspecies differences, assessment of genetic diversity of ospC gene within B. afzelii human Slovenian strains, prediction of risk of secondary and tertiary manifestations of Lyme borreliosis.</td>
</tr>
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Announcement of ESCMID Awards and Fellowships 2003

ESCMID Award for Excellence in Clinical Microbiology and Infectious Diseases 2003

The European Society of Clinical Microbiology and Infectious Diseases will present the ESCMID Award for Excellence in Clinical Microbiology and Infectious Diseases in the year 2003 to honour a senior scientist for his/her overall achievements in these fields.

**PURPOSE**
The purpose of this award is to recognise and reward an outstanding contribution to progress in clinical microbiology and/or infectious diseases.

**AWARD**
The award of EUR 10,000 will be presented by the president of ESCMID at the 13th ECCMID 2003 in Glasgow. The recipient will be honoured at the occasion of a 45-min lecture to be given by the awardee. The name of the recipient will be published in the Final Programme, ESCMID News, Clinical Microbiology and Infection (CMI) and on ESCMID’s website.

**ELIGIBILITY CRITERIA**
Nominees for the award must be senior scientists who are professionally active and prepared to give a plenary lecture in their field of research of 45 min during the 13th ECCMID. Members of the ESCMID Executive Committee or the ESCMID European Council are ineligible until 5 years after resignation.

**NOMINATION PROCEDURE**
All medical schools and institutions active in the fields of clinical microbiology and infectious diseases in Europe, ESCMID’s European Council, ESCMID members as well as ESCMID committees and study groups are asked to nominate candidates for the award. Each nomination should include:

1. A biographical sketch of the nominee (maximum two pages, plus an abstract of 150 words).
2. A summary and analysis of the nominee’s major contributions to research in the fields of clinical microbiology and/or infectious diseases.
3. A list of the major original publications in refereed journals.
4. The complete postal and e-mail address, phone and fax number, and a colour photograph of the nominee (on paper or electronically as tif, jpg or eps file).
5. In addition, two letters of support from individuals outside the nominating institution should be mailed directly or together with the nomination to the ESCMID Award Committee.

Seven copies of the nomination package must be received by 22 November 2002. The recipient of the award will be asked for a manuscript on the research field to which she/he mostly contributed for publication in CMI.

**SELECTION PROCEDURE**
The recipient will be determined by the ESCMID Award Committee. No correspondence beyond that necessary for the nomination will be accepted. Self-applications will not be considered.

**SPONSOR**
The ESCMID Award for Excellence in Clinical Microbiology and Infectious Diseases 2003 is sponsored by AstraZeneca.

Please send your nomination to:
ESCMID Award Committee
Hainbuchenstrasse 65
D-82024 Taufkirchen / Germany
Phone + 49 89 612 6162
Fax + 49 89 612 8176
Email birgit.menzemer@escmid.org
ESCMID Young Investigator Award for Research in Clinical Microbiology and Infectious Diseases 2003

The European Society of Clinical Microbiology and Infectious Diseases will sponsor in 2003 up to two ESCMID Young Investigator Awards for Research in Clinical Microbiology and Infectious Diseases to recognise outstanding research by younger colleagues in these fields.

PURPOSE
The purpose of these awards is to acknowledge excellence in research, and to stimulate further research of the highest scientific level.

AWARDS
The awards of EUR 11,500 each, which should be used to support further research, will be presented by the president of ESCMID at the 13th ECCMID in Glasgow on the occasion of a 20-min lecture to be given by the awardees on topics of their main field of research. In addition, the awardees are expected to write a review paper reflecting their field(s) of research for publication in Clinical Microbiology and Infection (CMI). The names of the recipients will be published in the Final Programme, ESCMID News, CMI and on ESCMID’s website.

ELIGIBILITY CRITERIA
Nominees for the award should be born on 1 January 1963 or after. Appropriate research may be based on laboratory investigations, clinical studies, experimental animal studies, or a combination thereof. Nominees must have been employed in a European laboratory or hospital or have a future appointment in one. Members of the ESCMID Executive Committee or the ESCMID European Council are ineligible.

NOMINATION PROCEDURE
Nominations must be received no later than 22 November 2002. They must be submitted in writing together with proof of the nominee’s age, and include a CV, a complete list of publications as well as up to five original papers published in 2000, 2001 or 2002 or accepted for publication. The nominations should describe the candidate, his/her career, his/her research interests and personal contributions to the various research projects he or she has been participating in. At least two additional supporting letters should be presented by individuals outside the nominating institution. Self-applications will not be considered. The complete postal and e-mail address, phone and fax number of the nominee must be included. Seven copies of all materials plus one colour photograph (on paper or electronically as tif, jpg or eps files) must be sent to the ESCMID Award Committee, who will select the recipients. No correspondence beyond that necessary for the nomination will be accepted.

ESCMID Research Fellowships 2003

The European Society of Clinical Microbiology and Infectious Diseases will sponsor the ESCMID Research Fellowships to support further research of young Society members in the fields of clinical microbiology and/or infectious diseases.

PURPOSE
The purpose of these awards is to encourage young investigators and to promote the development of research in the fields of clinical microbiology and/or infectious diseases.

FELLOWSHIPS
Up to five fellowships, each consisting of a cash award of EUR 4,000 will be presented by the president of ESCMID at the Assembly of Members taking place during the 13th ECCMID 2003 in Glasgow. The names of the recipients will be published in the Final Programme, Clinical Microbiology and Infection (CMI), ESCMID News and on ESCMID’s website.

ELIGIBILITY CRITERIA
Awards will be made on the basis of a detailed research plan to be part of the application. Eligible individuals should not be more than five years beyond their training as post-doctoral students or fellows. Appropriate research may be based on laboratory investigations, clinical studies, experimental animal studies, or a combination thereof. Research must be carried out in a European research laboratory or department. If there are collaborators, applicants must make clear their personal role in planning, undertaking and supporting the planned project. Members of the ESCMID Executive Committee or European Council are ineligible.

APPLICATION PROCEDURE
The deadline for submission is 22 November 2002. Applications must be submitted in writing together with a CV, a list of publications, and two supporting letters, including a specific description of the applicant’s present research and a detailed research plan. Applicants must include their complete postal and e-mail address, telephone and fax number and send four copies of all materials plus one colour photograph (on paper or electronically as tif, jpg or eps file) to the ESCMID Award Committee, who will select the fellows. No correspondence beyond that necessary for the application will be accepted.

Please send your application to:
ESCMID Award Committee
Hainbuchenstrasse 65
D-82024 Taufkirchen / Germany
Phone + 49 89 612 6162
Fax + 49 89 612 8176
Email birgit.menzemer@escmid.org
The European Society of Clinical Microbiology and Infectious Diseases (ESCMID) is pleased to announce an unrestricted research grant of USD 50,000 by AstraZeneca for research in the field of antibiotic resistance. This second consecutive research grant is based on the collaboration of ESCMID and AstraZeneca to overcome antibiotic resistance as announced under the logo Turning the Tide of Resistance during the 12th ECCMID 2002 in Milan. The objective of this research grant is to contribute to overcoming antibiotic resistance. Appropriate projects may be laboratory or clinically based, or a combination thereof. However, proposals with clear clinical relevance will be preferred.

APPLICATION
Applications are to be submitted in writing. They must contain a detailed research plan, a description of the applicant’s present research, his or her CV, a list of publications plus two letters of recommendation. Applicants must include their complete postal and e-mail address, telephone and fax number and send five copies of all materials plus one colour photograph to the ESCMID Executive Office. The selection of the recipient will be made by an ad hoc Award Committee of ESCMID Officers. Members of the ESCMID Executive Committee or the ESCMID European Council are ineligible. No correspondence beyond that necessary for the application will be accepted.

The deadline for submission is December 31, 2002. Applicants will be notified of the decision by February 28, 2003.

Please send your application to:
ESCMID Executive Office
P.O. Box 6, Clarastrasse 57
CH-4005 Basel, Switzerland
Email peter.schoch@escmid.org

Breaking Down the Wall of Resistance

Recipients of the AstraZeneca/ESCMID Research Grant 2002

The grant was announced under the logo Breaking Down the Wall of Resistance during 11th ECCMID 2001 in Istanbul. The recipients selected by the ESCMID Award Committee are:

Patrice Nordmann,
Hôpital Bicêtre,
Université Paris XI,
Paris, France

Jean-Marie Pagès,
INSERM,
Université de la Méditerranée,
Marseille, France

They were selected for their joint project on:
An analysis of in vitro and in vivo activity of efflux pump inhibitors in antibiotic-resistant Enterobacter aerogenes

We congratulate both recipients on their success.

ESCMID Award Committee
We are pleased to announce that ESCMID has launched a completely revised website with a much greater content and more modern layout that facilitates fast and easy navigation within the pages. The internet address has not changed (http://www.escmid.org).

Among the new features are webcasts from the 12th ECCMID 2002 in Milan. Video streams of three keynote lectures and four symposia supported by Bayer, GlaxoSmithKline and Merck Sharp & Dohme, which include synchronised PowerPoint presentations, allow you to ‘attend’ the ECCMID meeting online even if you were not able to be there in person. Our Study Group pages have been significantly expanded with much scientific as well as administrative information. Additionally, our newsboard pages are a source of current information, for example, extended abstracts and PowerPoint presentations from the Bioterrorism Symposium in Stockholm are available there.

Another new item is our online opinion poll page where you can fill out the currently running poll or view the results of our last poll. The outcome of our opinion poll on ECCMID Milan is now available on the website. Currently under preparation are webdebates and e-learning. Further convenient features are the online directory of ESCMID members as well as pages for online membership application and renewal.

It is our goal to make the ESCMID homepage an information centre for all specialists in clinical microbiology and infectious diseases. To this end we encourage your support and feedback. We hope you enjoy the new website and will find it useful. Comments and suggestions for improvement are welcome. Please direct them to info@escmid.org.

Peter Schoch
ESCMID Managing Director
EUCAST – European Committee on Antimicrobial Susceptibility Testing

EUCAST is a standing committee of ESCMID which was set up in 1996 with the aim of achieving consensus in the methods of susceptibility testing and the interpretation of their results in Europe. There were several sub-committees within EUCAST covering a range of topics; Automation, Breakpoints, Dilution methods, Fungi, Intracellular and cell-associated pathogens, Molecular methods, Mycobacteria, Quality assurance and Terminology. Ian Phillips initially was the Chairman and in 2001, on his resignation, Gunnar Kahlmeter took over. Meetings have been held at the various ECCMIDs since the inception of EUCAST.

In 2001 ESCMID requested an evaluation of the status and future role of EUCAST. The new chairman, Gunnar Kahlmeter, and the scientific secretary, Derek Brown, have undertaken this task. They presented their findings to ESCMID Council in spring 2002. This report summarises briefly Dr Kahlmeter and Dr Brown’s findings and the proposals put to and accepted by ESCMID for the future of EUCAST. A particularly important facet of this work was to discuss the future of breakpoint setting within a European context with the various European national breakpoint committees. The following countries have such committees: France (CA-SFM), Germany (DIN), The Netherlands (CRG), Norway (NWGA), Spain (MENSURA), Sweden (SRGA) and the UK (BSAC Working Party). Views were obtained from all of these groups and all were party to the final proposal. Overall the need for EUCAST was confirmed and in reply to the frequently stated comment ‘why not just use NCCLS guidelines?’ Dr Kahlmeter says, as did Prof. Phillips previously, that NCCLS is not a perfect system and that it is important that Europe does not relinquish control over the academic process involved in the setting of breakpoints. The six European national committees have a great deal of commitment and expertise and have a long tradition in which the role of industry is less pronounced than in the NCCLS and the role of clinical microbiologists and infectious disease specialists is more pronounced. The national committees are unlikely to give up their work and hand it over to the NCCLS. Until recently Prof. Phillips represented EUCAST on the NCCLS Subcommittee on Antimicrobial Susceptibility Testing, and he highlighted (EUCAST Newsletter, February 2002) some of the problems with the setting of breakpoints in his most recent report. For example, an area of disagreement between many of the European systems and NCCLS has been the breakpoints for β-lactams against organisms producing ESBLs. Previously NCCLS had a ‘blanket’ breakpoint for all β-lactams but at the meeting last year it was decided to re-evaluate this. EUCAST can have an influence on NCCLS decisions and it is important that this continues.

