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WFCC MATTERS

FIRST CIRCULAR

ICCC-9

Ninth International Congress for Culture Collections

Microbial Resources for the New Millennium

July 23-28, 2000, Brisbane, Australia

The Congress

The World Federation for Culture Collections (WFCC) is pleased to invite you to participate in the Ninth International Congress for Culture Collections (ICCC-9). Congresses are held every four years and provide the best opportunity to receive up to date information on scientific, managerial, and regulatory issues affecting culture collections, for those working in culture collections, and for those using the facilities, services, and information resources provided by culture collections of microorganisms, cultured cells, and genetic resources.

The WFCC is an international multidisciplinary Federation within the International Union of Microbiological Societies and the International Union of Biological Sciences and is dedicated to fostering the interests of culture collections and their users and promoting and supporting international programs for the conservation and use of microbial, cellular, and genetic resources, and interacts with international governmental and non-governmental organizations to further these objectives.

Congress themes

The major streams of ICCC-9 are Microbial Diversity, *ex-situ* Conservation, Culture collection management, Microbial systematics and identification, and Bioinformatics. Sessions are planned in the following areas:

Research support: Culture collections for health, agriculture, environment, genomics, taxonomy, and identification.

Convention on Biological Diversity: Microbial diversity, bioprospecting, access and benefit sharing, training and capacity building.

Industrial Applications: Biotechnology, bioremediation, biocontrol, bioinformatics.

Collection administration: Management and quality assurance, legal affairs, regulatory matters, patent cultures, standards, and infrastructure support

Congress format

In the tradition of previous Congresses, and building on the outstanding success of ICCC-8 in the Netherlands, ICCC-9 will provide an opportunity for formal and informal interaction through a mix of Plenary Lectures, Symposia, Workshops, and Round Table discussions, and social events. Keynote speakers will contribute thought-provoking and challenging ideas about the future role of culture collections as well as sharing their experience in topical areas. One highlight of the Congress will be the presentation of the Skerman Award Lecture by a young microbiologist selected for an outstanding contribution to

microbial systematics research.

The General Assembly of the WFCC will be held during the Congress as well as meetings of the WFCC Executive Board and committees. These meetings provide an opportunity for direct input to the policies and future programs of the WFCC.

The Congress proceedings will be published from oral and poster presentations. Guidelines for papers will be provided in the second circular early in 1999.

The venue

The venue for the Congress is the Brisbane Convention and Exhibition Centre located in Brisbane's South Bank Parklands and culture centre, a short walk or ferry ride from the heart of the city with a wide choice of accommodation and activities. The Parklands (former site of EXPO 1988) comprise 16 hectares of landscaped gardens, restaurants and a range of entertainment facilities.

The culture centre incorporates the Queensland Performing Arts complex, the Queensland Art Gallery, the Queensland Museum, the State Library, and the Queensland Conservatorium of Music.

Brisbane is a vibrant, modern, but relaxed and friendly sub-tropical city with abundant sunshine, green parks and proximity to white sandy beaches, rainforest, and national parks.

The city is served by major international airlines and is a convenient gateway to other tourist attractions. We suggest that you plan some extra time to experience Australian hospitality and spectacular scenery such as the Great Barrier Reef and wet tropical rainforests in the 'Far North', Ayres Rock in the 'Red Centre', Kakadu National Park in the 'Top End', southern cities, or snow-capped Mt. Kosciusko in the 'High Country'. Remember, though, Australia is a large continent and you will need adequate time.

Organization

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International Organizing Committee

Dr. Vanderlei Canhos, WFCC President (Chair) and WFCC Executive Board members

Scientific Program Committee

Prof. Erko Stackebrandt (Chair)

German Collection of Microorganisms and Cell Cultures

Further information

The second circular with details about the program, hotel accommodation, and registration will be distributed early in 1999 and will be available on the WFCC Home Page. To receive further information please complete the attached Pre-registration form and return to the ICCC-9 Secretariat or register directly online via the WFCC Home Page http://wdcm.nig.ac.jp/wfcc/AboutWFCC.html.

