

IN THIS ISSUE

WFCC EXECUTIVE BOARD : Officers and Members	1
WFCC COMMITTEES	2
WFCC MATTERS	2
● WFCC Workshop on the Economic Value of Microbial Genetic Resources	3
● Unesco/WFCC Technical Information Sheets	4
NEW WFCC MEMBERS, NAME CHANGES AND CORRECTION OF ADDRESSES	5
FOCUS ON CULTURE COLLECTIONS	6
● Microbial Strain Collection of Latvia	6
● European Collection of Cell Cultures (ECACC):ISO 9001 Accreditation	6
● Culture Collection of Luminous Bacteria, Russia	7
● DSMZ-German Collection of Microorganisms and Cell Cultures	8
NEWS FROM AND FOR CULTURE COLLECTIONS	10
● Important Note on Shipping Biological Materials	10
● Aspergillus Reference Cultures	11
● International Journal of Systematic Bacteriology	11
● Philippine Network of Culture Collections	11
NEW CATALOGUES AND DATABASES	12
BIOLOGY ON THE WEB	12
RECENT PUBLICATIONS OF INTEREST	13
NEW BOOKS	13
WORKSHOPS AND TRAINING COURSES	14
CONFERENCES AND MEETINGS	19
TO ALL WFCC MEMBERS	20
ANNOUNCEMENT AND REQUEST	20

WORLD FEDERATION FOR CULTURE COLLECTIONS

Number 27

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An Interdisciplinary Commission of the International Union of Biological Sciences and the International Union of Microbiological Societies.

WFCC EXECUTIVE BOARD

President

Dr. Vanderlei P. Canhos
Tropical Culture Collection
R. Latino Coelho 1301
CX. Postal 1889
13.087-010 Campinas-SP, Brasil
Tel: +55 19 242 7022; Fax: +55 19 242 7827
Email: vcanhos@bdt.org.br

Secretary

Dr. Alan Doyle
European Collection of Cell Cultures,
Centre for Applied Microbiology & Research
Porton Down, Salisbury, Wiltshire SP4 0JG, UK
Tel: +44 1980 612 512; Fax: +44 1980 611 315
Email: alan.doyle@camr.org.uk

Vice-President

Dr. Dagmar Fritze
DSMZ-Deutsche Sammlung von Mikro-
organismen und Zellkulturen GmbH
Mascheroder Weg 1b
38124 Braunschweig, Germany
Tel: +49 531 2616 254; Fax: +49 531 2616 418
Email: dfr@gbf-braunschweig.de

Treasurer

Dr. Dirk van der Mei
Centraalbureau voor Schimmelcultures
P.O. Box 273
3740 AG Baarn, The Netherlands
Tel: +31 3554 81238; Fax: +31 3554 25683
Email: van.der.mei@cbs.knaw.nl

Board Members

Mrs. Lois Blaine
American Type Culture Collection
12301 Parklawn Drive
Rockville, MD 20852, USA
Email: lblaine@atcc.org

Prof. Karel Kersters
Rijksuniversiteit Gent
Laboratorium voor Microbiologie
K.L. Ledeganckstraat 35
9000 Gent, Belgium
Email: karel.kersters@rug.ac.be

Dr. Susono Saono
Research and Development Centre
for Biotechnology - LIPI
Jl. Raya Bogor Km 46, Cibinong 16911
P.O. Box 422
Bogor, Indonesia
Email: saono@indo.net.id

Dr. J. L. Staphorst
Plant Protection Institute
Agricultural Research Council

Dr. Irena B. Ivshina
Institute of Ecology and Genetics
of Microorganisms, Ural Branch,
Russian Academy of Sciences
13, Goleva Str.
614081 Perm, Russia
Email: mike@iegm.perm.su

Dr. Cletus Kurtzman
Agricultural Research Service
Culture Collections (NRRL)
1815 North University Street
Peoria, Illinois 61604, USA
Email: kurtzman@mail.ncaur.usda.gov

Prof. Da-Kang Song
Institute of Microbiology
Chinese Academy of Sciences
Ahong Guan Jun
Beijing 10080, China
Email: songdk@sun.im.ac.cn

Dr. Masao Takeuchi
Institute for Fermentation
17-85 Jusohonmachi 2-chome

Private Bag X134
Pretoria, 0001, Republic of South Africa
Email: nipbjls@plantl.agric.sa

Yodogawa-Ku, Osaka 532, Japan
Fax: +81 6 3006814

Ex officio

Dr. Lindsay Sly (Past President)
Australian Collection of Microorganisms
Centre for Bacterial Diversity and Identification
Department of Microbiology
University of Queensland
St. Lucia 4067, Brisbane, Australia
Tel: +61 7 365 4617; Fax: +61 7 365 4620
Email: sly@biosci.uq.edu.au

Dr. Hideaki Sugawara (Director WDCM)
World Data Centre for Microorganisms
Center for Information Biology
National Institute of Genetics
Yata 111
Mishima, Shizuoka 411, Japan
Tel: +81 559 81 6895; Fax: +81 559 81 6896
Email: hsugawar@genes.nig.ac.jp

Editor Newsletter

Dr. Dieter Claus, Chemnitzer Str. 3, 37085 Göttingen, Germany, Tel.: +49 551 792653; Fax: +49 551 55791;
Email: clausgoettingen@flynet.de

[Go to top](#)

WFCC COMMITTEES

Committee on Biodiversity
Chair: Mrs. Barbara Kirsop
Stainfield House
Stainfield, Bourne, Lincolnshire PE10 0RS, UK
Tel: +44 1778 570618; Fax: +44 1778 570175
Email: bio@biostrat.demon.co.uk

Committee on Education and Capacity Building
Chair: Dr. Nina Gunde-Cimerman
Culture Collection of Fungi (MZKI)
National Institute of Chemistry
Hajdrihova 19, 61115 Ljubljana, Slovenia
Tel: +386 61 176 03 35; Fax: +386 61 125 92 44
Email: nina.gunde.cimerman@ki.si

Committee on Endangered Culture Collections
Chair: Dr. Maija-Liisa Suihko
VTT, Biotechnology and Food Research
P.O. Box 1501
02044 VTT, Finland
Tel: +358 0 4565133; Fax: +358 0 4552028
Email: majja-liisa.suihko@vtt.fi

Committee on Publications and Publicity
Chair: Dr. Robert Samson
Centraalbureau voor Schimmelcultures
P.O. Box 273
3740 AG Baarn, The Netherlands
Tel: +31 3554 81211; Fax: +31 3554 16142
Email: samson@cbs.knaw.nl

Committee on Postal, Quarantine and Safety
Regulations
Chair: Dr. D. Smith
International Mycological Institute
Bakeham Lane