Dr Kahlmeter has pointed out that a wide range of techniques is used in Europe, especially in those countries without national breakpoint committees. This makes comparisons across national boundaries difficult. He also emphasised that the growing incidence of isolates with acquired resistance to antimicrobials makes it essential that this is detected. A distinction is made between bacteria that are regarded as resistant from a microbiological or epidemiological point of view and those that are resistant from a clinical point of view. These differences have led to a lack of unity between the various breakpoint bodies, since the distinction is inexact and may be influenced by many factors, including local dosing customs, availability of various forms of the drug, and affordability. Prof. Phillips quoted an example from the last NCCLS meeting he attended where he queried the differing breakpoints listed for penicillin and amoxycillin. Eventually it emerged that in the US there is no parenteral preparation of amoxycillin, thus the penicillin breakpoints are appropriate for meningitis and the amoxycillin breakpoints are for non-meningitis conditions. There has been some criticism of EUCAST and some have queried its role. It became evident that the major national breakpoint committees have felt a lack of ownership and lack of influence over EUCAST. As a consequence, they have been reluctant to recognise the decisions and recommendations made by EUCAST. This needs to be addressed by involving the national committees more. Since most of the expertise is contained within the national committees, it is essential that EUCAST be built as an umbrella organisation for the national committees. It is thus proposed that a representative from each of these committees should sit on a Steering Committee of EUCAST. The Steering Committee will be the decision-making body of EUCAST. Adherence to their recommendations by various countries and bodies will remain a matter of choice.

Some have queried the numbers of sub-committees suggesting that nine was excessive. These sub-committees have now completed or are very close to completing their original tasks. Most have either already reported their findings in CMI (Terminology, Breakpoints and Dilution Methods) in June 2000 or have submitted their reports which are awaiting publication (Intracellular and Cell Associated Pathogens, Mycobacterium tuberculosis), or the reports are in the final stages of preparation (Yeasts, Molecular Methods and Quality Assurance). Once these reports are finalised it is not intended to continue with the system of sub-committees, with the possible exception of one on methodology. In addition the current sub-committee on Fungal Methods, which has recently reported on yeasts, will be asked to continue. It will, however, be appropriate for the reports to be updated at some time in the future. There were comments that the role of industry; pharmaceutical companies, media and disc manufacturers and makers of automation equipment was not clear. In the future EUCAST they will have two representatives each. They will not be represented on the Steering Committee but will be able to ask to have a ‘case’ addressed by the Steering Committee and will then have the possibility of discussing the case with the Committee. The ‘case’ may be a breakpoint for a new or an old antibiotic or a technical aspect of...
ESCMID News 2·2002

Funding has been a problem in the past but ESCMID has agreed that funding for the Steering Committee will be made available to hold at least two 2-day meetings every year and for the chairman to liaise with the national breakpoint committees and other groups, such as EARSS, NCCLS, EMEA and veterinary medicine groups. Funding will not be available for EUCAST members to attend EUCAST meetings at ECCMID. EUCAST will not accept any money directly from industry and will apply, jointly with various members of national breakpoint committees to the EU for grants.

**KEY FEATURES OF A PLAN FOR THE FUTURE**

- EUCAST will endeavour to define microbiological / epidemiological MIC-breakpoints for the measurement of resistance and for the comparison of resistance between countries via EARSS and other resistance surveillance programs.
- The microbiological/epidemiological breakpoints will also facilitate harmonisation of national clinical/pharmacological breakpoints.
- The current clinical/pharmacological MIC-breakpoints of the various breakpoint committees will be compared. If there is close agreement, EUCAST can designate a ‘European breakpoint’. Where there are discrepancies, these will be discussed and investigated with the aim of eventual harmonisation.
- EUCAST will invite national reference laboratories to collaborate in the setting up of a collection of well-defined ‘susceptible’ and ‘resistant’ bacterial and fungal isolates. This will be described on the internet and could be made available to local laboratories, national breakpoint committees and to a pan-European QA programme currently in the planning stage.

The conclusions were that EUCAST has a valuable role to play in co-ordinating European activities in this field and providing a forum for discussion. By paying attention to the various criticisms and suggestions for improvement, it is hoped that EUCAST will be able to draw the various groups together and encourage harmonisation.

Pamela Hunter

Medical Writer

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**EUCAST In Brief**

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<th>ESCMID</th>
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<td><strong>Contacts</strong></td>
<td>Chairman: Gunnar Kahlmeter (<a href="mailto:gunnar.kahlmeter@ltkronoberg.se">gunnar.kahlmeter@ltkronoberg.se</a>) Scientific Secretary: Derek Brown (<a href="mailto:dfjb2@cam.ac.uk">dfjb2@cam.ac.uk</a>)</td>
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The ECCMID Milan was the 12th congress organised by ESCMID since 1983 and the third since the congress became annual. As in previous years the intent of the organisers was to provide a broad overview of the recent developments in the infection disciplines, i.e. to provide a stage for the presentations of the latest findings in prevention, diagnosis, new laboratory techniques, pathogens, pathogenesis, host defence mechanisms, new treatments as well as public health, epidemiology and infection control. In summary and in compliance with ESCMID’s mission, the focus was thus once more on the management of infection in man both in the laboratory and at the bedside.

12th ECCMID attracted 4798 registered participants from 87 different countries. The scientific programme developed by the ECCMID Programme Committee under the leadership of Patrick Francioli, Lausanne, comprised 10 keynote or plenary lectures, 75 symposia (19 of which were arranged by the industry), 21 oral and 15 meet-the-expert sessions as well as one educational workshop. Out of 1650 submitted free communications 1300 were accepted for oral (128) or poster (1172) presentation. A one-hour time slot was introduced in the early afternoon for concise symposia or workshops, which provided additional flexibility in creating a diversified programme.

For the first time an opinion poll among the participants was conducted after the congress through the internet. The detailed results are available on ESCMID’s homepage (www.escmid.org). Of particular interest to the Organising Committee were the answers to the question what participants liked / disliked most. Here is a short summary:

The most frequently mentioned positive comment was a general approval of the quality and breadth of the scientific programme. Many participants praised the audio-visual support to the speakers as the best they have ever experienced and were most satisfied with the general organisation of the congress.

The number one complaint was the choice of an exhibition centre for ECCMID. Originally the choice of Fiera Milano as a congress venue was based on the promise that new congress facilities would be available by 2002. Since this failed to happen, temporary lecture halls had to be constructed which were, unfortunately, not sound proof, resulting in disturbing noise from neighbouring areas. ESCMID will take all necessary measures to ensure that this will not happen again.

Other critical comments that were made and that are taken seriously by the Executive were the wish for: more diagnostic and basic microbiology, an upgrading of the poster sessions, and a lowering of registration fees. Some corrective measures have already been initiated for the 13th ECCMID 2003 in Glasgow; others will follow for the subsequent congresses.

The ESCMID Executive considers the success of the 12th ECCMID a mandate to further develop its annual congress and thanks Gian Carlo Schito, President of 12th ECCMID, and his team for their support.

Peter Schoch
ESCMID Managing Director

Fashion show at the Opening Ceremony of the 12th ECCMID in Milan: Final appearance on stage of the 14 models
12th ECCMID 2002 Milan

A full house for the opening ceremony

“The Internet Corner allowing electronic poster viewing

“Audiovisual Workshop” for last-minute changes to PowerPoint presentations

Fine Italian cuisine at the reception following the Opening Ceremony

After-hours at the Commercial Exhibition Hall
Photo Gallery

Poster session

A keynote lecture in the main auditorium

Presidential dinner

Check-in at the registration area

Main entrance to the conference area at Fiero Milano
Dear Colleagues

It is with great pleasure that we invite you to Scotland for the 13th European Congress of Clinical Microbiology and Infectious Diseases (ECCMID). The ECCMID has rightly secured its place as the premier scientific congress in its field and we are confident that Glasgow will maintain this scientific excellence while giving you the opportunity to sample the renowned Scottish hospitality, marvellous scenery and a European city of culture.

The scientific and organising committees have put together a truly exciting and innovative programme which reflects the latest advances in basic sciences, clinical microbiology, diagnostics, infectious diseases, antimicrobial chemotherapy, infection control and epidemiology. In addition, we are planning several innovations in the way data is presented at ECCMID including poster walks, a European network corner, educational updates and literature reviews.

On the cultural side, Glasgow has famously developed from a major industrial city and sea-port of the British Empire into a modern European city of cultural significance and a major shopping hub (second only to London). Yet it has retained most of its impressive Victorian architecture and has many fascinating historical sites as well as numerous art galleries and museums. While Scottish weather is not always ideal, May is the driest month and spring will be in the air.

We are confident that ECCMID in Glasgow will be scientifically, culturally and socially rewarding and that you will return home with new ideas, new friendships, rekindled old friendships and a determination to return to Scotland in the future to further experience its renowned hospitality.

We are looking forward to welcoming you in Scotland.

Dr. I. Gould
President 13th ECCMID

Prof. R. G. Finch
President of ESCMID
Review of the 1st ESCMID School 2002 in Lausanne

The first ESCMID School was held on July 6–12, 2002 in Lausanne, Switzerland. It was hosted by the Lausanne Medical School. 27 fellows or specialists attended from the following 13 countries: Germany (2), Greece (4), Israel (1), Italy (3), Japan (2), The Netherlands (2), Portugal (1), Romania (1), Sweden (2), Switzerland (3), Turkey (2), UK (3), Ukraine (1). The School started on Saturday, July 6 at 5 pm, with 2 lectures. From Sunday the 7th to Friday the 12th, the programme featured plenary sessions with lectures in the morning, and group discussions in the afternoon. Well-known European experts gave morning lectures. Four to six illustrative key aspects were addressed within each of the following topics:

- antimicrobial chemotherapy and immunization
- microorganisms and pathogenesis
- major clinical syndromes: diagnostic and management strategies
- immunocompromised host
- epidemiology and public health

For afternoon sessions the attendees were divided into 4 groups. Three groups discussed cases with facilitators (members of the ESCMID Education Committee) while the remaining group prepared the presentation of cases that were selected by the organizers from participant submissions. Those presentations took place during plenary sessions from 5 to 7 pm.

On Thursday evening, all participants and members of the faculty enjoyed a dinner cruise on Lake Geneva. As the ship’s engine failed in the middle of the lake, everyone had enough time to enjoy the beautiful sunset and magnificent mountain view!

The atmosphere of the School was very amiable. The overall evaluation of the course by the participants was 9.25 on a scale of 1–10.

We would like to warmly thank the speakers who delivered wonderful talks, the members of the Education Committee who served as facilitators and all the participants for their active contribution.

This first experience was very positive and rewarding. Hence, the Education Committee is currently planning a second ESCMID School that will be held in Utrecht (NL), in Summer 2003 (see below).

Claude Carbon
ESCMID
Coordinator of the ESCMID School

Giorgio Zanetti
Education Officer
ESCMID

2nd ESCMID School of Clinical Microbiology and Infectious Diseases

Utrecht, the Netherlands, June 28–July 4, 2003

A one-week course dedicated to postgraduate and continuous medical education. The programme covers most of the relevant topics in clinical microbiology and infectious diseases, thus being of particular interest to young MD’s at the end of their specialty training. By providing short reviews and well-selected case studies, the ESCMID School helps the students to prepare for their examination. For details see the forthcoming ESCMID News in December 2002 or the ESCMID homepage at www.escmid.org later this year.