Pre-registration Please complete the following details to register your expression of interest and to receive further information as it becomes available. Title (circle): Prof/Dr/Mr/Ms/other Given name: ____ Surname: Organisation:_____ Address: Telephone: (Please include international codes) Fax: (Please include international codes) Email address: I would like further circulars I would like to make an oral presentation I would like to make a poster presentation Topic of presentation:

Other suggested Symposium topics:		
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WFCC WORKSHOP

THE ECONOMIC VALUE OF MICROBIAL GENETIC RESOURCES

to be held at the

Eighth International Symposium on Microbial Ecology (http://www.glinx.com/isme8/)

Halifax, Canada, August 12th 1998

The WFCC Executive Board and the Committee on Biodiversity are planning the above workshop as part of the on-going activities to resolve some of the uncertainties and develop procedures for the distribution of exsitu Microbial Genetic Resources (MGRs) within the framework of the Convention on Biological Diversity (CBD).

Following the international workshop at the Eighth International Congress for Culture Collections held in Veldhoven, Netherlands (August 1996), an Information Document on Access to Ex-situ Microbial Genetic Resources within the Framework of the CBD was finalized 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). This document was summarized and distributed at the Third Conference of the Parties to the CBD (Buenos Aires, Argentina, November 1996) by the CBD Secretariat as an Information Document (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 microbial genetic resources, 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 programs and to assign values that should be attached to potential industrial strains for royalty and licensing purposes and the development of material transfer agreements and benefit sharing.

Moreover, the value of the services delivered by the ex-situ collections to the international scientific community and to society requires an economic assessment to provide policy makers with the information needed for sustainable support. 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-8 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.

The WFCC gratefully acknowledges the support of the European Union's Biotechnology Directorate (DGXII), The Organization of the American States (OAS) and Health Canada.

http://www.wfcc.info/NEWSLETTER/Newsletter28.html

HALIFAX WORLD TRADE AND CONVENTION CENTER, August 12, 1998

08:30	REGISTRATION
09:00	● Overview of WFCC activities and CBD developments, V. Canhos and CBD Secretariat speaker
09:30	ECONOMIC VALUE OF BIOLOGICAL DIVERSITY Chair: B Kirsop, UK, Co-chair: D.K. Song, China • Value of in-situ microbial diversity, J. Staley, USA • Value of microbial diversity for biotechnological applications, J.C. Hunter-Cevera, USA
10:30	COFFEE
11:00	ECONOMIC VALUE OF EX-SITU COLLECTIONS Chair: R. Colwell, USA; Co-chair: L. Sly, Australia • Views of Service Collections: □ E. Stackebrandt, DSMZ, Germany □ R. Cypess, ATCC, USA • Views of IDA's and Research Collections: □ D. Fritze, WFCC Patents ctee/DSMZ, Germany
12:00	DISCUSSION chaired by R. Colwell, USA, and L. Sly; Australia
12:30	LUNCH
13:30	APPROACHES TO ASSESSING VALUE AND PROMOTING INCENTIVES Chair: C. Takase, CBD Secretariat; Co-chair: J. Staley, USA • Approaches to assessing value, A. Artuso, USA • Promoting incentives for bioprospecting, J. Vogel, Ecuador
14:30	THE VALUE OF MICROORGANISMS AND GENOMIC INFORMATION Chair: D. van der Mei, Netherlands; Co-chair: H. Sugawara, Japan Biological nitrogen fixation in agriculture, H. Coutinho, Brazil The value of extremophiles in biotechnology, E. Mathur, Diversa Co., USA Microorganisms and the development of bioindustries in Japan, S. Sumida, Japan

15:30	TEA
15:45	INTERNATIONAL INITIATIVES AND PLANS (Valuation, Access / Equitable Sharing and Bioprospecting) Chair: A. H. Zakri, Malaysia; Co-chair: A. Doyle, UK • The Biotrade Initiative, UNCTAD • The Revision of the FAO International Undertaking, IPGRI/CGIR • The International Cooperative Biodiversity Program • Code of Conduct for Accessing MGR's, MOSAICC project
16:45	PLENARY DISCUSSION AND RECOMMENDATIONS Chair: OECD participant; Co-chair: J. Hunter-Cevera, USA