Committee on World Data Centre for Microorganisms
Chair: Dr. Lindsay Sly
Australian Collection of Microorganisms
Centre for Bacterial Diversity and Identification,
Department of Microbiology University of Queensland

Egham, Surrey TW20 9TY, UK
Tel: +44 1784 470 111; Fax: +44 1784 470 909
Email: d.smith@cabi.org

St. Lucia 4067
Brisbane, Australia
Tel: +61 7 365 4617; Fax: +61 7 365 4620
Email: sly@biosci.uq.edu.au

Committee on Patents

Chair: Dr. Dagmar Fritze

DSMZ-Deutsche Sammlung von Mikro-
organismen und Zellkulturen GmbH

Mascheroder Weg 1b

38124 Braunschweig

Germany

Tel: +49 531 2616 254; Fax: +49 531 2616 418

Email: dfr@gbf-braunschweig.de

[Go to top](#)

WFCC MATTERS

Dr. S. Bradley, Treasurer of the International Union of Microbiological Societies (IUMS), wrote to WFCC after having received the WFCC report Postal, Quarantine and Safety Regulations: Status and Concerns (1996):

"I congratulate the World Federation for Culture Collections Postal, Quarantine and Biosafety Committee on its excellent report on the status and concerns 1994-1996. The Committee has not duplicated information already available but has made an effort to keep the microbiological community informed of important changes and developments.

Your report contains an excellent list of relevant publications. The report provides a useful summary of the classification of biological agents in Europe as laid down in the European Council Directive 93/88/EEEC and the classification used in Japan.

Well done. Keep up the good work!"

Copies of the report are still available and may be ordered from the WFCC Secretary.

[Go to top](#)

WFCC WORKSHOP ON THE ECONOMIC VALUE OF MICROBIAL GENETIC RESOURCES

to be held at the

International Symposium of Microbial Ecology (<http://www.glinx.com/isme8>)

Halifax, Canada, August 12th 1998

The WFCC executive board and the Committee for Biodiversity are planning the above workshop as part of the on-going activity to resolve some of the uncertainties and develop procedures for the distribution of ex-

situ microbial genetic resources (MGRs) within the framework of the Convention on Biological Diversity (CBD). Following the international workshop at ICC8, an Information Document on Access to Ex-situ Microbial Genetic Resources within the Framework of the CBD was finalised and has been widely distributed. It is available from the WFCC Web Site (<http://www.wfcc.nig.ac.jp/>) or as hard copy from the WFCC Secretary (alan.doyle@camr.org.uk). It was summarised and distributed at COP3 by the CBD Secretariat as (UNEP/CBD/COP/3/Inf.19).

In continuing discussions on the implementation of the CBD at the microbial level, the question frequently arises as to the ECONOMIC VALUE OF MGRs, both in-situ and ex-situ. It is not difficult to draw attention to the clear value of microorganisms producing antibiotics, fine chemicals and other biotechnological products. Similarly, the general value of microorganisms in essential degradation, in the food chain and also in food production (bread, fermented beverages) is abundantly clear. However, the economic value has not yet been estimated in monetary terms. As a result, it is difficult to assess the priorities that should be afforded to microorganisms in conservation programmes and to assign values that should be attached to potential industrial strains for royalty and licensing purposes and the development of Material Transfer Agreements.

This is an important gap in current knowledge that the workshop will help to resolve.

The workshop will be a one-day event, taking place on the Wednesday of the ISME Conference. The aim of the workshop is to bring environmental economists and microbiologists/culture collection experts together to discuss the economic issues involved and possible developments.

Proposed topics for discussion and provisional programme:

MORNING SESSION: Microbial issues

Welcome and Introduction; WFCC activities

Valuation of Biological Diversity: developments within the CDB framework

Microbial Diversity for Sustainable Development:

- extent of diversity and its fundamental importance for industry, agriculture and health
- endemism x redundancy
- genetic/phenotypic/metabolic diversity

The Economic Value of Ex-situ MGRs: views of CC's

- (a) Service collections : IDAs and Information Resources
- (b) Industrial Collections and Research Collections

AFTERNOON SESSION: Economic issues

Empirical Approaches to Assessing Value:

- measures of willingness to pay
- direct/indirect/option/existence values
- experimental data to estimate value
- incentive measures

Economics of Use of MGRs (case studies/examples)

- (a) Industry

- (b) Agriculture
- (c) Environmental bioremediation
- (d) Health

International ongoing efforts (access/equitable sharing/valuation)

- (a) UNCTAD/Biotrade
- (b) OECD/Megascience Forum
- (c) FAO/plant genetic resources
- (d) Andean Pact/India/Philippines

The need for a commissioned study on Economics of MGR's

*

It is hoped that WFCC members will be able to be present, as this event is important and also provides an opportunity for mid-term discussions on other WFCC activities. Further information on the workshop programme will be posted on the WFCC Web Site as speakers are confirmed. Comments from members are welcome. Please address these to any EB member or member of the Biodiversity Committee.

Barbara Kirsop (barbara@biostrat.demon.co.uk)

Chair Biodiversity Committee

[Go to top](#)

Unesco/WFCC Technical Information Sheets (TIS)

TIS No. 15 *Microscopic examination of bacteria on agar coated slides*, prepared by D. Claus, is now available. The morphological examination of isolates is an important step in the characterization of bacterial cultures. Methods for preparing slides for microscopical examination and photodocumentation are described.

In TIS No. 14 Ch. Rohde et al. describe the *Packing and Shipping of Biological Materials*. Legal requirements and international regulations regarding postal services and air freight are discussed followed by step by step instructions for packing and shipping of biological materials. Finally, some addresses of suppliers of commercially certified packaging systems for infectious substances are given.

The Technical Information Sheets, which are also published in the World Journal of Microbiology & Biotechnology, can be obtained from the editor Dr. K.A. Malik, DSMZ-Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH, Mascheroder Weg 1b, D-38124 Braunschweig, Germany (kma@gbf.de). They will be also available from the WFCC Web Site (<http://wdcn.nig.ac.jp/wfcc/wfcc.html>).

The editor welcomes any proposal for the publication of additional TIS.