Organised by the ESCMID Education Committee

Under the auspices of the University Hospital Utrecht, Department of Medicine
Increasing levels of bacterial antibiotic resistance have renewed interest in obtaining relevant antibiotic consumption data, especially from hospitals. Although a standard methodology for calculating drug consumption has been developed during the past 20 years by the World Health Organization (WHO) through its Collaborating Centre for Drug Statistics Methodology (Oslo, Norway), this methodology is still poorly understood by microbiologists, infectious disease specialists, and often pharmacists. As a consequence, several research groups have developed their own methods and own measurement units to calculate antibiotic consumption, which has created confusion. Because very few data on antibiotic consumption in hospitals are published in the literature and these data are reported using various measurement units, it is almost impossible for a hospital to benchmark its consumption with other hospitals that are similar in size, affiliation and patient case-mix.

ABC Calc is a simple computer tool to measure antibiotic consumption in hospitals and hospital wards. It transforms aggregated data provided by hospital pharmacies (generally as a number of packages or vials) into meaningful antibiotic utilization rates. It was developed for the ESCMID Study Group on Antibiotic Policies (ESGAP) at the Department of Microbiological Research and Development, Statens Serum Institut (Copenhagen, Denmark), as part of the Danish Integrated Antimicrobial Resistance Monitoring and Research Programme (DANMAP) and is available as a Microsoft Excel® file in the ESCMID/ESGAP homepage (www.escmid.org >Study Groups >ESGAP). As recommended by WHO, ABC Calc reports hospital antibiotic consumption as a number of Defined Daily Doses (DDD) per 100 bed-days. For a specific drug, the DDD corresponds to the assumed average daily dose for its main indication in adults. DDDs are assigned by the WHO Collaborating Centre for Drug Statistics Methodology (Oslo, Norway) and updated once a year. ABC Calc uses the latest update, i.e. the 2002 version of the “ATC (Anatomical Therapeutic Chemical) Index with DDDs”. Although DDDs might not reflect daily doses used in practice in a specific setting, they should NOT be modified, in order to allow comparisons among hospitals or hospital wards.

At present, ABC Calc is unable to deal with several antibiotic combinations, mainly because DDDs have not been defined for these combinations. Before a solution is found to this problem, we nevertheless encourage users to record information on special implemented antibiotic combinations to help identify the ones that are used in hospitals. Another limitation is that ABC Calc presently only deals with “Antibacterials for systemic use” also known as group J01 of the ATC classification system. This means that it cannot take into account antibiotics given orally for decontamination of the digestive tract (this includes oral vancomycin), as intestinal antiinfectives (ATC group A07A), or nitroimidazole derivatives given against protozoal diseases (ATC group P01AB).

Despite its present limitations, we hope that ABC Calc will promote the collection of antibiotic consumption data from hospitals in Europe and worldwide, and increase awareness of antibiotic misuse in hospitals.

Dominique L. Monnet
Clinical Microbiology and Infection

Indexing, Impact Factors and the Inevitable

The importance of an Impact Factor cannot be denied but it should be understood in context. Originally intended to guide researchers and other professionals in locating the literature relevant to their particular needs, the Impact Factor has come to be an imperfect tool used in rating applicants for research funds and employment positions. A simple check of the applicants publication record – i.e. noting the Impact Factor of the journals in which he or she publishes – has supplanted the more time-consuming assessment of the actual research, which would be a more reliable and more fair assessment of ability and potential. Similarly, the Impact Factor is not always an accurate measure of a journal’s impact on the scientific community. It has come to be considered an official rating, however, and it is a fairly reliable reflection of current trends in research and public opinion. Independent of its validity, the desirability of an Impact Factor cannot be disputed; nor can the desire to publish in a journal with a high Impact Factor be belittled.

THE CRITERIA
Not all publications are covered by the Institute for Scientific Information, and criteria for selection exist. These criteria include a journal’s ability to meet the declared schedule and frequency of publication, the existence of a peer review system, and the journal’s adherence to international standards concerning format, the composition of the editorial board, and the reputation of the Publisher as well as the Society when that affiliation exists.

The selection of journals to be included in the ISI database is independent of the journals’ inclusion in PubMed/IndexMedicus. A publication may be included in one and not the other. However, although inclusion in PubMed/IndexMedicus increases visibility and thus the potential for citations, the National Library of Science does not generate Impact Factors.

THE FORMULA
As may be expected, much of the scientific literature cited is published in a subset of the total number of journals in existence. For example, in a given year, 900 (21%) of the 4 400 journals indexed in the Science Citation Index received 83% of the 8 000 000 citations processed for the Journal Citation Record. However, 86% of the 435 000 articles that were included in the Journal Citation Record for the same year were distributed among 2 000 journals (46%). In other words, the articles that reference the ‘most citable’ papers (not necessarily to be equated with the best papers) cannot all be published in the same journals that published the cited papers.

The actual calculation of an Impact Factor is done by employees of the Institute for Scientific Information. The process involves counting the citations in the reference lists of each journal covered (citing journal) to determine a total for each destination journal (cited journal). The articles in the cited journals are, at the same time, analysed to decide which are sufficiently substantial to warrant being considered source items (citable articles).

THE HISTORY
Impact Factors were conceived by, and are calculated by, the Institute for Scientific Information (ISI), a private enterprise in the United States established in the 1960s. Included among its services are various editions of Current Contents and the Science Citation Index, in which Clinical Microbiology and Infection (CMI) is included. Unlike PubMed/IndexMedicus, a function of the National Library of Medicine (NLM), whose credibility is linked to the US National Institutes of Health (NIH), the credibility of the Impact Factor and the Institute for Scientific Information is linked to that of its founder and its current executive director, and its role within the realm of scientific publication is commercially based.
The first Impact Factor for CMI should be announced in the 2002 edition of the Journal Citation Reports (JCR) which will appear in the summer of 2003. It will be calculated according to the following formula:

\[
\text{CMI Impact Factor} = \frac{\text{Citations received in 2002 to articles published in CMI in 2000-2001}}{\text{Number of source items published in CMI in 2000-2001}}
\]

THE IMPACT

The validity of Impact Factors has been repeatedly questioned. Nonetheless, this abstract figure – generated by a single commercial enterprise but accepted worldwide – has become a critical factor in decision-making about scientific and academic careers. Independent of its reliability as an indicator of an author’s merit, the Impact Factor of the journals in which an individual publishes is consistently taken into consideration when making decisions about promotions and funding. Selection committees welcome objective data such as an Impact Factor with which they can justify decisions, rather than being forced to enter into time-consuming analysis of actual scientific output and subjective judgment of a candidate’s potential. Critics of the current system have maintained that its merits will be reconsidered only in conjunction with the willingness of academic and research institutions, as well as funding agencies, to adopt a means of assessing applicants more sophisticated than checking their publication record. It has been suggested that a more equitable assessment would result from a greater reliance upon citation indices. Unlike the ISI system of calculating an Impact Factor, a citation index ranks individual papers rather than the journals in which they appear. In such a system, citations to a particular paper are counted without regard for the publishing journal, and authors receive direct credit for citations to the paper itself rather than indirect credit for the journal, which accepted the paper for publication.

THE POLITICS

Also questionable is the practice of ‘cultivating’ or ‘nourishing’ an Impact Factor. The types of papers published in a journal significantly influence its rating. For example, it is commonly accepted that review articles provide a more concentrated source of information and are more frequently cited than original articles concerning a single aspect of the same subject. Space limitations compound the situation, requiring authors of original articles to include frequent references to reviews in order to adhere to imposed guidelines concerning the number of references acceptable. Journals that publish a large number of reviews will thus benefit in terms of generating an Impact Factor superior to that possible for journals that publish primarily original articles. Finally, the degree of specialization and the scope of a journal influence the Impact Factor. It should also be noted that a certain Impact Factor in one specialty area might be considered insignificant, while the same rating would be considered high in another. Similarly, journal editors are in a position to influence the Impact Factor by favouring topics of current high interest, sometimes at the expense of quality. Editorialists that have been selected or commissioned to reflect current trends will necessarily lead to more frequent citations. A frequently cited article may be definitive or authoritative, or may be simply confirmatory. Either way, the frequency of citation, although not necessarily a measure of novelty or merit, certainly relates to the popularity of the subject. The incentive to nurture an Impact Factor is widespread, given the commercial implications; a healthy Impact Factor will generate submissions and increase circulation, which in turn attracts revenue from advertising. It has been proposed to create a more equitable situation by eliminating review articles from the process of calculating Impact Factors. The Institute for Scientific Information, however, is itself a commercial enterprise and would not benefit from such amendment to the current system.

THE FUTURE

The movement toward electronic periodicals and the ease with which on-line text can be accessed will very likely influence the current system of indexing and archiving and may affect the importance of the impact factor as a measure of success. The availability of electronic versions of the published literature, and a growing facility on the part of the consumer of scientific literature, may lead to a situation where the Impact Factor becomes less important than accessibility. At this point, the frequency of citation will be simply another factor among several, e.g. frequency of viewing the abstract or frequency of downloading the article; and a more adequate system for assessing both authors and the literature they produce will evolve accordingly. It could be that technological evolution may be the necessary impetus to change the system. With the advent of PubMed as the successor of the traditional Medline/Index Medicus, the dissemination of scientific literature, current and otherwise, has become even more widespread. At the same time, controversial programmes continue to acquire more titles and to display full-text electronic versions free of charge. Although the attempt to ‘boycott’ journals, which do not provide free public access, seems unlikely in the near future, at least in the dimensions proposed, it certainly indicates a trend, and the archiving of scientific literature will eventually change accordingly. At some point authors, editors and publishers will all be required to re-think their definition of a scientific journal, and it is inevitable that the traditional systems of ranking periodicals must evolve accordingly. Reassessment of long-established institutions is always slow in coming, but widespread public access to scientific literature may prove to be the beginning of the decline in impact of the Impact Factor. In the meantime, authors continue to be pressured to publish in high impact journals, and a journal’s reputation continues to be linked to its assigned Impact Factor. None of us can afford to disregard the system in place, and we all – those of us who have been involved in establishing the journal alongside all of our authors – look forward to the long anticipated ‘unveiling’ of CMI’s Impact Factor.

Judith Crane
CMI Managing Editor

RESOURCES

- The impact of the impact factor, Frank Cannon, EMBO Reports, vol. 1, no. 4, 2000
- The Impact Factor, Stuart Taylor, Inhouse publication, Blackwell Publishing
Bioterrorism – Are we Prepared?

On June 10th and 11th in Stockholm a number of experts in the field met to discuss bioterrorism, the threat it posed to Europe and to consider what, if anything, should be done. The conference was organised jointly by ESCMID, the Karolinska Institute and the Swedish Institute for Infectious Disease Control. Extended abstracts from all the speakers and their PowerPoint presentations are available at the Society’s Website (www.escmid.org, by clicking on the running title). This report gives an account of some of the highlights of the meeting and points raised during discussions.

Professor Ragnar Norrby, in his introductory remarks, said that the anthrax attacks in America last autumn had taken the whole world by surprise and led experts in infectious disease to consider the position in their own country. How prepared were they for a similar attack? What are the most likely threats? How would the public health systems cope? Would a terrorist attack be recognised rapidly enough to take protective measures? The organising committee thought that a European consensus was needed and this conference thus was planned to bring together experts in the field and to provide a forum for discussion on this most important and topical subject.