Note: Updated information on the workshop and background documents will be available at

http://wdcm.nig.ac.jp/wfcc/index.html

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WFCC-MIRCEN World Data Center for Microorganisms (WDCM)

moves to a new host institute

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1. Beginning and growth of WDCM in Brisbane, Wako and Mishima

It was in July 1966 when a group of specialists met in Paris to solve problems related to culture collections. This meeting was triggered by the Japan Federation for Culture Collections (JFCC, the current name is Japan Society for Culture Collections (JSCC)) and sponsored by the United Nations Educational, Scientific and Cultural Organization (UNESCO). The group soon recognized the necessity for a World Directory of Collections of Cultures of Microorganism as the base for the improvement of culture collections worldwide.

Dr. S. Martin of the National Research Council of Canada conducted an initial survey of culture collections in 1967. Professor V. B. D. Skerman of the University of Queensland in Brisbane, Australia continued the survey

work and published three editions of the World Directory. Thus a data centre for culture collections was born in Australia.

After the retirement of Professor V. B. D. Skerman, the World Federation for Culture Collections (WFCC) decided in 1986 to move the data centre to the Life Science Research Information Section (LSRIS) of RIKEN in Wako, Japan, following the call for international competitive submissions.

Professor Kazuo Komagata and later Dr. Hideaki Sugawara served as the director of the data center.

The data centre in RIKEN was renamed the WFCC-MIRCEN World Data Centre for Microorganisms (WDCM) and developed on-line databases on culture collections and their holdings. They are called CCINFO and STRAIN. World Wide Web (WWW) servers for WDCM and WFCC have since been developed there also.

In 1996, Dr. Hideaki Sugawara moved from LSRIS/RIKEN to the National Institute of Genetics (NIG) in Mishima, Japan, where the DNA Data Bank of Japan resides. Following many discussions among RIKEN, NIG, JSCC and WFCC, the four parties agreed in August 1996 that WDCM be transferred from RIKEN to NIG.

The WWW at NIG started functioning from April 1 st, 1997. The URL addresses are now http://wdcm.nig.ac.jp/ for WDCM and http://wdcm.nig.ac.jp/ for WFCC.

2. Positive appraisal of WDCM at NIG

Recently, an evaluation of the WDCM HomePage was made by the American Society of Microbiology: "WFCC World Data Center for Microorganisms is a resource maintained at RIKEN, Japan, as a clearing house on the function and services provided by microbial culture collections worldwide. The page enables keyword searches of the database to allow ready access to the appropriate culture collection a researcher would need to contact. The page maintains current links to all the collections of microorganisms, algae and cell lines, and all linked pages (as well as those on the site) downloaded quickly. This site should be of great value to the microbiology community at large; in particular the listing of consulting services available at each culture collection should be very helpful --- " with some suggestions for the improvement.

The WDCM WWW site contains:

- Guide to WDCM and Supporting Organization
 - WFCC, CODATA, UNESCO, UNEP, CIB, JST
- Locator of Culture Collections and Strains
 - Here you could search cultures, experts, services etc., worldwide

Databases provided by individual Culture Collections and Cell Banks, Sequence and Phylogenetic Analysis, Genome Projects, Biodiversity, Publishers

- Other
 - WWW servers and news group for Bio-medicine

NOTE:

The Agent for Hunting Microbial Information on the INTERNET (AHMII) is available in the menu of "Locator of Culture Collections and Strains".

The WFCC WWW site contains sections on: About the WFCC, What's New, WFCC Executive Board, Committees and Activities, Statutes and Bylaws, Membership, Discussion List, Skerman Prize, Publications - books, reports, newsletters, Workshops and Conferences, Links

NOTE:

Some menus are under construction.

WDCM started a new survey to update the databases of CCINFO and STRAIN sponsored by Japan Science and Technology Corporation (JST) in January 1998 and got replies from 168 culture collections by May 12th, 1998, most of them are active but a few culture collections stop functioning for various reason including retirement of curators. The result of the survey will soon be reflected to CCINFO and STRAIN.