[Go to top](#)

NEW WFCC MEMBERS, NAME CHANGES AND CORRECTION OF ADDRESSES

New Ordinary Member

Dhr. A.S. Lampe

Oostduinlaan 93

2596 JJ Den Haag

Netherlands

Correction of Addresses

NBIMCC
Prof. Dr. T. Donev
Tzarigradsko Chausse BLVD. 125
BL. 2 PO Box 239
Sofia 1113
Bulgaria

Dr. Susono Saono
Research and Development Centre
for Biotechnology - LIPI
Jl. Raya Bogor Km 46, Cibinong 16911
P.O. Box 422
Bogor, Indonesia

"Lost Members"

The Newsletter was returned to the Editor from the following addresses. Who can help to find correct addresses:

Prof.C.G.Heden
Biotechnology MIRCEN
Department of Bacteriology
Karolinska Institutet
S-104 Stockholm, Sweden

Miss M.S. Hendrie
Torry Research Station
P.O. Box 31
135 Abbey Road
Aberdeen AB9 8DG, Scotland

Ann Hoffman
Synergen, Inc.
1885 33rd Street
Boulder
Colorado 80301, USA

Prof. J. Papavassiliou
National University of Athens
School of Health Sciences
Department of Microbiology
P.O. Box 8540
100 10 Athens, Greece
Mycological Reference Laboratory
Public Health Laboratory Service
Keppel Street (Gower Street)
London WC1E 7HT, UK

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We would like to thank our Japanese Sustaining Members for their continuing support of long standing:

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[Go to top](#)

FOCUS ON CULTURE COLLECTIONS

Microbial Strain Collection of Latvia

The Microbial Strain Collection of Latvia (MSCL) was founded in 1993 on the basis of the Department of Microbiology, Faculty of Biology, University of Latvia. MSCL is the only collection of this kind in the Baltic states at present.

The main concept of the Collection is the maintenance of microbial strains. Currently the collection holds over 500 cultures of microorganisms: bacteria, filamentous fungi, yeasts and plasmid bearing strains. A considerable part of the strains have been isolated in Latvia and are single samples in the world.

All strains are preserved in metabolically inactive condition - on agar slants under mineral oil, freeze-dried, in liquid nitrogen or in freezers at -20° C.

MSCL provides consultant and practical services to interested educational establishments, research institutes, companies and private persons such as

- isolation and purification of cultures;
- characterization and identification of strains,
- distribution of pure strains;
- deposit of strains for public access, for safe deposit and for patent purposes.

The collection offers fundamental and applied contract research, too. Computerization of the collection data is being developed. In 1998, the first edition of the catalogue of the collection will be published. The permanent staff of MSCL includes 3 full-time research scientists.

MSCL is a member of WFCC since 1996 and a member of the European Culture Collections' Organization (ECCO) since 1997. MSCL is recognized as an International Depository Authority (IDA) under the Budapest Treaty since 1997.

Contact: Dr biol. Vizma Nikolajeva, Microbial Strain Collection of Latvia, University of Latvia, Faculty of

Biology, Kronvelda Blvd. 4, RIGA, LATVIA, LV-15X6, Tel. +371 7322914, Fax +371 7325657, Email indrikis@laima.acad.latnet.lv.

[Go to top](#)

European Collection of Cell Cultures (ECACC)

First Culture Collection in the world to operate under ISO9001 accreditation system

Customers can rely upon the quality of ECACC's products and services with increased confidence as ECACC, being part of the Centre of Applied Microbiology & Research, becomes the first culture collection in the world to be accredited with the international quality standard BS EN ISO9001. Accreditation was achieved in April 1996 following the completion of a successful audit by the British Standards Institute (BSI).

This quality management system now in place provides numerous benefits not only to ECACC, in terms of improving efficiency and effectiveness, but also its customers, the main benefit being that ECACC ensures that satisfying the needs of the customers is of paramount importance. ISO9001 has enabled us to build upon the systems and procedures already in place to guarantee customers high quality services and cell lines. The outward sign of this is ISO9001 registration.

In addition the ECACC quality control section has also obtained full compliance to Good Laboratory Practice (GLP) for the mycoplasma, bacteria and fungi testing service.

GLP is a management system whose scope is restricted to facilities conducting safety tests. The tests offered by ECACC to GLP include detection of mycoplasma by Hoechst staining and culture and detection of bacteria and fungi by culture.

All of these tests are performed using either ECACC protocols or protocols in full compliance with regulatory bodies such as the FDA.

[Go to top](#)

Culture Collection of Luminous Bacteria,

Institute of Biophysics, IBSO, Krasnoyarsk, Russia

A unique culture collection of luminous marine bacteria has been maintained and enlarged in the Institute of Biophysics, Siberian Branch of the Russian Academy of Sciences (IBSO). The collection dates back to the 60's and includes about 700 strains belonging to 4 species: *Photobacterium phosphoreum*, *P. leiognathi*, *Vibrio harveyi* and *V. fischeri*. These species are isolated more frequently from sea waters and marine organisms.

Strains of the collection were isolated from various regions of the Indian and the Pacific Oceans, of the Black, Mediterranean and others seas, from tropical to polar latitudes and from the surface layers to the depth of several thousand metres. Luminous bacteria are a constant and in some cases rather substantial component of the sea water microflora, constituting 0.1 to 10% of the total amount of saprophytic bacteria in open waters and 60-70% in the lagoons of coral atolls. Strains of luminous bacteria associated with marine fauna are represented by symbionts isolated from light organs, and commensals inhabiting the gastrointestinal tract.

Research work in the IBSO Collection is done along the following lines:

- guaranteed preservation of viability and initial properties of the collection gene pool;

- development of optimum methods of gene pool storage;
- screening of strains producing luciferase, oxidoreductases and other target products;
- study of distribution of luminescent bacteria in waters of the world ocean and their taxonomic identification;
- study of the population heterogeneity and dissociation under various cultivation conditions;
- structural organization and fatty acid composition of luminous bacteria
- Research of activity and stability of enzymes of the luminescence reaction
- development of high-sensitive toxicity biotest for monitoring of environment.

The first edition of the Catalogue of Cultures of Luminous Bacteria, 1997, gives an impression of the special collection of luminous marine bacteria held at the Institute of Biophysics (IBSO). The catalogue contains the description of 500 strains of luminous bacteria. Brief information on the peculiarities of the morphology, physiology, biochemistry, and metabolism of luminous bacteria is given, supplemented with illustrations. Preparations of freeze-dried luminous bacteria for bioluminescent analysis as well as the bienzyme luciferase-oxidoreductase system isolated from the cell are offered.

Contact: Emma Rodicheva, Curator, Culture Collection of Luminous Bacteria, IBSO, Institute of Biophysics, Russian Academy of Sciences, Siberian Branch, Krasnoyarsk, 660036, Russia. Fax +7 3912 433400, E-mail krat@bbl.krasnoyarsk.su.

[Go to top](#)

DSMZ - Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH

The German Collection of Microorganisms and Cell Cultures (acronym: DSMZ; formerly: DSM) is an independent, non-profit organization dedicated to the acquisition, characterization and identification, preservation and distribution of bacteria, archaea, fungi, plasmids, phages, human and animal cell lines, plant cell cultures and plant viruses.

The DSMZ was founded in 1969 as the national culture collection in Germany. In 1988 the DSMZ became an independent body set up in the form of a private limited company (GmbH). In 1996 the DSMZ was recognized as a member of the Science Association of Blue List Institutions (WBL), financially supported by the Federal Ministry of Research and Technology and the State Ministries.