Most of the discussions centred around the agents regarded by many as those most likely to be used as a bioterrorism weapon by virtue of their infectivity, the high risk of extensive morbidity and mortality, the known ability to weaponise them and the risk of causing public panic and thus social disruption. These are the agents described in a paper published in the Lancet in 2000 by the Centers for Disease Control (CDC) in Atlanta, USA as ‘Category A, high-priority critical biological agents’ (see Box 1). Some reference was made to some organisms included in the lower-risk categories A, B and C (CDC, 1998) but also to dangerous pathogens of categories A, B and C (CDC, 1998) but also to infectious agents of lower risk (see Box 2) and to infectious agents of lower risk groups (Professor Gintsburg). The message from several speakers was to ‘expect the unexpected’!

The Pathogens

SMALLPOX
Smallpox and plague are probably the two infections most feared by the general population and thus highly likely to cause widespread panic. Smallpox fulfils many of the criteria for an ideal agent (see Box 2) and is highly transmissible from person-to-person. It is also stable in aerosol form. There is significant morbidity and the death rate can be up to 30%. Since it was announced by the WHO in 1980 that it had been finally eradicated throughout the world, vaccination ceased. Those vaccinated prior to this date are highly unlikely to have any immunity remaining. Professor Geddes described the last case of smallpox in the UK, a woman who contracted the disease in medical school and who died in 1978. She had been vaccinated several years earlier.

Some countries have stocks of smallpox vaccine, but these were prepared prior to 1980 and there was no general consensus as to how effective they would be. After the anthrax attacks...
there has been a major effort in several countries to prepare new smallpox vaccines [2]. The old vaccines were prepared from vaccinia (a live animalpox virus) in calf skin but tissue culture is now being used. Dr Brooks said that individual variation in response to smallpox vaccination is great and that during the final stages of the WHO eradication programme people were revaccinated every three years. Those known to be at high risk of exposure to the disease were vaccinated every year. Emphasis was made of the importance of giving the vaccine correctly. Dermal cells mount a strong response to vaccinia and the vaccine has therefore to be given intradermally without drawing blood. A number of other factors have to be taken into account when vaccinating for smallpox; in the early post-vaccinated stages adults are infective and have to avoid contact with children who may be susceptible.

There are no drugs proven to have any effect on the course of the smallpox disease but a case of progressive vaccinia was treated successfully with ribavirin and vaccinia immune globulin [3]. Some recent work has indicated that cidofovir and various derivatives have activity against several orthopox viruses, including vaccinia, cowpox and monkeypox [4]. Dr Huovinen made the point that live smallpox virus is needed to test potential new agents.

### PLague

Even a small outbreak of plague, which still occurs sporadically around the world, is capable of causing widespread panic. Naturally occurring outbreaks are most often of the bubonic form of the disease, but if the organism is inhaled, pneumonic plague results. This form of the disease, rare in nature, has a high mortality (up to 50%) and untreated patients can die within a few days. Strains of *Yersinia pestis* are normally susceptible to a range of antibacterial agents but in an outbreak in Madagascar the strain was found to be resistant to ampicillin, chloramphenicol, streptomycin, tetracycline, sulphonamides [5]. It was still susceptible to trimethoprim and fluoroquinolones. The effectiveness of therapy would depend on rapid recognition of the disease.

#### Anthrax – Bacillus anthracis

As has become clear from the recent events in the USA, it is not difficult to spread anthrax deliberately, although good quality weapon-grade spores are required to cause widespread infection of the public by the inhalation route. Skin infections are also likely to be common, although these are less serious, with many healing spontaneously. Cutaneous anthrax is generally amenable to treatment. If anthrax were spread via an aerosol, this would result in large numbers of pulmonary anthrax cases. This is a far more serious disease with initial symptoms very similar to those of various upper respiratory tract infections. Professor Geddes said that this form of the disease could carry a high mortality; in the incident in Sverdlovsk where anthrax spores from a biological warfare unit were accidentally released into the atmosphere, the mortality was 75%.

Anthrax is susceptible to a range of antibacterials, but β-lactamase-producing strains have occurred naturally. Dr Huovinen said, however, that the clinical relevance of this is not clear. Currently the recommended therapy for pulmonary or systemic anthrax is ciprofloxacin or doxycycline combined with one or two other anti-microbials. Treatment should last for 60 days even for prophylaxis. Professor Bartlett said that this was probably based on research on infected monkeys where the disease recurred when treatment stopped after 30 days. Many groups are working on new rapid methods of detection, and Professor Gismondo described a new rapid test PCR, which could identify anthrax from either spores or bacilli. This method is effective in the presence of organic material and can detect as few as ten spores.

### Box 2

**The ‘Ideal’ bioterrorism agent**

- possible to be mass-produced (except for smallpox)
- stable to temperature fluctuations
- stable in food and water
- difficult to identify – a feature of toxins
- resistant to antibiotics and/or genetically modified
- capable of being aerosolised or weaponised
- can produce high mortality
- target population not immunised

Geddes, European Symposium on Bioterrorism, Stockholm, June 2002
TULARAEMIA

Francisella tularensis is one of the most infectious pathogenic bacteria. It occurs naturally as a zoonosis and is carried by a range of small mammals in the northern hemisphere. There are two subspecies, F. tularensis tularensis (type A) and F. tularensis holarctica (type B). Type A occurs in North America and is highly pathogenic to humans whereas type B occurs in northern Europe and Asia and is far less pathogenic. It is known that Russia, Japan and America have produced a weaponised version of type A suitable for spread by aerosol. The organism would be highly virulent in such a form and it can be assumed that large numbers of people would contract the disease. The organism is relatively hardy and can survive well in the environment, adding to its potential for spreading the infection.

Pulmonary and septicaemic infections can carry a mortality of up to 60% although less serious cases are responsive to antimicrobial treatment. F. tularensis is susceptible to ciprofloxacin, streptomycin, doxycycline and gentamicin but is resistant to β-lactams. Treatment usually has to be prolonged. Rapid identification would be a necessity in the case of a bioterrorism attack and Dr Johansson described how he had developed a novel rapid method which can distinguish between type A and B. Previously, identification took several days and required animal tests. The isolation of type A from a patient in Europe would indicate the possibility of deliberate spread.

BOTULINUM TOXIN

Botulinum toxin is the single most poisonous substance known. Clostridium botulinum produces several antigenic types (A-G) of toxin. The most commonly occurring are A, B and E and there is a trivalent vaccine available against these. Botulism occurs naturally through the ingestion of contaminated food or from the absorption of the toxin through a wound or mucosal surface. As a bioweapon, the toxin would most probably be inhaled as an aerosol. Botulinum toxin is not generally regarded as a good way of infecting large numbers of people although Professor Geddes referred to some experiments carried out in Canada in the 1950s (not documented in detail) where toxin was sprayed over an uninhabited part of the country and many hundreds of dead animals were found within 24 hours. It is unlikely to be used in water as the toxin is inactivated by chlorine, but Dr Brooks pointed out that in some countries the chlorination of water was less than ideal and the toxin can then survive for several hours.

The only antitoxin currently available is botulin although the US army apparently holds a heptavalent antitoxin. Detection of toxins can be difficult, as they are highly potent and bind to receptors. They are proteins and are metabolised leaving little free toxin in the body. Dr Brooks described a new rapid assay based on a competitive ELISA, which could replace the conventional animal assays. These animal tests are complex and take two or more days to complete. The occurrence of cases of botulism caused by the less common antigenic types (C, D, G) would be a strong indicator of bioterrorism.

HAEMORRHAGIC FEVER VIRUSES

Several of the haemorrhagic fever viruses are classified by CDC as category A, these are Ebola and Marburg viruses (Filoviridae), Lassa fever and various other Arenaviruses. They cause serious diseases some of which can be transmitted person-to-person and occur in various parts of Africa and South America. The source is not known but is assumed to be mammals. These viruses do not readily lend themselves to use, as biological weapons, for instance, smallpox because they are not easy viruses to handle. They do, however, cause high morbidity and mortality and if they were aerosoled would undoubtedly be a great threat. The only current treatment is careful nursing, but Dr Huovinen said that the use of ribavirin in Lassa fever has been reported to reduce the death rate significantly. Improved PCR techniques have been developed in Professor Schmitz’s laboratory, which allow the identification of many of these viruses in 3–6 hours. It is possible to destroy the virus by heating the sample to 60°C without affecting the PCR. They have also determined that transmission of the virus to humans only occurs in the later stages of infection when the viral load is very high.

The importance of diagnostics

Many laboratories have little experience in handling or identifying most of the agents that are potential biological weapons, often because these infections are naturally rare. In the event of a bioterrorism attack the more rapidly the infection can be identified the greater the chance of containing the outbreak. The use of modern molecu-
lar techniques has transformed the process of identification of many of these agents. These methods are often rapid (hours rather than days) and highly sensitive. PCR methods have been developed for haemorrhagic viruses (Schmitz) and anthrax (Gismondo); ELISAs have been improved by the use of fluorescence-boosted signals. These new techniques also minimise the exposure of staff to pathogenic organisms and are particularly good for fastidious and slow growing species.

Some of the more exciting methods described include the use of microarrays and pyrosequencing (Elgh and Uhlen). Pyrosequencing is now available commercially and allows for DNA diagnostics. Fluorescence resonance energy transfer (FRET) can detect specific proteins (Uhlen). Affibodies are small and robust protein ligands, much smaller than antibodies (6kDa versus 150 kDa), and Professor Uhlen described how they are finding many uses as recognition molecules. Other ‘biochips’ include aptamers and antibodies. Multiple locus variable number tandem repeat analysis (MLVA) has been developed as a technique to distinguish between the two subspecies of F. tularensis (Johansson).

Several people emphasised that, notwithstanding these advances, traditional methods were still needed. Electron microscopy is an essential for the recognition of viruses and culture of bacteria would still be necessary to allow the performance of virulence studies and antimicrobial susceptibility tests.

The diagnosis of toxins presents special problems. They are usually highly potent substances, very few molecules producing a toxic effect and as they bind to receptors and may be metabolised rapidly, little is left to identify. Nevertheless Dr Brooks described how surface plasma resonance was being developed as a rapid and sensitive assay for various toxins and a competitive ELISA with electrochemiluminescent detection was showing promise for the detection of botulinum toxin.

The use of vaccines

There are few vaccines currently available to protect against the above agents and those that are available have drawbacks. A number of experimental vaccines were made in the era of biological warfare, but few have been tested thoroughly. Professor Kaufmann pointed out that there is a distinction between biological warfare, where military personnel (young and fit) need to be protected and bioterrorism where the general population has to be protected. Many of the current vaccines, including those for anthrax, cause too many adverse reactions for general use. Plague vaccines are ineffective against the pulmonary form. There is a risk in the use of live vaccines for immunising people who are immunocompromised. In spite of these problems, in the case of an attack with a biological agent, vaccines may have to be used to prevent spread. The WHO recommends ring vaccination to contain the infections (Steffen). In the US, the CDC has published a document on their website prepared by the Advisory Committee on Immunisation Practices entitled ‘Use of smallpox (vaccinia) vaccine, June 2002’ [6]. In this they state ‘Under current circumstances … vaccine of the general population is not recommended, as the potential benefits of vaccination do not outweigh the risk of vaccine complications.’ In the event of an outbreak, the military may have to be used to protect stocks of vaccine and/or antibiotics (Steffen).

Vaccines cannot generally be made rapidly, so are only of theoretical value for some disease outbreaks. Even where the technology is well established, such as for influenza, should an unusual strain appear, it could take over three months before supplies were available. A problem with the development of vaccines is the lack of ability to carry out Phase III studies for obvious ethical reasons. There have been advances in the understanding of vaccines in recent years and the anthrax incident has stimulated work in several countries. Far more is now known, for example, about the mechanism of adjuvants and they may have a greater role to play in vaccine implementation in the future (Kaufmann).