3. WDCM expects new developments

The director of WDCM, Professor Hideaki Sugawara, has participated in meetings of the OECD Megascience Forum Biological Informatics Working Group in the last two years, which had sub-groups for Biodiversity Informatics, Neuro-informatics and IPR/Ethics. The report compiled by the Working Group will be evaluated and approved by OECD committees and its ministerial meeting by next March.

The Biodiversity Informatics sub-group proposed a concept of a Global Biodiversity Informatics Facility (GBIF) and some members of the sub-group will move to the materialization of a GBIF secretariat. The GBIF is not specific to microorganisms but will have a certain impact to the networking of microbial culture collections in the age of biodiversity.

It is interesting to know that the CSTP Working Party on Biotechnology has also discussed the future role of biological resources. The WDCM will organize a symposium on scientific and business aspects of microbial resources centres probably in February 1999 related to the discussions in OECD.

The staff of WDCM have joined a national project on the databasing and networking of biological resources in Japan since last year. WDCM will develop a new version of AHMII and a model of integration of distributed data resources by use of object-oriented technology. The staff are also members of APBioNet (Asia Pacific Bioinformatics Network), formed to establish a useful and efficient information environment for researchers there. Of course, APBioNet will be interconnected with all domains in INTERNET.

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Relocation of ATCC

The American Type Culture Collection (ATCC) has now moved form Rockville, Maryland, to a new state-of theart facility. The new address is 10801 University Boulevard, Manassas, Virginia, 20110-2209, USA (Tel: +1 703 365 2700; Fax: +1 703 365 2701; Internet: http://www.atcc.org/)

WHO CAN HELP?

The last WFCC Newsletter was returned to the editor from the following member:

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If somebody is aware of the new address of Dr. Kumari, please contact the editor.

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FOCUS ON CULTURE COLLECTIONS

Regional Specialised Collection of Alkanotrophic Microorganisms

The Regional Specialised Collection of Alkanotrophic Microorganisms (Acronym: IEGM; (WDCM WFCC # 768) is a non-profit organisation that aims at collecting, characterisation and identification, maintenance and distribution of industrially valuable bacterial cultures with the main biological peculiarity to destruct and transform natural and anthropogenic hydrocar-bons (including gaseous n-alkanes such as ethane, propane and n-butane) and a wide range of xenobiotics. The Collection is a part of the laboratory of alkanotrophic microorganisms at the Institute of Ecology and Genetics of Microorganisms of the Ural Branch, Russian Academy of Sciences. The Collection is based on the author's collection of alkanotrophic microorganisms which has been initiated in 1975 to study this group of organisms with respect to their usage as bioindicators of oil- and gas-bearing and environmental pollution.

Currently the IEGM Collection comprises more than 800 identified pure non-pathogenic and aerobic bacterial cultures isolated from samples of core, stratal and surface waters, snow, air and soils of contrasting climatic regions of the Former Soviet Union. These bacterial cultures belong to the genera *Acinetobacter, Corynebacterium, Dermacoccus, Dietzia, Gordona, Kocuria, Micrococcus, Nocardia* and *Rhodococcus*.

The bacteria of the genus *Rhodococcus* (Zopf 1891) Goodfellow and Alderson 1977 represent the major part of the IEGM Collection. Having significant potential for industrial application, the extreme forms are widely represented in the Collection; they are the strains that destruct and transform various classes of organic pollutants; strains that produce indispensable amino acids, vitamins and biosurfactants. The collected fund of the non-pathogenic *Rhodococcus* cultures with a highly active enzymatic oxygenase complex represents the appropriate object to be studied with respect to new producers of valuable substances and destructors of xeno-biotics; and also for designing new forms and developing new biological technologies.

Main subjects of the Collection are general and applied microbiology, microbial ecology, physiology, systematics and taxonomy, and microbial diversity.

The main goal of the research activities of the IEGM Collection is to study and preserve *in/ex situ* the functional species diversity of the alkanotrophic microorganisms useful for ecocenoses and practical human activity.

The research activities are directed to the areas related to

- the taxonomic study aiming at the improvement of classification and identification of the eubacteria studied;
- environmental studies involving the improvement of methods for effective isolation of alkanotrophic microorganisms from natural substrates;
- the study of biodiversity;
- the development of methods for effective conservation and long-term preservation of the collection cultures.