The DSMZ has, at present, more than 8200 Bacteria and Archaea, 100 bacteriophages, 2300 filamentous fungi, 500 yeasts, 1200 plant cell cultures, 700 plant viruses, and 310 human and animal cell lines. Only biological material of risk group 1 and 2 can be accepted. The DSMZ currently has a staff of 82, including 28 trained to the Ph. D. level in microbiology or other fields.

The main functions of the DSMZ are

- To collect, maintain and store microorganisms and cell lines of relevance for applied biology, biotechnology, microbiology, teaching and other areas of research and general application;
- To keep the scientific and industrial community informed on the contents of the collections by the means of catalogues, special lists or data bases;
- To supply scientists and institutions with DSMZ cultures, in accord with national and international laws as well as the DSMZ terms of supply;

- To function as an international recognized collection for the deposit of microorganisms, cell lines, and other biological material which has been cited in the scientific literature or which are used in national or international test procedures;
- To act, on a confidential basis, as a centre for the safe deposit of biological material and the deposit of biological material for patent purposes under national law and the Budapest Treaty;
- To act as an advisory centre for the scientific community and to offer teaching and service facilities covering microorganisms and cell lines.

The collection's research projects include microbial taxonomy, molecular biodiversity studies, development of preservation methods for biological material, cell line characterization and identification, as well as detection and elimination of mycoplasmas and viruses from human and animal cell lines.

The DSMZ is a member of the UNESCO Network of Microbiological Resource Centres (MIRCEN). There are cooperations with other culture collections world-wide and with other relevant national or international bodies such as the European Culture Collections' Organization (ECCO), WFCC, WDCM, and the Microbial Information Network Europe (MINE). DSMZ scientists are taking charge of important functions in international bodies such as ECCO, WFCC and others.

The DSMZ offers scientific consultancy and training services in the following areas:

- Isolation and cultivation of biological material
- Long-term storage of biological material
- Characterization and identification of cultures
- Biological safety

The microbial identification service of the DSMZ offers classical, chemotaxonomic, and molecular biological methods for determining the taxonomic affiliation and the phylogenetic position of microorganisms.

Relevant modern taxonomic methods are in use which include

- Light and electron microscopy
- Physiological tests using classical and commercial test systems
- Evaluation of the data using numerical methods
- Cell wall analysis
- Analysis of the cellular lipid and cellular fatty acid composition
- Analysis of mycolic acids
- Polyamine analysis

Molecular biological studies offered include

- Determination of the G+C mol% composition of the DNA by HPLC

- DNA-DNA hybridization by spectrophotometric method
- RFLP-patterns for taxonomic purposes
- Analysis of a DNA sequence (automated)
- Molecular identification by 16S rDNA analysis (automated)
- Taylor made probes based on 16S rDNA
- Taylor made PCR primers, universal and taxon specific

Characterization and identity checks can also be undertaken on cell lines and plant viruses.

Plant viruses

- Purification and isolation of plant viruses
- Production of specific antisera
- Identification of viruses using specific antisera and electron microscopy

Human and animal cell cultures

- Isoenzyme analysis
- Cytogenetic analysis
- DNA fingerprinting
- Detection of retroviruses
- Immunophenotyping

The DSMZ offers a special service for long-term preservation of microorganisms where access to these deposits is only through written request from the depositor. Such Safe Deposits remain the property of the depositor. Information concerning deposit is treated in strict confidence.

The DSMZ accepts deposits for patent purposes under the rules of the Budapest Treaty

- Bacteria, fungi, yeasts, bacteriophages, plasmids
- Plant cell cultures and plant viruses
- Human and animal cell cultures, murine embryos

The DSMZ offers data bases on-line, all information is available in print or diskette version. General information on the DSMZ and its services (prices, staff, conditions of delivery) can be found on the DSMZ Home Page URL <http://www.gbf.de/DSMZ/dsmzhome.html>. Available files include also "Catalogue of Strains" 6th edition, 1998 (bacteria, archaea, fungi, yeasts, plasmids, phages, media and references; lists of plant, human and animal cell lines, and plant viruses; "Bacterial Nomenclature Up-to-Date" (List of validly published bacterial names). Files (catalogues, lists, forms) can be downloaded from the GBF-FTP-Server under the address <ftp.gbf.de/pub/DSMZ>.

The postal address of the DSMZ is:

DSMZ-Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH,
Mascheroder Weg 1b,
D-38124 Braunschweig, Germany.

Tel.: +49 531 2616 0; Fax: +49 531 2616 418; E-mail: dsmz@gbf.de

[Go to top](#)

NEWS FROM AND FOR CULTURE COLLECTIONS

Important note on shipping biological materials in compliance with the Dangerous Goods Regulations (DGR) of IATA

The Dangerous Goods Regulations (DGR) is an annually updated manual published by the *International Air Transport Association (IATA)* and is based on the Technical Instructions of the *International Civil Aviation Organisation (ICAO)*. All culture collections shipping microorganisms classified within risk groups 2, 3 or 4 according to the *WHO* classification scheme and hence classified as being dangerous goods (class 6.2) should be aware of the fact that *ICAO/IATA* have introduced obligatory DGR training courses for all shippers of dangerous goods (*ICAO* Technical Instructions, chapter 6; *IATA* DGR, chapter 1.5) certified by the responsible national authorities. The first training course ends with an examination and has to be refreshed after 24 months at the latest.

One has to bear in mind that *IATA* interprets "should" as being compulsory, and one has to adhere to the packing instructions issued by *IATA*. Biological material classified within risk groups 2, 3 or 4 have to be packed according to *IATA* Packing Instruction 602 (class 6.2) using certified containment systems regardless of the actual pathogenic potential. Consequently, a rather harmless colon isolate of *Escherichia coli* has to be packed and shipped like a highly pathogenic virus classified within risk group 4. Lastly, dangerous goods incidents or accidents are reported to the responsible authorities and are subject to legal penalties. An alternative possibility for the shipper is to commission an agent specialised on certified packaging and shipping. However, it is a very costly business to ship microbes and future discussions concerning the risk group definition or packaging classification especially regarding risk group 2 should urgently be envisaged.

The *ICAO* Technical Instructions for the safe transport of dangerous goods by air are implemented by the competent authority of each Member State. For questions the *IATA* Manager Dangerous Goods, Montreal, Fax ++514 954 6759 may be contacted. *IATA* presents online information regarding the background information and also a list of world-wide addresses of containment suppliers via <http://www.iata.org/cargo/dg/dgr.htm>.