Recognising a bioterrorism incident

The European view, stated by Professor Steffen, is that as a basic principle, any outbreak of infectious disease is assumed to be a natural incident until proved otherwise. There may, however, be strong indications that certain infections are not likely to be a natural event. In the US, for example, any case of inhalation anthrax is now regarded as caused by bioterrorism. Similarly in Europe, cases of tularemia caused by type A subspecies, which is not found naturally in Europe, would indicate strongly the likelihood of deliberate spread. A number of cases of botulism caused by the less common serotypes would cause suspicion.

Several speakers emphasised how important it was to recognise the first case in any outbreak. This can be a major challenge and requires a clinician who is not only highly observant but can recognise the unusual. Professor
Bartlett praised the clinician in Miami who recognised that the organism in a CSF smear was anthrax and not the more likely diagnosis – *Listeria*. Clinical diagnosis of many of these infections is not easy; when for example, the agent is aerosolised the pulmonary effects can be non-specific, with many possible causes in the early stages. Similarly smallpox can be confused with a range of conditions, including dry eruptions, chicken pox, herpes simplex, and eczema vaccinatum.

**Handling a bioterrorism incident**

A key feature in coping successfully with a bioterrorism incident is how to deal with the public (Steffen). Mayor Juliano in New York during the anthrax scare gave an excellent example; he used experts and there was no contradictory information provided. As a consequence the public did not panic. Staff need training in dealing with the media and conducting interviews to ensure that the correct approach is taken. In Europe after the anthrax attacks in the US there were nearly 8000 threats (mostly hoaxes) between October and November (Hansen). Preparedness requires significant investment of time and resources, but a rapid response may prevent an emergency from turning into a disaster (Steffen). Co-operation between the military or intelligence and civilian authorities is essential (Hansen). Currently it would appear that this is sadly lacking as several speakers commented that there was a considerable pool of expertise among the military, which was not shared with the academic community. It was clear that facilities for nursing infected people were sparse, as were laboratory facilities for handling category 4 organisms. Some countries have limited facilities for handling patients with haemorrhagic viruses. Sweden, for example, now has a biosafety level 4 unit at the Karolinska Institute and can deal with haemorrhagic viruses. Other facilities are also not abundant although recent events have stimulated some improvement; Sweden now has a Central Field Epidemiological Group, which is on standby 24 h. This new unit should become operational in late 2002 (Elgh).

Smaller countries look to the EU for help in preparing to cope with any bioterrorism attack but suggestions from some that a Centre for Disease Control in the EU should be set up did not find favour with all. Several thought that this was unnecessary or that it would not work, pointing out that those likely to co-operate could do so without an institution (Hansen, Steffen). Professor Finch pointed out that different European countries currently have different approaches for dealing with incidents involving infections with haemorrhagic viruses and a uniform approach would be better. Hansen said that there were new initiatives in the EC for co-ordination and that Framework 6 includes support for bioterrorism. Collaboration was required between the EU, NATO and the WHO; NATO has a Centre of Weapons of Mass Destruction, which has a great deal of expertise, but communication with the EU is poor. The WHO has stated that ‘The responsibility for national preparedness and response to BW lies with Member States. The role of WHO is to facilitate support for this purpose’ [7]. Communication with Russia was mentioned, since it is known that they had a major biological warfare programme and thus have a great deal of expertise. Professor Steffen thought that effort should be put into seeing that these scientists were paid to keep them from being tempted to pass their knowledge onto terrorists or rogue states. Professor Kaufmann said that Framework 6 might facilitate communication with Russia.

**Conclusions**

The conference proved informative and stimulating, revealing as it did, both a great deal of expertise but also a worrying lack of facilities and preparedness in most countries. Most biological agents are not easy to turn into highly effective weapons without technical expertise, and most terrorist organisations lack such expertise. However, it is impossible to predict what terrorists will do; until September 11th no one would have predicted that anyone could hijack a large aeroplane and fly it into a skyscraper. A determined terrorist in the early highly infective stages of smallpox could infect a large number of people by just walking around a major city. It was clear that more co-operation is required both across national boundaries and between military establishments, who have the greatest expertise, and academic institutions. Above all, rapid recognition that an unusual infection has been caused by deliberate means will help to control and contain any possible outbreak.

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Professor Didier Raoult – ESCMID Excellence Awardee 2002

At the 12th ECCMID in Milan in April, Professor Didier Raoult was the recipient of the ESCMID Award of Excellence in Clinical Microbiology and Infectious Diseases, and, as is the convention, gave a lecture. His plenary lecture was both fascinating and stimulating and gave some insight as to why he had been selected to receive this prestigious award. Afterwards, I talked to Professor Raoult about the work and the man and found someone dedicated to his work, with a single-minded determination and strong views on how research should be conducted.

Didier Raoult is a professor at the Marseille School of Medicine and the founder of the Rickettsia Research Unit. This unit is the largest laboratory of this kind in the world, and Professor Raoult is the foremost expert on these intriguing intracellular pathogens. His interests and expertise encompass all intracellular bacteria, including Bartonella, Borrelia, Coxiella, Ehrlichia and Tropheryma, as well as Rickettsia. An important and distinctive characteristic of Professor Raoult is his multidisciplinary approach, covering the full range of clinical, diagnostic and laboratory aspects of research and the epidemiology and ecology of the diseases. It became apparent that this has been one of the key features of his success.

He first worked on Mediterranean Spotted fever, a disease caused by Rickettsia conorii, which is reputed to be benign. This rickettsia is transmitted to humans by the brown dog tick, Rhipicephalus sanguineus and is found in southern France. His superior asked him to look at the known cases in the area; at that time there were 41 total with one fatality. This death had been previously assumed to be 'atypical' and had been ignored by those studying the disease and reporting its characteristics. Dr Raoult was not convinced that this was the right approach and when, as time went by, more cases were available, the original incidence of 2.5% fatality closely agreed with the later current figures. This, he said, exemplifies some important points; especially that one should not make assumptions about diseases.

Although it is important to be well-informed on the current literature, it is unwise to blindly accept current thinking. Additionally, one must always be aware of the unusual, no matter how seemingly trivial, as it may yield unexpected results.

As a young man, Professor Raoult completed his military service in Tahiti where he was able to extend his knowledge of unusual pathogens by working on leptospirosis. When he returned to southern France, having developed a keen interest in the diagnosis of these diseases, he decided to embark upon a doctorate in diagnostics. At this time he thought the diagnostic service system was not functioning well and applied for the position of laboratory director. Now he has built up the diagnostic facilities to the present excellent state. His laboratories have pioneered a variety of new techniques, which include molecular approaches, serological tests, and a wide range of cultural methods.

Although he is at the forefront of the development of modern molecular techniques, Professor Raoult emphasizes that this does not mean that traditional techniques are obsolete. The value of novel methods should be regarded as complementary to cultural techniques and, as he has said in a recent publication, “...culture is still an irreplaceable key for studying emerging bacterial diseases”[1]. This attitude illustrates the strict scientific approach taken by Professor Raoult in all his work. He regards the fulfilment of Koch’s postulates as a necessary part of the rigorous proof required in the identification of new and emerging diseases. Culture of the organism is, of course, an essential part of Koch’s postulates. He regards all prokaryotes as potentially cultivable; just hard work is necessary to determine the correct environmental conditions. Many of these fastidious organisms require unique conditions; some are grown in amoe-bae and various cells from frogs, dogs and humans and some have a long doubling time, needing prolonged incubation.

The success of Professor Didier’s group in the area of diagnosis and culture is exemplified by various recent publications, such as one describing the culture and detection of Tropheryma whippelii, the causative organism of Whipple disease [2]. Here the samples were biopsies from the duodenum of patients with Whipple disease and the organism was cultured by growing in fibroblast cultures and genotyping the organism after amplification and sequencing of DNA fragments. This organism had long been thought to be uncultivable, but previous work by Professor Raoult’s group had shown that it was possible to culture the bacillus and to generate specific antibodies in mice that might be of value as a
serological test for the disease [3]. They suggest that the problems previously encountered in culturing *T. whipplei* were partly because the patients had been treated with antibiotics and partly because of the long doubling time of the bacterium under laboratory conditions (approximately 17 days). Monocytes are unsuitable as they do not survive long enough in culture but fibroblasts can be used successfully. Another paper describes the detection of *Bartonella quintana*, the agent of trench fever, in erythrocytes from homeless people [4]. The organism is transmitted by body lice, which can infest the homeless. *B. quintana* can be grown on agar medium but as it resides in erythrocytes, better results are obtained when the blood is frozen first to lyse the cells. A specific monoclonal antibody was used to stain the bacteria in fresh blood, and the bacteria could then be seen within the erythrocytes using laser confocal microscopy [4]. These organisms are all transmitted to humans or other animals by a biting vector and some have a non-human vertebrate reservoir. Those working on these diseases thus need to have an understanding of the vectors and reservoirs of the bacteria. Epidemiology and ecology have played an important part in Professor Raoult’s career and are another of the strengths of this unit. The work of the unit has included epidemiological studies on the various vectors, such as the body louse (*Pediculus humanus humanus*), which transmits three human pathogens: *Borrelia recurrentis*, *Bartonella quintana* and *Rickettsia prowazekii* [5]. Professor Raoult works closely with colleagues in the veterinary field as many of these infections occur in animals, both wild and domestic. Surveys have been carried out, for example, of the prevalence of antibodies reactive with several species of importance (*Coxiella burnetti*, *R. conorii* and *R. typhi*) in seven African countries. This prevalence was associated both with the possible mammalian hosts (stock animals and domestic animals) and with the vectors, species of *Rhipicephalus* and *Amblyomma* [6]. Other epidemiological studies include the extensive survey of Q fever based on over 1,000 patients worldwide, where different forms of Q fever were associated with different patient status [7]. Professor Raoult emphasizes the importance of extremely careful clinical examination and observation when dealing with patients suspected of having a rare and not obvious infectious disease. The clinician must keep an open mind and not be overly influenced by ‘received wisdom’. Curiosity and perhaps the ability to think laterally are important. It is clear that this approach combined with the subsequent detailed and careful examination of all samples in the laboratory using a rigorous scientific approach is what has led to much of Professor Raoult’s success in recognising new and emerging infections. A topic frequently discussed is whether a central diagnostic service should be set up in Europe. Although he thinks that the Centers for Disease Control and Prevention (CDC) in the USA do a good job, Professor Raoult does not favour a European central service and believes that even a central diagnostic laboratory for France is not a practical proposition. Such previous attempts in France have not been promising, and he strongly believes that big organisations can stifle individuality by promoting working by the rules and discouraging innovation. It would be difficult to ensure that a central service is not bureaucratic, and bureaucracy would hinder the implementation of the principles emphasised in his talk as being so necessary for the discovery of new and emerging diseases. Key among these is observation, curiosity and honesty. Additionally, he thinks that people should be encouraged to contribute regardless of where they work, and much of his work has been carried out with groups from around the world. In conclusion, Professor Didier Raoult is an exceptional man with broad-ranging interests, which encompass all aspects of disease caused by these intracellular pathogens. His interests are not restricted to clinical aspects of diagnosis but include all types of laboratory work, studies of the vectors and any other mammals that are susceptible to the infection. Much of his success stems from this multidisciplinary approach combined with strict and rigorous scientific principles. He embraces new technology but also acknowledges the value of traditional methods. He is not afraid to take an idiosyncratic and individualistic approach and this undoubtedly has helped in the recognition of many new diseases.