The provided services include:

- distribution and exchange of strains;
- characterisation and identification of isolates and samples;
- isolation of cultures;
- preservation;
- contract research;

- training courses in the methods for isolation, cultivation and identification of alkanotrophic microorganisms;
- field and laboratory work.

For taxonomic analyses, only organisms up to and including risk group 2 are accepted (see Council Directive 93/88/EEC on the protection of workers from risks related to exposure to biological agents at work. Official Journal of European Communities, No L 268/71 of 29/10/93).

Taxonomic methods are in use which include:

- light and electron microscopy;
- physiological tests using classical test systems;
- evaluation of the data using numerical methods;
- determination of the cell wall structure (amino acid and sugar composition) by TLG;
- analysis of the cellular polar lipid composition by TLC;
- analysis of the cellular fatty acid composition by GC;
- bacterial whole-cell protein electrophoresis;
- immunochemical analysis.

The IEGM Collection has the bank of specific polyclonal immune sera against the majority of valid species of *Dermacoccus*, *Dietzia*, *Gordona*, *Kocuria*, *Micrococcus* and *Rhodococcus*.

The first edition of the Catalogue of strains of Regional Specialised Collection of Alkano-trophic Microorganisms, 1994, comprises the history of more than 400 strains stored, their potential biotechnological properties, nutrient media compositions and conservation regimes. The Catalogue also includes references relevant to the taxonomy and biology of the collection cultures.

Databases on microbial strains are available on-line (Internet address: http://www.ecology.psu.ru/jegmcol/).

Development of the IEGM Collection Network was financially supported by the NATO Computer Networking Programme (NIG 960787).

Correspondent: Prof. Dr. Irena B. Ivshina, Head of the IEGM Collection

Address:

Regional Specialised Collection of Alkanotrophic Microorganisms Institute of Ecology and Genetics of Microorganisms Ural Branch of the Russian Academy of Sciences 13 Golev str., 614081 PERM, RUSSIA

Tel.: +7 13422 -646714, Fax: +7 13422 1 646711

Email: <u>iegmcol@ecology.psu.ru</u> <u>or ivshina@ecology.psu.ru</u> Internet address: http://www.ecology.psu.ru/iegmcol/

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FOCUS ON VENEZUELA

Under the framework of a Bilateral Cooperation Program Brazil-Venezuela, a technical visit and a training

course on "Microbial Culture Collections" were held at the Instituto Nacional de Higiene "Rafael Rangel" (INHRR) in Caracas, Venezuela, from March 18-20th, 1998. The event organized by the INHRR in collaboration with the Tropical Culture Collection (CCT) was funded by the Pan American Health Organization (PAHO).

More than 40 microbiologists from the INHRR, universities and industries in Venezuela parti-cipated in the training course where topics related to the organization and management of microbial culture collections and information were addressed. There is a renewed interest in culture collections issues in Venezuela and during the event several scientists decided to affi-liate to WFCC (see the new members list on page 10).

Venezuelan Center for Culture Collections (CVCM)

The Venezuelan Center for Cultures Collections (CVCM) is an institution emerged from a col-lection initiated more than 40 years ago at the Faculty of Sciences of the Central University of Venezuela (UCV). The CVCM, founded by Dr. Vidal Rodríguez Lemoine in 1991, is current-ly located in the Institute of Experimental Biology of the UCV in Caracas, Venezuela.

The CVCM is a non-profit academic organization formed by a voluntary association of Vene-zuelan public and private institutions interested in culture collections. The effort is funded by the Interamerican Bank for Development (BID), the National Council for Scientific and Tech-nological Research (CONICIT), the University Council for Development of Sciences and Humanities (CDCH) and the Institute for Experimental Biology. In January 1998, the CVCM was transformed into the National Laboratory for Culture Collections sponsored by CONICIT. The CVCM facilities provided by the UCV include research laboratories for mani-pulation and identification and long-term preservation and storage of microorganisms (freeze-drying and cryogenic storage).