[Go to top](#)

ASPERGILLUS REFERENCE CULTURES

The International Commission on *Penicillium* and *Aspergillus* (ICPA) announces the availability of *Aspergillus* Reference Cultures. Eleven species, selected by ICPA members to represent the major characteristics of taxonomic importance in the genus, are described in an accompanying booklet. These may be used in teaching and/or by researchers needing to identify aspergilli in their own labs.

The booklet and cultures are available in North America from ATCC (Contact: Mycology Department, American Type Culture Collection, 12301 Parklawn Drive, Rockville MD 20852-1776, USA; Fax 301 816 4365; Cost U.S. \$220) and from CCFC/DAOM (Contact: Carolyn Babcock, Canadian Collection of Fungal Cultures, Eastern Cereal and Oilseed Research Centre, Agriculture and Agri-Food Canada, Ottawa, Ontario, Canada K1A 0C6; Fax 613 759 1924; Cost Can. \$286). The cultures are also available from the European collections Centraalbureau voor Schimmelcultures (CBS), Baarn, The Netherlands (Fax +31 3554 16124) and IMI, Genetic Resources Collection, International Mycological Institute, Egham, UK (Fax +44 1784 470909) as well as from the Australian collection FRR (Division of Food Research, North Ryde, Australia, Fax 61 2 887 310).

The booklet is also available on the Internet on the ICPA Home Page <<http://res.agr.ca/ecorc/program2/mycology/icpa>>.

For questions about the culture set or booklet, contact Maren Klich, USDA, ARS, SRRC, P.O. Box 19687, New Orleans LA 70179 USA; Fax 504-286-4419; email <mklich@nola.srrc.usda.gov>.

[Go to top](#)

International Journal of Systematic Bacteriology (IJSB)

As of January 1998, the publication of the IJSB has been transferred from the American Society for Microbiology to the Society for General Microbiology (UK). Individual members of the Society of General Microbiology, the American Society for Microbiology or other IUMS-affiliated societies may subscribe Volume 48, 1998 (4 issues: January, April, July and October) at the Journal Sales, Society of General Microbiology, Marlborough House, Basingstoke Road, Spencers Wood, Reading RG7 IAE, UK (Tel: +44 (0)118 988 1800; Fax: +44 (0)118 988 5656; e-mail: jsales@socgenmicrobiol.org.uk). The member subscription rates for individuals (not for institutes or libraries) are \$70.00 for North America and £ 45.00 for the rest of the world. For subscribers in EC countries other than the UK who are not VAT-registered, prices will be subject to UK VAT at the rate current at the time of payment. The new Guidelines for Authors and the latest developments on IJSB are available on the Web site <http://www.socgenmicrobiol.org.uk>.

[Go to top](#)

Philippine Network of Microbial Culture Collections

A list of microbial culture collections in the Philippines, their holdings and services has been published in the Philippine Network of Microbial Culture Collections Newsletter No. 2, August 1997. Contact: Dr. L.M. Tapay, Biotech, UPLB College, Laguna 4031, Philippines, Fax +63 49 536 2721, Email mccsl@biotech.uplb.edu.ph.

[Go to top](#)

NEW CATALOGUES AND DATABASES OF CULTURE COLLECTIONS

CFF Catalogue of Filamentous Fungi, 4th edition, 1996 (free of charge). Culture Collection of Fungi (CCF), Department of Botany, Faculty of Natural Sciences, Charles University, Benátská 2, 128 01 Praha, Czech Republic (Fax +42 2 21953125; E-mail kubatova@prfdec.natur.cuni.cz or vanova@prfdec.natur.cuni.cz)

International Collection of Micro-Organisms from Plants (ICMP). Catalogue of Strains, 3rd edition (1997). The catalogue covers 5850 bacterial and 4200 fungal strains, mainly plant pathogenic, but also includes a collection of 500 rhizobia, and saprophytic and soil-related bacteria and fungi. It includes indexes of type and pathotype strains, an index of plant/micro-organism associations, a strain index and recipes of media for growth and maintenance. Price: \$US30. Bank draft in US\$, payable to Landcare Research, Private Bag 40, Lincoln, Canterbury, New Zealand, or by Visa or Bankcard/Mastercard. E-mail: youngj@land-care.cri.nz.

Catalogue of Luminous Bacteria Cultures, 1997. Culture Collection of Luminous Bacteria IBSO, Institute of Biophysics, Russian Academy of Sciences, Siberian Branch, Krasnoyarsk, 660036, Russia. A diskette version of the catalogue is also available. Fax +7 3912 433400, E-mail krat@bbl.krasnoyarsk.su

[Go to top](#)

BIOLOGY ON THE WEB

In no. 25 of the WFCC Newsletter the URL address of the World Data Centre for Microorganism (WDCM) was wrongly cited. The address is

<http://wdcm.nig.ac.jp/>

the home page of the WDCM is

<http://wdcm.nig.ac.jp/WDCMHomePage.html>.

Cells Alive	http://www.cellsalive.com
Microbiology Video Library	http://www-micro.msb.le.ac.uk/Video/Video.html
Rotavirus Online Data Centre	http://rotavirus.com/about.html
<i>Saccharomyces</i> Genome Database	http://genome-www.stanford.edu/Saccharomyces
The BioTech Web Site	http://biotech.chem.indiana.edu
The Microbe Zoo	http://commtechlab.msu.edu/CTLProjects/dlc-me/zoo
The Tree of Life	http://phylogeny.arizona.edu/tree/phylogeny.html
The Phylogeny of Life	http://www.ucmp.berkeley.edu/exhibit/phylogeny.html

For newcomers in the World Wide Web: Edward J. Renehan, Jr., *Science on the Web: a connoisseur's guide to over 500 of the best, most useful, and most fun science websites*, Springer-Verlag, 1996, 382 pages, DM

RECENT PUBLICATIONS OF INTEREST TO CULTURE COLLECTIONS

- Report of the Meeting Advisory Committee on Dangerous Pathogens (ACDP) Seminar on Microbiological Risk Assessment, 28 January 1997, *Journal of Applied Microbiology* 83, 659-664 (1997)

- S. Falkow What is a pathogen? *ASM News* 63, 359-365 (1997)
- B.E. Kirsop The Convention on Biological Diversity: some implications for microbiology and microbial culture collections. *Journal of Industrial Microbiology* 17, 505-511 (1996)
- T. Sakane, K. Kuroshima Viabilities of dried cultures of various bacteria after preservation for over 20 years and prediction by the accelerated storage test. *Microbiology and Culture Collections* 13, 1-7 (1997)