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![Histochemical staining of *Tropheryma whipplei* in lamina propria of the villous tips from a human patient. x250.](Reproduced from Emerg Infect Dis 2002; 8: 122-31)
June 30, 1999 was to be a remarkable moment in the history of medical microbiology, an endpoint to an unprecedented success story in the annals of infectious disease: the victory over smallpox, one of the oldest plagues of humanity. On this date, the last stocks of smallpox virus still in existence should have been destroyed in the presence of the media. For the past two decades, these relics of a bygone era had been stored in liquid nitrogen tanks in two research institutes, one American and one Russian.

But the solemn final ceremony for a pathogen that had accompanied humanity for more than 2500 years did not occur. Ignoring the World Health Organization’s (WHO) request, the American government decided to keep the germs in deep-frozen storage. The ostensible reason given was that much more research was required: only when all the scientific questions were fully elucidated could the last virus stocks be destroyed. The WHO had no other option than to accept this decision, and it set up an expert commission to monitor the progress in the investigation of the variola virus, requesting, however, that the Center for Disease Control in Atlanta and the Russian VICTOR laboratories in Novosibirsk - the two facilities storing residual amounts of the highly infectious germs - should coordinate their research activities. A new deadline was set for December 31, 2002. The WHO estimated that by that time all scientific studies should be completed, and the last virus particles could then disappear once and for all from the high-security laboratories. In the wake of the terrorist attacks on 11 September 2001, the WHO has postponed the deadline once again. The argument that further scientific research was required anyway was a rather weak one anyway. The actual reason for the refusal to comply with WHO recommendations was apparently grounded in US fears that terrorists might use smallpox germs secretly smuggled out of Russia as a biological weapon against the American population. The concern that highly pathogenic agents could be used for terrorist aims was dramatically confirmed by the series of attacks with Bacillus anthracis in the US. In retrospect, it is now clear that in early 1999 US health authorities simply wanted to gain time, in order to have counter measures at hand in case of a targeted smallpox release during a bioterrorist attack (see Box 1).

**Box 1**

**WHAT HAPPENS DURING AN EPIDEMIC?**

In the USA, simulations of events that would occur when the smallpox virus is released by bioterrorists are now performed not only by federal authorities but also by local governments and townships. The scenarios for such simulated occurrences are anything but reassuring. Even assuming that only 100 people would be infected during a terrorist attack, the resulting epidemic would rapidly overwhelm the existing medical infrastructure.

A large proportion of the patients would be severely ill and would require hospitalization. In order to avoid spreading the virus through the air, these patients would have to be treated in rooms with a negative-pressure system. Very few clinics are equipped with such equipment.

Hardly any physician practicing today has ever seen a smallpox victim. This means that, in case of an outbreak, a high proportion of wrong diagnoses should, at least in the beginning, be anticipated. At the same time all contact persons should be vaccinated without delay (the vaccine is only effective if it is administered within four days after infection).

The lack of an appropriate infrastructure, the insufficient clinical experience of the physicians, and the still limited stocks of vaccine available today make it likely that a second smallpox wave would follow the first one. Since every initial infection would lead to 10 to 25 secondary cases, 1000 to 2500 patients would have to be treated already within two weeks.
sion that is unique in the history of the pharmaceutical industry. However, no mass vaccination of the US population will follow despite the recommendation by the ACIP (Advisory Committee on Immunization Practices) in June 2002 to vaccinate special Smallpox Response Teams which may include medical personnel, public health advisors, and security enforcement personnel. The 40-year-old vaccine has been known to cause severe side effects in isolated cases. It can be calculated that a comprehensive vaccination of the entire US population would cause 400 deaths from acute adverse effects and several thousand more cases with serious long-term effects. The NIH has therefore undertaken a vigorous research effort to develop a safer vaccine for smallpox.

First, the vaccine stocks that have been kept for 20 years or more in government depots, and from which 15 million vaccination doses are still available, were tested for their efficacy. When investigations in the Medical School in St. Louis, Department for Vaccine Research showed that at least the ‘newer’ batches of the residual vaccine stocks had retained their efficacy, the next step was to perform an experiment that might seem, at first glance, somewhat strange: a total of 650 volunteers received the vaccine either in undiluted form or in a 1:10 dilution. As Dr. Antoni Fauci, the director of the NIH, recently explained during a meeting of the American Association for the Advancement of Science, this study was very instructive. The old vaccine can be diluted at least by a factor of two, possibly even by a factor of five, without losing its efficacy. The rationale for the dilution experiment is evident: 15 million vaccine doses would not be enough to protect the population against a targeted terrorist attack, for instance a release of smallpox virus particles as an aerosol in the New York Subway. This is because it is estimated that every index case infects an additional 25 persons within two weeks. However, if the so-called Dryvax vaccine, which is still available, could be ‘amplified’ by a factor of five, the currently available stocks would be at a reassuring level.

It has now become clear that the Dryvax vaccine was meant to be only a temporary solution. The US government has ordered 300 million vaccine doses from a British company, to be delivered by the end of 2002, a commitment that might seem, at first glance, somewhat strange: a total of 650 volunteers received the vaccine either in undiluted form or in a 1:10 dilution. As Dr. Antoni Fauci, the director of the NIH, recently explained during a meeting of the American Association for the Advancement of Science, this study was very instructive. The old vaccine can be diluted at least by a factor of two, possibly even by a factor of five, without losing its efficacy. The rationale for the dilution experiment is evident: 15 million vaccine doses would not be enough to protect the population against a targeted terrorist attack, for instance a release of smallpox virus particles as an aerosol in the New York Subway. This is because it is estimated that every index case infects an additional 25 persons within two weeks. However, if the so-called Dryvax vaccine, which is still available, could be ‘amplified’ by a factor of five, the currently available stocks would be at a reassuring level.

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During a meeting in Washington, Russian scientists pointed to a hitherto overlooked fact: due to the anticipated warming of the earth’s climate, the frozen bodies of ancient smallpox victims buried in the permafrost of Siberia could thaw, and since it is very likely that they contain replicable virus particles they could become a threat to the general population. Experts have no doubts that there are such frozen bodies, for instance in the province of Gorno-Altayskaya. In fact, Russian scientists have already exhumed some of them (apparently under the pretense to study the evolution of the smallpox virus). However, it is improbable that they represent an actual threat to public health.

The CDC scientists have taken good advantage of the available time, considerably expanding the knowledge on variola. Of the 451 isolates in Atlanta, 49 were selected to be representative worldwide smallpox virus samples since they are from smallpox victims in Asia, Africa, South America, North America and Europe and from an era when the germ was still a natural and ubiquitous menace. The genomes of six of these isolates have now been completely sequenced. At the same time, the molecular biology of the lesser-known members of the poxvirus family (the monkey smallpox virus, camel smallpox virus and the vaccinia virus) has been studied. Furthermore, 274 chemicals have been tested as to their efficacy against the variola virus. Cidofovir, a DNA polymerase inhibitor, was shown to be remarkably efficacious. However, because it cannot be ruled out that terrorists might use a genetically altered form of the smallpox virus as a biological weapon, American health authorities would have to decide within a very short time span which participants, for example, present at a mass gathering should be put into quarantine (see Box 1).

All in all this is an extraordinary deployment of resources for a pathogen that even medical historians had almost put aside, and whose final elimination had been foreseen for the end of the year. There is reason to believe that smallpox, that ‘mother of all plagues’, will have some more surprises in store, even after the year 2002.

Hermann Feldmeier

**Box 3**

GLOBAL WARMING AS A RISK FACTOR

**Box 4**

SMALLPOX VACCINATION

Because smallpox vaccination has been discontinued for the general population, with the exception of certain professional groups and military personnel, since 1977 the overwhelming majority of persons has no immunity to the virus. The question as to how long a person is protected after one or several smallpox vaccinations has never been specifically investigated.

Experts assume that after a first vaccination about 95% of the treated persons have adequate antibody concentrations for about five years. It is unclear, however, whether the presence of antibodies and protection against smallpox infection are really correlated. It has been suggested that T-cell dependent immune mechanisms are also required to protect a person from contracting the disease. Based on the analysis of outbreaks at the turn of the last century, for which the ratios of vaccinated versus not vaccinated persons are known, biostatisticians have concluded that protection after vaccination may even last for several decades.

Our present knowledge of the infectious epidemiology of smallpox virus is thus still characterized by controversy. “As far as epidemiology is concerned”, says Dr. James Leduc of the CDC, “our scientific knowledge of this disease is at the same level as it was in 1980”.

Hermann Feldmeier

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**Figure 3. Smallpox lesions on skin**
Affiliation with ESCMID

Short presentation of the Associazione Microbiologi Clinici Italiani (AMCLI)

AMCLI (Associazione Microbiologi Clinici Italiani - Association of Italian Clinical Microbiologists) was founded in 1970 to promote advancement in the field of clinical microbiology. The Association is a member of FeSIM (Federazione delle Società Italiane di Microbiologia – Federation of Italian Microbiology Societies) and is affiliated with ESCMID.

AMCLI currently has a total membership of 2,300 including specialists who are hospital doctors, university microbiologists, biologists, and biomedical microbiology laboratory technicians. The President co-ordinates the work of the Executive Council which is made up of 15 members elected from the various Association subscribers and avails itself of a Board of Arbiters and Auditors. The Association is present throughout the national territory with regional sections (17 total), each under the direction of a regional delegate, which allows the Association to operate effectively at a grass-roots level with initiatives geared to local situations.

A number of special Study Committees (Clinical Virology, Parasitology, Biotechnology, Antimicrobial Agents, Mycobacteria, Mycology, Bacteriology, Sexually Transmitted Infections, Hospital Infections) and Work Groups (Autoimmune Diseases, Campylobacter, Helicobacter pylori, Evidence-Based Medicine) have been set up in order to enhance knowledge and investigate scientific and technological topics in greater depth in a number of specific areas.

AMCLI figures prominently in the process of continuing medical education (compulsory in Italy) drawing on the strength of its more than 30-year tradition of organizing national congresses (one national congress per year), updating courses, and theoretical and practical study workshops and seminars, with the aid of multimedia support systems. Along with this activity, the Association is also involved in publishing a monthly bulletin (NOTIZIE AMCLI - AMCLI NEWS) and a quarterly scientific journal (MICROBIOLOGIA MEDICA - MEDICAL MICROBIOLOGY).

It is the Association’s intention to increase its collaboration with ESCMID and to take part in scientific initiatives (scientific conferences, study groups, multicentre studies). The central organization and peripheral sections are most interested in this affiliation and I am confident that for both partners highly profitable results will ensue.

Prof. Enrico Magliano
Presidente Nazionale AMCLI
Via Carlo Farini 81, 20159 Milano, ITALY

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**News in Brief**

### Infectious Disease and Outbreaks

**INCIDENCE OF CAMPYLOBACTER RISING IN NORWAY**
The Norwegian National Surveillance System for Infectious Diseases (MSIS) has reported a continued increase in the numbers of campylobacter infections in recent years, and it is now the most common cause of bacterial gastro-enteritis in Norway. A similar increase has been noted in several other European countries. For the majority of domestic infections the numbers peak in July. Approximately half of the infections are acquired abroad.

*Eurosurveillance* Weekly June 13th, 2002

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**POLIO ERADICATED FROM EUROPE, BUT ‘MANUFACTURED’ IN THE US**
The WHO announced on June 21st that polio has been eradicated from the 51 countries comprising Europe. The last cases occurred in Turkey in 1998. There are no long-term carriers or vectors of polio and vaccination confers immunity for life. It is anticipated that the disease will be eradicated worldwide by the end of 2002. Paradoxically a group of workers in the US have announced that they have synthesised viable poliovirus from commercially available nucleic acid base pairs. The synthesised virus was able to cause paralysis when injected into the brains of mice, although more virus was required to produce infection than with wild-type polio. The work has caused controversy as some regard it as irresponsible.