The CVCM is at the present time a service culture collection. Specific functions are:

to provide conditions to establish a network with all culture collections in the country and abroad, and with national and international organizations involved with culture collections;

to collect, preserve, maintain and supply cultures of microorganisms of interest in Micro-biology, Biomedicine, Biotechnology, Education and other fields of research and applied sciences;

to provide information registered at the CVCM data system and published in the periodical CVCM catalogue, and to incorporate data from other collections in order to establish a National Data Service;

to promote and collaborate in research programs for the isolation, characterization and identification of microorganisms from ecosystems in Venezuela;

to provide training courses on isolation, characterization, preservation and manipulation of microorganisms.

The CVCM published a catalogue of strains in 1996. A second edition will be published in November 1998. For catalogue copies and additional information please contact:

Centro Venezolano de Colecciones de Microorganismos (CVCM). Instituto de Biologia Experimental. Facultad de Ciencias, Universidad Central de Venezuela. Caracas, 1041^A - Venezuela, Apartado de Correos 47114 - Telefone/Fax (58 2) 751-8353

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NEWS FROM AND FOR CULTURE COLLECTIONS

CABRI - the Common Access to Biotechnological Resources and Information project

Alan Doyle, ECACC, CAMR, Porton Down, Salisbury, SP4 OJG, England (alan.doyle@camr.org.uk),

Jack Franklin, ASFRA BV, Bult 2,1135 AJ Edam, The Netherlands (asfra@asfra.nl).

It is common knowledge that consumers like choice, but they are not that keen on having to travel large distances encountering different procedures and barriers to exercise that choice. Hence the present trend towards shopping malls, furniture boulevards or even car dealer parks where the consumer can find the competing products he/she desires in one area.

The coming of the Internet, and especially the WWW, will provide a similar opportunity for electronic vendors and shoppers alike. One stop shops are being developed and will surely prove popular: especially if they offer the consumer guarantees on quality and delivery.

CABRI - the Common Access to Biotechnological Resources and Information project, is using this concept to offer access to, initially, six of Europe's Culture Collections¹. The customer will soon be able to connect to a central server which will have these centre's Culture Collection Catalogues indexed and mounted online. The catalogues will have standardised features such as a Minimum Data Set, and a Minimum Searching Data Set so that the user can easily locate the required product and they will then be taken to the collection concerned for purchasing formalities to be concluded.

While CABRI could not have been developed without using the latest developments in Information Technology, its key claim will be quality. One of the criticisms of Shopping on the Internet is that the customer can be misled as to the quality of what is on offer, and CABRI is handling this by developing Quality Control and Quality Assurance Guidelines on a series of facets ranging from the storage of the culture to its delivery. Therefore, Collection Quality Management Standards Manuals, based upon national, European and international biotechnology standards, are currently being completed with the authoring teams ensuring that partner collections have instructions to guarantee:

- authenticity of micro-organisms
- purity and freedom from microbial contamination (e.g. mycoplasma in cell lines)
- accuracy of data
- production criteria/standards including stability of key characteristics (product expression)
- adherence to ethical and safety standards in biotechnology
- punctuality and delivery standards.

These manuals are now being refereed by non-CABRI reviewers, and tested among the part-ners. Soon, an audit trail will be developed so that collections participating in CABRI can show their adherence to these quality criteria. Only collections that adhere to these quality guidelines will be included in CABRI. CABRI is partially funded by the collections involved, a group of information service organisations, and the European Commission. It is running as a Demonstration Project and will be tested later this year.

CABRI will also explore links with other EC-financed projects such as the Advanced Data-base Linking in Biotechnology (ADLIB) project. This will allow CABRI users to further their search in other biotechnology-orientated databases with a special emphasis on linking to litera-ture and full text databases. The project team expects that this will greatly enhance the use of the various catalogues as the user can then gain additional verification from the literature trail.

The project welcomes inquiries from other European collections. These should be directed to either of the authors, or visit our website http://www.cabri.org.