NEW BOOKS RELEVANT TO CULTURE COLLECTION WORK

- K. Ahern (ed.) *The Biotechnology Software Directory. A Buyer's Guide.* Mary Ann Liebert, Inc., 1995, 281 pp., US\$ 69.95. ISBN 0 913 113 70 0
- G.J. Boland, L.D. Kuykendall *Plant-Microbe Interactions and Biological Control.* Marcel Dekker, Inc., 1997, 464 pp., US\$ 165.00. ISBN 0 8247 0043 0
- M.H. Briscoe (ed.) *Preparing Scientific Illustrations - A Guide to Scientific Illustrations.* Springer, 1996, 204 pp., 206 ill., DM 44.00. ISBN 0 387 94581 4
- M. Clynes *Animal Cell Culture Techniques.* Springer, 1998, 500 pp., US\$ 84.95. ISBN 3 540 63008 2
- R.R. Colwell, U. Simidu, K. Ohwada *Microbial Diversity in Time and Space.* Plenum, 1996, 172 pp., US\$ 75.00. ISBN 0 306 45194 8
- J. Coombs, Y.R. Alston *The Biotechnology Directory.* Macmillan, 1997, 643 pp., £ 175.00. ISBN 0 333 68787 6
- J.D. van Elsas, J.T. Trevors, E.M.H. Wellington *Modern Soil Microbiology.* Marcel Dekker Inc., 1997, 712 pp., US\$ 195.00. ISBN 0 8247 9436 2
- R. Fuller (ed.) *Probiotics 2.* Chapman & Hall, 1997, 224 pp., £ 65. ISBN 0 412 73610 1
- G.E. Jones *Human Cell Culture Protocols. Methods in Molecular Medicine.* Humana Press, 1996, 560 pp., US\$ 79.50. ISBN 0 89603 335 X
- R.Y. Morita *Bacteria in oligotrophic environments.* Chapman & Hall, 1997, 608 pp., £ 69.00. ISBN 0 412 10661 2
- C.E. Morris et al. *Aerial Plant Surface Microbiology.* Plenum, 1996, 294 pp., US\$ 95.00. ISBN 0 306 45382 7
- P. Narayanasamy *Plant Pathogen Detection and Disease Diagnosis.* Marcel Dekker, Inc., 1997, 344 pp., US\$ 145.00. ISBN 0 8247 0040 6
- E.J. Renehan, Jr. *Science on the Web: A Connoisseur's Guide to over 500 of the Best, Most Useful, and Most Fun Science Websites.* Springer, 1996, 382 pp., DM 20.00. ISBN 0 387 94795 7.
- P.M. Rhodes, P. Stanbury (eds.) *Applied Microbial Physiology. A Practical Approach.* IRL Press, 1997, 288 pp., US\$ 55.00. A useful resource and guide to the successful culture of microorganisms in pure form; it covers the optimizing of culture conditions.

- E. Schaechter In the Company of Mushrooms. A Biologist's Tale. Harvard University Press, 1997, 280 pp., £ 16.50
- I.E. Smith et al. (Editorial Committee) Quarantine Pests for Europe. Data sheets on quarantine pests for the European Union and for the European and Mediterranean Plant Protection Organization, 2nd edition. CAB International, 1997
- D.K. Summers The Biology of Plasmids. Blackwell Science, 1996, 157 pp., £ 16.95. ISBN 0 632 03436 X
- A. Varma Mycorrhiza Manual. Springer, 1998, 350pp., US\$ 92.50. ISBN 3 540 62437 6
- K. Wolf (ed.) Nonconventional Yeasts in Biotechnology: A Handbook. Springer, 619 pp., DM 128.00. ISBN 3 540 59482 5
- OECD Intellectual Property, Technology Transfer and Genetic Resources. An OECD Survey of Current Practices and Policies. OECD, 1996, FF 80. ISBN 92 64 15328 4. Also published in French.

The Convention on Biological Diversity, signed in Rio de Janeiro in 1992, is a permanent, worldwide commitment to conserving the earth's biological diversity.

The Convention has brought in focus the links between access to genetic resources, equitable sharing of benefits derivable from them, technology transfer and intellectual property, all complex and potentially conflicting objectives with no simple policy prescriptions.

Intellectual Property, Technology Transfer and Genetic Resources helps clarify the issues and the ongoing international discussions. Prepared by two eminent experts on intellectual property rights, it reviews the relevant laws, practices and policies of OECD countries.

[Go to top](#)

WORKSHOPS AND TRAINING COURSES

Training Activities in Latin America

The Tropica1 Foundation in Brazil has an active training programme for Culture Collections in Latin America. Since 1986 the Tropical Culture Collection (CCT), R. Latino Coelho 1301, CX. Postal 1889, 13.087-010 Campinas-SP, Brasil, and the Tropical Data Base (BDT), in collaboration with WFCC organized more than 40 international workshops, in the field of microbial systematics, bioinformatics and culture collections. This year, in a collaborative effort with the WFCC Education and Capacity Building Committee and the WFCC Patent Committee, the following training events were held:

Workshop: Molecular systematics and evolution of microorganisms (September, 1997)

Teaching staff:

Dr. T. M. Embley (Natural History Museum, London, UK)

Dr. M. Wilkinson (University of Bristol, UK)

Dr. G. Manfio (Tropical Foundation, Campinas, Brazil)

Addressed topics:

- Introduction to microbial systematics and phylogenetic systematics.
- Methods of phylogenetic inference.
- Investigating support for hypotheses of relationships.
- Use of phylogenetic inference and alignment programmes.

Conference: The System of Depositing Biological Material for Patent Purposes (October, 1997)

Speakers:

Dr. D. Fritze, patent curator, German Collection of Microorganisms and Cell Cultures (DSMZ)

Dr. A. Doyle, patent curator, European Collection of Cell Cultures (ECACC)

Dr. M. Mittelbach, director, Brazilian Patent Office (INPI)

Dr. R. Borojevic, "Banco de Células do Rio de Janeiro" (BCRJ)

Dr. V. P. Canhos, president, World Federation for Culture Collection (WFCC)

Addressed topics:

- Legal and technical aspects related to deposit of biological material.
- Provisions of the "Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the Purposes of Patent Procedure".
- Methods of storage and viability testing.
- Accessibility of biological material deposited for patent purposes.
- Request and release procedures for patent strains.
- International packing and shipment regulations of biological materials.

For 1998, the following training activities are planned:

Workshop: Identification and typing of bacteria using ribosomal genes, May 11-13 (tentative date)

Teaching staff:

Jolanta Zakrzewska-Czerwinska, Department of Microbiology, Ludwik Hirsfeld Institute of Immunology and Experimental Therapy, Wroclaw, Poland

Gilson Manfio & Valéria M. de Oliveira, Colegao de Culturas Tropical (CCT/FTPTAT)

Topics to be addressed:

- Theory and practice of molecular techniques for the identification of bacteria using molecular probes and ribosomal genes.
- Characterization of strains by ribotyping.

- The focus will be on the identification and typing of pathogenic bacteria.