*Cello, Paul & Wimmer, Science* July 11th 2002; BMJ 2002; 325:122

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**CAMELPOX VIRUS GENOME SEQUENCED**
A group from Imperial College, London, UK have sequenced the genome of camelpox and found that it is more similar to smallpox than was previously believed. Both are orthopox viruses and the similarities between the two genomes has led to speculation that camelpox could, with very minor changes, prove infectious to humans.

*Gasser & Smith, J Gen Virol* 2002; 83:855

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**MEASLES EPIDEMIC IN ITALY**
There have been nearly 1000 cases of measles in children in Campania, Italy between January and May 2002. Thirteen children developed encephalitis three of whom died. The rate of vaccination in this area is low, only 65%, while in some areas of southern Italy, it is even lower, less than 60%. In the UK parents have been advised to ensure that their children are vaccinated prior to travelling to Italy.

*New Scientist* July 3rd 2002
*Eurosurveillance* July 1st 2002
*CDR Weekly* July 4th 2002

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**CRYPTOSPORIDIOSIS OUTBREAK IN IRELAND**
A public water supply in Ireland was found to be the source of an outbreak of cryptosporidiosis. Oocysts were found in the lake, which supplied the water. The supply was chlorinated but not filtered. There is no routine monitoring for Cryptosporidium in Ireland. Cases are still occurring and remedial measures with regard to farming practices are planned.

*Eurosurveillance* May 30th 2002

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**OUTBREAK OF NORWALK-LIKE VIRUS INFECTION IN BRITISH SOLDIERS IN AFGHANISTAN**
An outbreak of acute gastro-intestinal illness, characterised by vomiting, diarrhoea and fever, occurred in British soldiers and staff at a field hospital in Afghanistan in mid-May, 2002. The cause of the illness was confirmed as being Norwalk-like viruses, which are common in a military setting. Some patients were so severely affected that they were evacuated to England or to a military hospital in Germany. All patients recovered uneventfully.

*CDR Weekly* May 23rd 2002
*MMWR* Weekly June 7th 2002

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**SEVERE INFLUENZA OUTBREAK IN MADAGASCAR**
An influenza-like illness in Madagascar has affected over 1000 people and killed 156. Influenza A (H3N2) has been isolated from two samples tested by the Institut Pasteur.

[www.who.int/disease-outbreak-news](http://www.who.int/disease-outbreak-news)

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**GLYCOPEPTIDE RESISTANT STAPHYLOCOCCI FOUND IN THE UK AND GREECE**
A glycopeptide-resistant Enterococcus faecalis was isolated from the same site, indicating the possibility of the transfer of genes between the species. This is the first occurrence of a clinical isolate of staphylococcus with full resistance to glycopeptides. The isolate retained susceptibility to linezolid, quinupristin/dalfopristin, chloramphenicol, tetracyclines and co-trimoxazole.

*MMWR* 2002; 51:565-7

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**THE FIRST VANCOMYCIN RESISTANT S. AUREUS ISOLATED IN THE US**
A strain of MRSA with high-level resistance to vancomycin (MIC vancomycin >128 mg/l, MIC teicoplanin 32 mg/l) has been isolated from a patient in the US. The isolate was shown to carry the Van A gene. A glycopeptidase-resistant Enterococcus faecalis was isolated from the same site, indicating the possibility of the transfer of genes between the species. This is the first occurrence of a clinical isolate of staphylococcus with full resistance to glycopeptides. The isolate retained susceptibility to linezolid, quinupristin/dalfopristin, chloramphenicol, tetracyclines and co-trimoxazole.

*ESCMID News* 2·2002

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**OUTBREAK OF LEGIONNAIRES’ DISEASE IN THE UK**
An outbreak of Legionnaires’ disease occurred in Barrow-in-Furness, UK in early August. Nearly 100 people have been infected and one elderly man has died from the infection. The source of the infection is under investigation but is believed to be an air conditioning unit in a leisure complex. The extractor for the unit discharges from the top of the building over a passage used by many of the towns people.

*CDR Weekly* 8th August 2002

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*MMWR* 2002; 51:565-7

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**GLYCOPEPTIDE INTERMEDIATE STAPHYLOCOCCI FOUND IN THE UK AND GREECE**
Glycopeptide-intermediate staphylococci (GISA) have been isolated from patients in Greece. A MRSA was isolated from a blood culture of one patient who had suffered a severe road accident and a multiresistant S. sciuri from a blood culture of an intravenous drug user. This is the first report of an infection caused by a GISA from Greece and the first report of glycopeptide resistance in S. sciuri.

*Tsiakris et al., Emerg Infect Dis* 2002; 8:536

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**RESISTANCE**
A glycopeptide-intermediate S. aureus has been isolated from a renal trans-
plant patient in the UK. The patient had persistent MRSA bacteraemia, which did not respond to vancomycin therapy. When the strain was recognised as GISA, therapy was switched to gentamicin, linezolid and rifampicin and blood cultures became sterile. This is the first GISA to be isolated in the UK.

**CDR Weekly May 16th 2002**

**Prions**

**US INVESTIGATES HUNTERS’ DEATHS FROM BRAIN DISEASE**

Chronic wasting disease is common in deer, elk, moose and caribou in certain areas in the US. This disease, like BSE, CJD and scrapie, is caused by prions. Sportsmen who hunt these animals frequently eat the meat and possibly the brains. Chronic wasting disease has now been found in deer in Wisconsin for the first time and this has triggered an investigation into the deaths of three sportsmen, known to have eaten deer and elk, all of whom died of a neurological disease. Two were diagnosed as having CJD and one as having Pick’s disease. Although the WHO has stated that there is no evidence that chronic wasting disease can infect humans, it also recommends that no part of deer or elk known to be infected should be eaten.

**Newsday.com July 31st 2002**

**INCREASE IN CJD CASES SEEN IN SWITZERLAND**

A report from the Institute of Neuropathology and National Reference Center for Prion Disease in Zurich has shown that the incidence of CJD in Switzerland increased two-fold in 2001, although none of these infections is believed to be the variant form of the disease, linked with bovine prions. Figures from the first quarter of 2002 indicate a continued rise. The reasons for this increase are not known. Switzerland has had a larger incidence of BSE than other non-UK European countries and there is thus speculation that there is a link with BSE although it is not clear what that may be.

**Glatzel et al., Lancet 2002; 360: 139–141**

**PROPHYLAXIS AGAINST PRION DISEASE IN MICE**

A group of German workers have reported that injecting mice with CpG oligodeoxynucleotides immediately after infecting them with scrapie prions prolonged the life of the mice significantly. The authors suggest that the CpG oligodeoxynucleotides stimulated the innate immune system and might thus offer some promise for prophylaxis in humans known to have been exposed to prions.

**Sethi et al., Lancet 2002; 360: 229**

**Pharmaceutical Companies and Compounds**

**AVENTIS AND VIROPHARMA DROP CO-DEVELOPMENT OF PICOVIR**

The antiviral agent against the common cold, Picovir™ (pleconaril), failed to receive FDA approval because of concerns over its safety. As a result Aventis and ViroPharma ceased their agreement to co-develop the drug.

**VERSICOR AND NOVARTIS TO WORK TOGETHER ON PEPTIDE DEFORMYLASE INHIBITORS**

The collaboration between Versicor and Novartis has been extended to include research into the antibacterial peptide deformylase inhibitors. Compounds are apparently currently under evaluation and are expected to reach clinical trial status by 2003.

**PFIZER AND PHARMACIA MERGE**

Pfizer and Pharmacia merged in July making the largest pharmaceutical company in the world. Pharmacia will continue to sell its remaining ownership of Monsanto.

**VORICONAZOLE IS APPROVED IN THE US**

Pfizer’s new azole antifungal, voriconazole (Viend™), has been approved in the US.

**ROCHE – APPROVAL FOR TAMIFLU AND PEGASYS, PHASE III RESULTS WITH T-20**

Roche’s treatment for hepatitis C, a pegylated interferon (Pegasys), has been granted marketing authorisation by the EC. It will be given in combination with ribavirin. The company has also filed a license application in the US. The influenza drug, Tamiflu™ (oseltamivir), developed jointly by Roche and Gilead Sciences, has received approval form the EMEA for treatment of influenza in adults and children and for prevention of influenza in adolescents and adults. Roche’s new antiviral drug T-20 (Fuzeon™) shows great promise in the treatment of HIV; Phase III data described recently showed better than anticipated activity. It is a fusion inhibitor and prevents the entry of HIV virus into the cell. This novel mode of action means that there is no cross resistance with the existing types of anti-HIV compounds. Roche is developing T-20 jointly with Trimeris and aims to submit it to regulatory authorities in both the US and Europe later this year. The companies have announced that they are unlikely to be able to produce sufficient supplies of the drug as demand has increased dramatically following the presentation of the Phase III results at the AIDS conference in Barcelona. The manufacturing process is complex (over 100 stages) with low yields and the drug is expected to be expensive.

**BRISTOL-MYERS SQUIBB SUBMIT MARKETING APPLICATION FOR ATAZANVIR TO EMEA**

Atazanvir is an azapeptide protease inhibitor effective against HIV and is in Phase III clinical studies. BMS 284756 filed registration documents with the EMEA in May. They claim that unlike other protease inhibitors, atazanvir does not increase the risk of cardiac problem by increasing levels of cholesterol, LDL and triglycerides. In addition, there are good data to support once daily dosing.

**GLAXO SMITHKLINE LAUNCH CHICKEN POX VACCINE IN UK**

GSK marketed the first widely available chicken pox vaccine, Varilrix™, in the UK at the beginning of August. The vaccine is for children over the age of thirteen and adults at risk. The vaccine has the advantage of being stable when stored between 2–8°C for up to 2 years. Varicella vaccination is routine in the US, but not currently in the UK.

**Pamela Hunter**

Medical Writer
Forthcoming events

**ESCMID events:**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Location</th>
<th>Contact Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>10–13 May 2003</td>
<td>13th European Congress of Clinical Microbiology and Infectious Diseases (ECCMID)</td>
<td>Glasgow, UK</td>
<td>AKM Congress Service Phone: +41-61-686 77 11, Email: <a href="mailto:info@akm.ch">info@akm.ch</a></td>
</tr>
<tr>
<td>1–4 May 2004</td>
<td>14th European Congress of Clinical Microbiology and Infectious Diseases (ECCMID)</td>
<td>Prague, Czech Republic</td>
<td>AKM Congress Service Phone: +41-61-686 77 11, Email: <a href="mailto:info@akm.ch">info@akm.ch</a></td>
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<tr>
<td>2–5 April 2005</td>
<td>15th European Congress of Clinical Microbiology and Infectious Diseases (ECCMID)</td>
<td>Copenhagen, Denmark</td>
<td>AKM Congress Service Phone: +41-61-686 77 11, Email: <a href="mailto:info@akm.ch">info@akm.ch</a></td>
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</tbody>
</table>