Further details on training activities and events can be found at: <http://www.bdt.org.br/bdt/news/cursos> or by contacting Rosely Coelho at rosely@bd.org.br or Rua Latino Coelho, 1301, CEP 13097-010, Campinas (SP), Brazil.

International Mycological Institute, Training Courses for 1998

Basic Mycological Techniques, 22 & 23 January

A short introductory course aimed at microbiology technicians or others needing help with traditional mycological techniques. It will be suitable for those working in plant pathology, industry, food or environmental mycology. It will be particularly useful for new technical staff or those unused to working with fungi. Isolation from plant material, soil and manufactured goods will be covered. Topics will include the preparation of a variety of material for microscopic examination, culturing and aseptic techniques, methods of inducing sporulation and the use and preparation of standard and specialised media. The course will consist of lectures and demonstrations but most time will be spent in experience building practical sessions. There will be opportunities for discussion of any particular mycological problems which participants may have encountered. The course fee of £ 350 includes tuition and a course manual, coffee, tea and cold buffet lunches.

Identification of Industrial & Food Spoilage Fungi, 16 - 20 March

This one week course will be of value to those working in food, pharmaceutical and industrial manufacturing, and biotechnology consultancy companies. It will be of particular use to those involved in quality assurance, clean room monitoring and microbiology services.

An introductory course to the groups of microfungi having the potential to cause problems in the industrial situation and those that cause food spoilage. Participants will have the opportunity to examine material of particular relevance and make reference slides for future use. Approximately 60% of this course will be "hands on" practical work, the remainder of the time being spent on lectures and demonstrations. By the end of the course you will be familiar with the identification of key fungi to generic level and the most important ones to species level.

Other topics include basic techniques and an introductory practice session looking at a whole range of different fungi, and several specialist lectures for either the food or pharmaceutical/ industrial situation where you chose the session of most relevance to you. Planned choices are: Detection & Quantification of Fungi for the food industry or Clean room monitoring & QA for the pharmaceutical and non-food industries; Mycotoxins: Significance, occurrence & detection; The preservation of industrially important fungi with brief visit to IMI collection.

Course fee £ 650 which includes a course manual, coffee, tea and cold buffet lunches. The fee does not include accommodation.

International Course on the Identification of Fungi of Agricultural & Environmental Significance, 10 August-18 September

The International Course at IMI has been running for 19 years with over 230 past participants from 65 different countries. The course aims to give training in the classification and identification of economically important groups of microfungi. Particular attention will be given to those that are commonly found associated with plant diseases and are difficult to identify. The course will be organised to

take account of both tropical and temperate examples in all sections. With prior notice of your particular interests, we can normally provide additional coverage as required. The course will also be of value to those interested in a broad range of fungal identification, perhaps for environmental and biodiversity studies. By use of additional sessions, a wider range of fungal groups can be covered than is normally offered on the formal course. The training includes lectures and informal discussions, but most of the time will be spent in practical work. An 'option' day enables participants to receive individual training. Course fee £ 3200 to include self catering accommodation with private shower and toilet.

Modern Techniques in the Identification of Bacteria and Filamentous Fungi, 19-30 October

This 10 day course is designed to give microbiologists/plant pathologists an introduction to modern techniques currently of use in microbial taxonomy. The course will include lectures and practical work, with opportunities for gaining "hands on" experience of the techniques themselves. Both molecular biological and chemotaxonomic procedures will be used to study filamentous fungi and bacteria of agricultural significance. The course will be especially relevant to those who are considering introducing these techniques to their own work or those who are relatively inexperienced in the techniques and need further help. It is not suitable for those who are already routinely using these methods. Topics to be covered include: RFLP analyses; PCR detection and characterisation methods (including RAPD's); Detection and identification techniques using serological methods; Characterisation of microorganisms by polyacrylamide gel electrophoresis including analysis of whole cell proteins and extra- and intracellular isoenzyme patterns for identification; Identification of bacteria by quantitative fatty acid analysis; Analysis of isoprenoid quinones; Diagnostic uses of secondary metabolites (eg phytotoxins, mycotoxins) by TLC, HPLC. Course fee £ 1550 which includes a course manual, coffee and tea.

Isolation & Identification of Fungi from Natural Habitats, 26-30 November

A 5 day course designed to help those needing to isolate fungi from a range of different natural habitats and give a preliminary identification to the isolations. It will be of use to those involved in natural product screening programmes, ecosystem and biodiversity surveys, environmental consultancy, bioaudits, ecology and soil biology. The course will cover a wide range of techniques for obtaining fungi and suggestions and ideas for maximising the diversity sampled. Soil will be the model habitat studied but participants may select other habitats to study in detail from aquatic environments or insects and other invertebrates; plant material or air; and mycorrhizal fungi or fungi from extreme environments. The course will also include a session on how to go about identifying a fungus and the recognition of the main groups of fungi. An exploratory session on the gathering and handling of data about fungal biodiversity in an ecosystem will be included and an identification workshop will allow participants to ask a group of expert mycologists specific or general questions. The course fee of £ 750 includes tuition and a course manual, coffee, tea and cold buffet lunches.

Specialist courses planned for 1999

In addition to our usual course programme, the following courses are planned for 1999: Culture Collection Techniques; PCR - Fingerprinting & Characterization; Entomogenous Fungi.

For further details, please contact Mrs Stephanie Groundwater, International Mycological Institute, Bakeham Lane, Egham, Surrey TW20 9TY UIC, Tel +44 1784 470111, Fax +44 1784 470909, Email s.groundwater@cabi.org

European Collection of Cell Cultures (ECACC), Training Courses for 1998

An Introduction to Cell Culture Techniques, 23-27 March 1998 and 21-25 September 1998.

This course will provide a programme of lectures and practicals designed for people with limited cell culture experience. Courses are limited to 12 participants, costs are £ 775 (excluding accommodation). A bursary of £ 500 is available to workers from non-profit organisations within Europe. Contact: ECACC, C.A.M. R., Salisbury SP4 0JG, UK (Fax +44 1980 611315; E-mail eccac@camr.org.uk).

MIRCEN COURSE FOR 1998: YEAST BIOTECHNOLOGY

GOALS: The purpose of this course is to expose participants to recent developments in yeast biotechnology with special emphasis on techniques and application. Practical and demonstrations of most techniques will be presented.

Course attendees: B Sc and higher qualifications to a maximum of 50
Date: 26 January-6 February 1998
Place: Department of Microbiology and Biochemistry, University of the Orange Free State, Bloemfonteine, South Africa

COURSE CONTENT

1. The world of yeasts: Taxonomy and ecology (van der Walt, UOFS/Botha, UOFS)
2. Molecular biology and genetics of yeast including non-traditional yeasts (Thevelein, KU Leuven/Dorrington, Rhodes University)
3. Physiology and biochemistry of yeasts (Hofmeyer, U. Stellenbosch/Kilian, UOFS)
4. Yeast process development
 - 4.1 Growth kinetics (du Preez, UOFS)
 - 4.2 Bioreactor design (Villadsen, TU Denmark or Harrison, UCT)
5. Processes using yeasts
 - 5.1 Yeast biotransformations (Smit, UOFS)
 - 5.2 Bakers, brewing and wine yeasts (Jacobs, KWV/ Hulse, SAB)
 - 5.3 High value products from yeast (Van Zyl, U. Stellenbosch/G. Pretorius, UOFS)
 - 5.4 Conversion of waste using yeast (Prior, UOFS/du Plessis, UOFS)
6. Techniques in yeast biology
 - 6.1 Isolation and identification of yeast with demonstration (Botha, UOFS)
 - 6.2 Preservation of yeast and culture collection management (E. Pretorius, UOFS)
 - 6.3 Cultivation of yeasts in fermenters and SSF (du Preez, UOFS)

6.4 Analytical techniques in yeast biology (Litthauer, UOFS)

6.5 Molecular techniques in yeast biology (G. Pretorius, UOFS/Vergeer. UOFS)

Contact: MIRCEN Yeast Biotechnology Course, Att. Ms Elma Pretorius, Department of Microbiology & Biochemistry, University of the Orange Free State, P.O. Box 339, Bloemfontein 9300, South Africa (Fax +27 51 4482004; E-mail pretoree@micro.nw.uovs.ac.za)

[Go to top](#)

CONFERENCES AND MEETINGS

International Congress on Extremophiles, 18-22 January 1998, Yokohama, Japan. Contact: Mr. Katsumi Sakakura (Fax: +81 468 665306, Email: shimizut@jamstec.go.jp)

Society for General Microbiology, 140th Ordinary Meeting, 30 March-2 April 1998, Nottingham, UK. Main Symposium: Microbial Responses to Light and Time. Contact: Society for General Microbiology, Meetings Office, Marlborough House, Basingstoke Road, Spencers Wood, Reading RG7 IAE, UK (Fax +44 118 998 5656; E-mail meetings@socgenmicrobiol.org.uk)

3rd Anaerobe Society of the Americas (ASA) Biennial Meeting, 24-26 April 1998, Buenos Aires, Argentina. Contact: Jill Silton, ASA, 902 Teakwood Road, Los Angeles, CA 90049, USA (Fax +1 310 471 2825; E-mail jsilton@anaerobe.org)

98th Meeting of the American Society for Microbiology, 17-21 May 1998, Atlanta, USA. Contact: American Society for Microbiology, Meetings Dep., 1325 Massachusetts Ave., N.W., Washington, D.C. 20005-4175 (Fax +1 202 942 9340; E-mail meetingsinfo@asmusa.org; WWW, <http://www.asmusa.org>)

ASM Conference on Future Prospects in Marine Microbiology and Biotechnology, 13-16 June 1998, New Orleans, Louisiana, USA. Contact: American Society for Microbiology, Meetings Dep., 1325 Massachusetts Ave., N.W., Washington, D.C. 20005-4175 (Fax +1 202 942 9340; E-mail meetingsinfo@asmusa.org; WWW, <http://www.asmusa.org>)

GIM-98, 8th International Symposium on the Genetics of Industrial Microorganisms, 28 June-3 July 1998, Jerusalem, Israel. Contact: Mrs. T. Gur, GIM-98, P.O.Box 50006, Tel Aviv, Israel (Fax +927 3 5175674; E-mail gim@kenes.com; www: <http://www.tau.ac.il/~biotwww/gim98.html>)

2nd International Symposium on Propionibacteria, 25-27 June, 1998, Cork, Ireland. Contact: Dr. Tim Cogan, Dairy Products Research Centre, Fermoy, Ireland. (Fax +353 25 42340; E-mail Tcogan@dpc.Teagasc.ie)

International Symposium on Aquatic Microbiology, 13-16 July, 1998, Lancaster, UK. Contact: Society for Applied Microbiology, The Blore Tower, The Harpur Centre, Bedford MK40 1TQ, UK (Fax +44 1234 326678)

8th International Symposium on Microbial Ecology, 9-14 August, 1998, Halifax, Nova Scotia. Contact: Dr. Colin R. Bell, Microbial Ecology Laboratory, Department of Biology, Acadia University, Wolfville, Nova Scotia, Canada B0P 1X0 (Fax +1 902 542 3466; E-mail isme8@acadiau.ca)

7th International Congress of Plant Pathology, 9-16 August, 1998, Edinburgh, UK. Contact: ICPP Congress Secretariat c/o Meeting Makers, 50 George Street, Glasgow G1 1QE (Fax +44 141520511)

6th International Mycological Conference, 23-28 August, 1998, Jerusalem, Israel. Contact: Secretariat
6th International Mycological Conference, P.O. Box 50006, Tel Aviv 61500, Israel

3rd International Conference on Anthrax, 7-10 September, 1998, Plymouth, UK. Contact: Society for
Applied Microbiology, The Blore Tower, The Harpur Centre, Bedford MK40 1TQ, UK (Fax +44 1234 326678; E-
mail sfam@btinternet.com)

[Go to top](#)

To all WFCC Members

The Editor of the WFCC Newsletter welcomes any contribution you may have.

Would you like to

- send a feature article
- send a letter to the editor
- draw the attention to a current topic
- supply a good idea to improve the newsletter
- send an article describing the activities of your culture collection
- start a discussion on a problem recently occurred to you concerning
culture collection matters

Did you know or read about

- Internet news
- news of culture collections
- books, publications, reviews
- new catalogues or databases
- news of old and new members
- workshops, conferences, meetings relevant to culture collections
- new regulations, eg. shipping of cultures (in your country or internationally)

Please do not hesitate to send material or proposals to the editor

Dr. Dieter Claus

Chemnitzer Str. 3

D-37085 Göttingen, Germany

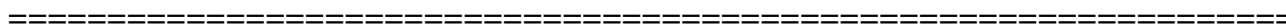
Tel. +49 551 792653

Fax +49 551 55791

E-mail clausgoettingen@flynet.de

or to any WFCC Officer or Board Member

[Go to top](#)



Announcement and Request

The WFCC Newsletters 12-19 and 23-26 are available on the Internet via the World Date Centre for Microorganisms (<http://wdcn.nig.ac.jp/wfcc/wfcc.html>) or via Bioline (<http://www.bdt.org.br/bioline/>)

Back issues will be added as soon as available. WFCC-Members, who have spare copies of Newsletter No. 1-11, 20 and 21/22 are kindly asked to provide these to the WFCC Newsletter editor for scanning into the computer. We will of course send your copies back to you.

[Go to top](#)