**Other events:**

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<tr>
<th>Date</th>
<th>Event</th>
<th>Location</th>
<th>Contact Details</th>
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<tbody>
<tr>
<td>8–12 September 2002</td>
<td>3rd European Congress on Tropical Medicine, Lisbon, Portugal</td>
<td>Lisbon, Portugal</td>
<td>Dr. Miroslav Petrovec Phone: +386 1 543 74 51 Email: <a href="mailto:mrc.petrovec@mf.uni-lj.si">mrc.petrovec@mf.uni-lj.si</a> Internet: <a href="http://www.rickettsia.org">www.rickettsia.org</a></td>
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<tr>
<td>15–18 September 2002</td>
<td>5th International Conference of the Hospital Infection Society (HIS), Edinburgh, UK</td>
<td>Edinburgh, UK</td>
<td>HIS 2002 c/o Concorde Services LTD. Phone: +44-141-331 0123 Internet: <a href="http://www.his2002.co.uk">www.his2002.co.uk</a></td>
</tr>
<tr>
<td>28–30 September 2002</td>
<td>42nd Interscience Conference on Antimicrobial Agents and Chemotherapy (ICCAAC), San Diego, CA, USA</td>
<td>San Diego, CA, USA</td>
<td>ASM Conferences Phone: +1-202-942 9248 Internet: <a href="http://www.asmusa.org">www.asmusa.org</a></td>
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<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>6–10 October 2002</td>
<td>54th Annual Meeting of the German Society for Hygiene and Microbiology, Heidelberg, Germany</td>
<td>Heidelberg, Germany</td>
<td>Christine Thorne Phone: +49-6221-647-803 Email: <a href="mailto:christiane.thorne@med.uni-heidelberg.de">christiane.thorne@med.uni-heidelberg.de</a> Internet: <a href="http://www.dghm.org">www.dghm.org</a></td>
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<tr>
<td>7–9 May 2003</td>
<td>3rd World Congress on Anaerobic Bacteria and Infections, Glasgow, Scotland, UK</td>
<td>Glasgow, Scotland</td>
<td>Congress Secretariat International Society for Anaerobic Bacteria Phone: +1 (617) 738-9951 Email: <a href="mailto:info@infnt-anaerobe.org">info@infnt-anaerobe.org</a> Internet: <a href="http://www.infnt-anaerobe.org">www.infnt-anaerobe.org</a></td>
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<td>12–16 October 2002</td>
<td>3rd Croatian Congress on Infectious Diseases, Dubrovnik, Croatia</td>
<td>Dubrovnik, Croatia</td>
<td>Tatjana Jeren Phone: +385-1-46-03-248 Internet: <a href="http://www.bfm.hr">www.bfm.hr</a></td>
</tr>
<tr>
<td>13–15 October 2002</td>
<td>Pros &amp; Cons in Infectious Diseases: Current Perspectives in Gram-Positive Infections, Nice, France</td>
<td>Nice, France</td>
<td>Meditoxa Phone: +33-(0)4-93-53-41-79 Email: <a href="mailto:meditoxa@wanadoo.fr">meditoxa@wanadoo.fr</a></td>
</tr>
<tr>
<td>16–19 October 2002</td>
<td>10th International Symposium on Staphylococci and Staphylococcal Infections, Tsukuba, Japan</td>
<td>Tsukuba, Japan</td>
<td>Conference Secretariat Phone: +81-3-5802-1040 Email: <a href="mailto:info@staohylococcus.net">info@staohylococcus.net</a></td>
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<tr>
<td>19–24 October 2002</td>
<td>4th International Conference on Therapeutics for Viral Hepatitis, Isla Verde, Carolina, Puerto Rico</td>
<td>Isla Verde, Puerto Rico</td>
<td>Conference Secretariat c/o International Medical Press USA Phone: +1-404-233-6446 Email: <a href="mailto:info@intmedpress.com">info@intmedpress.com</a></td>
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<tr>
<td>23–26 October 2002</td>
<td>4th International Meeting on the Therapy of Infections (IMTI), Florence, Italy</td>
<td>Florence, Italy</td>
<td>INTMI Organising Committee Phone: +39-055-427-9478 Email: info@<a href="mailto:intmedmeetings@oo-careggi.toscana.it">intmedmeetings@oo-careggi.toscana.it</a></td>
</tr>
<tr>
<td>24–27 October 2002</td>
<td>11th International Congress on Therapeutics in HIV Infection, Glasgow, Scotland, UK</td>
<td>Glasgow, Scotland</td>
<td>Conference Secretariat c/o International Medical Press USA Phone: +1-404-233-6446 Email: <a href="mailto:info@intmedpress.com">info@intmedpress.com</a></td>
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**In co-operation with ESCMID**

<table>
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<tr>
<th>Date</th>
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<th>Location</th>
<th>Contact Details</th>
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<tbody>
<tr>
<td>10–13 November 2002</td>
<td>1st Asian Congress of Pediatric Infectious Diseases, Pattaya, Chonburi, Thailand</td>
<td>Thailand</td>
<td>Pediatric Infectious Disease Society of Thailand Phone: +66-2-540-6005 Email: <a href="mailto:pidst@pidst.org">pidst@pidst.org</a></td>
</tr>
</tbody>
</table>

**10–14 November 2002 | American Society of Tropical Medicine and Hygiene: 51st Annual Meeting, Denver, CO, USA | USA                                    | ASTMH Headquarters Phone: +1-847-480-9592 Email: astmh@astmh.org |

17–21 November 2002 | 4th International Congress on Drug Therapy in HIV Infection, Glasgow, Scotland, UK | Scotland, UK                        | Bridget Stevens Phone: +44 (0) 1625-511-953 Email: hviv@gardiner-caldwell.com Internet: www.hiv6.com |

19 – 23 November 2002 | 3rd World Congress of Pediatric Infectious Diseases – WSPID, Santiago, Chile | Chile                                | Kenes International Phone: +52-2-908-0488 Email: www.kenes.com/wspid |

1–5 December 2002 | 8th Western Pacific Congress of Chemotherapy and Infectious Diseases, Perth, Australia | Australia                           | International Convention Management Services (ICMS) Phone: +61-3-9462-0244 Email: wpc@icms.com.au |

9–11 January 2003 | Winter Meeting SPV/ESCV, Estoril, Portugal | Portugal                            | Eurocongressos Phone: +351-218-472-577 Email: eurocongressos@mail.telepac.pt |
### Other events:

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<tr>
<th>Date Range</th>
<th>Event Description</th>
<th>Location</th>
<th>Contact Details</th>
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<tr>
<td>28–30 March 2003</td>
<td>Symposium on Resistant Gram Positive Infections (RGPI-II)</td>
<td>Baveno, Italy</td>
<td>MCA Events Phone: +39-02-3493-4404 Email: <a href="mailto:mcaevents@tin.it">mcaevents@tin.it</a></td>
</tr>
<tr>
<td>6–8 April 2003</td>
<td>13th Annual Scientific Meeting of SHEA</td>
<td>Arlington, VA, USA</td>
<td>SHEA Meetings Department Phone: +1-864-423-7222 Internet: <a href="http://www.shea-online.org">www.shea-online.org</a></td>
</tr>
<tr>
<td>1–3 May 2003</td>
<td>4th International Symposium on Antimicrobial Agents and Resistance (ISAAR 2003)</td>
<td>Seoul, Korea</td>
<td>Ms. Susan Chung Phone: +82-2-3410-0327 Email: <a href="mailto:susan@ansorp.org">susan@ansorp.org</a> Internet: <a href="http://www.ansorp.org">www.ansorp.org</a></td>
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<tr>
<td>18–21 May 2003</td>
<td>Medical Virology Congress of Africa, Berg-en-Dal, South Africa</td>
<td></td>
<td>Barbara Lilienfeld Phone: +011-803-8461 Email: <a href="mailto:lppeople@icon.co.za">lppeople@icon.co.za</a></td>
</tr>
<tr>
<td>4–7 July 2003</td>
<td>Central European Symposium on Antimicrobial Resistance</td>
<td>Brţuni, Croatia</td>
<td>Croatian Microbiological Society Phone: +385-1-23-90-204 Email: <a href="mailto:hmd@hmd-cms.hr">hmd@hmd-cms.hr</a> Internet: <a href="http://www.hmd-cms.hr">www.hmd-cms.hr</a></td>
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<tr>
<td>28 September–1 October 2003</td>
<td>9th Congress of the European Confederation of Medical Mycology</td>
<td>Amsterdam, The Netherlands</td>
<td>Congress Care Phone: +31-73-483-1238 Internet: <a href="http://www.ecmm-lift2003.org">www.ecmm-lift2003.org</a></td>
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<tr>
<td>9–12 October 2003</td>
<td>41st Annual Meeting of the Infectious Diseases Society of America (IDSA)</td>
<td>San Diego, CA, USA</td>
<td>IDSA 2003 Phone: +1-703-299-0200 Email: <a href="mailto:info@idssociety.org">info@idssociety.org</a> Internet: <a href="http://www.idssociety.org">www.idssociety.org</a></td>
</tr>
<tr>
<td>16 – 19 October 2003</td>
<td>3rd International Meeting on Antimicrobial Chemotherapy in Clinical Practice (ACCP)</td>
<td>Santa Margherita, Portofino, Italy</td>
<td>Matheo Bassetti Phone: +39-010-555-2668 Email: <a href="mailto:matteob@tin.it">matteob@tin.it</a></td>
</tr>
<tr>
<td>17–21 October 2003</td>
<td>5th European Congress of Chemotherapy and Infection, Rhodes, Greece</td>
<td></td>
<td>Congrex Sweden AB Tel +46 8 459 66 00 Email: <a href="mailto:ecc5@congrex.se">ecc5@congrex.se</a> Internet: <a href="http://www.congress.com/ecc5/">www.congress.com/ecc5/</a></td>
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<tr>
<td>30 November–5 December 2003</td>
<td>40th World General Assembly of the International Union Against Sexually Transmitted Infections (IUSTI)</td>
<td>Punta del Este, Uruguay</td>
<td>Dr. Ross Phillips c/o IUSTI Phone: +61-882-324-511 Email: <a href="mailto:iusti@ozemail.com.au">iusti@ozemail.com.au</a></td>
</tr>
<tr>
<td>2–5 December 2003</td>
<td>8th World STI / AIDS Congress, Punta del Este, Uruguay</td>
<td></td>
<td>Anette Lilos Email: <a href="mailto:anette@aidas2002.com">anette@aidas2002.com</a></td>
</tr>
<tr>
<td>3–5 December 2003</td>
<td>6th International Epidemiological Association Scientific Meeting in the Eastern Mediterranean Region, Ahwaz, Iran</td>
<td></td>
<td>Hamid Soori Phone: +98-611-336-3132 Email: <a href="mailto:6IEA@ausms.ac.ir">6IEA@ausms.ac.ir</a></td>
</tr>
<tr>
<td>7–10 December 2003</td>
<td>6th Asia Pacific Congress of Medical Virology, Kuala Lumpur, Malaysia</td>
<td></td>
<td>Jalan Yaacob Lallf Phone: +603-9170-3836 Email: <a href="mailto:APDMV@email.hukm.ukm.my">APDMV@email.hukm.ukm.my</a> Internet: <a href="http://www.6APMCV.medic.ukm.my">www.6APMCV.medic.ukm.my</a></td>
</tr>
<tr>
<td>15–17 January 2004</td>
<td>ESCV Winter Meeting, Copenhagen, Denmark</td>
<td></td>
<td>Birte Rothstein Phone: +46-3268-3355 Email: <a href="mailto:br@ssi.dk">br@ssi.dk</a> Internet: <a href="http://www.escv.org">www.escv.org</a></td>
</tr>
<tr>
<td>4–7 March 2004</td>
<td>11th International Congress on Infectious Diseases (11th ICID)</td>
<td>Cancun, Mexico</td>
<td>International Society for Infectious Diseases (ISID) Phone: +1-617-277-0551 Email: <a href="mailto:info@isid.org">info@isid.org</a> Internet: <a href="http://www.isid.org">www.isid.org</a></td>
</tr>
<tr>
<td>24–29 July 2005</td>
<td>Meeting of the International Union of Microbiological Societies (IUMS) 2005, San Francisco, CA, USA</td>
<td></td>
<td>American Society for Microbiology Phone: +1-800-227-1227 Email: <a href="mailto:info@asmusa.org">info@asmusa.org</a> Internet: <a href="http://www.asmusa.org">www.asmusa.org</a></td>
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