The culture collections are:

Belgian Coordinated Collections of Microorganisms (BCCM), The Federal Services for Scientific Technical and Cultural Affairs

Centraalbureau voor Schimmelcultures (CBS), Royal Netherlands Academy of Arts and Sciences (RNAAS)

DSMZ-Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH

European Collection of Animal Cell Cultures (ECACC), Centre for Applied Microbiology and Research (CAMR)

Human Genome Mapping Project Resource Centre (HGMP-RC), Medical Research Council

These are supported in the management, business development and Information Technology roles by: Institut National de la Santé et de la Recherche Medicale (INSERM); ASFRA BV; Centre Européen de Recherche et de Développement en Information et Communication Scientifiques (CERDIC) and the Microbial Strain Data Network (MSDN).

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The Van Niel International Prize for Studies in Bacterial Systematics

The Van Niel Prize was established in 1986 by a contribution of \$ 10,000 from the IUMS International Committee on Systematic Bacteriology and a donation from the late Professor V. B. D. Skerman in honor of the contribution to scholarship in the field of Microbiology of Professor Cornelis Bernadus Van Niel, who died in 1985.

The Prize is awarded by the Senate of the University of Queensland, Australia:

- On the recommendation of the Head of the Department of Microbiology following consultation with a panel
 of experts nominated on behalf of the International Committee on Systematic Bacteriology.
- To the person who is judged to have made the most distinguished contribution in the field of Bacterial Systematics in the previous 3 years.
- 3.

 The Prize shall be awarded in the year of the meeting of the Congress of the International Union of Microbiological Sciences, that is every three years.
- 4. The Prize takes the form of a citation and check for approximately \$ 2.000.

The role of the International Committee on Systematic Bacteriology is purely advisory. The committee has the task of monitoring publications in the field of bacterial systematics and appraising the University of Queensland of the outcome of this exercise. It does not need to call for nominations.

The first Prize was awarded to Professor P. H. A. Sneath (Leicester University, UK) at the IUMS Congress held in Osaka, 1990. The second Prize was awarded to Prof. Josef de Ley (University of Gent, Belgium) at the IUMS Congress held in Prague, 1994. No Prize was awarded at the past meeting in Jerusalem in 1996 because the change in the scheduling of IUMS Congresses required an alteration in the charter of the Prize. The next IUMS Congress is to be held in Sydney, Australia, August 16-20, 1999.

Nominations for the Prize should be sent to the address given below by the end of February 1999:

Prof. Y. Takeda, Vice-President IUMS Research Institute, International Medical Center of Japan 1-21-1 Toyama, Shinjuku-ku, Tokyo 162, Japan Fax: +81 3 3202 7364

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Asian Information Network for Microbial Research*

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Yong-Ha Park³, Coy-Choke Ho⁴, Been Hen Nga⁵, Endang S.Rahayu⁶, Priscilla C.Sanchez⁷,

Vullapa Arunpairojana⁸, Mikiya Hiroki⁹, Makoto M.Watanabe⁹ and Takashi Nakase¹

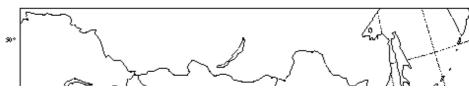
- ¹ Japan Collection of Microorganisms, The Institute of Physical and Chemical Research (RIKEN) 2-1 Hirosawa Wako Saitama, 351-01, Japan
- ² Institute of Microbiology, Chinese Academy of Science, Beijing, China
- ³ Korea Research Institute of Bioscience and Biotechnology, HIST, Teajon, Korea
- ⁴ Department of Genetics and Cellular Biology, University of Malaya, Kuala Lumpur, Malaysia
- ⁵ Department of Microbiology, The National University of Singapore, Singapore
- ⁶ Faculty of Agricultural Technology, Gadjah Mada University, Yogyakarta, Indonesia
- ⁷ University of the Philippines at Los Banos, Los Banos, The Philippines
- ⁸ Thailand Institute of Scientific and Technological Research, Bangkok, Thailand
- ⁹ National Institute for Environmental Studies, Environment Agency, Tsukuba, Japan
- * Special Coordination Funds for promoting science and technology of the Science and Technology Agency of the Japanese Government "Asian Network on Microbial Researches (ANMR)"

SUMMARY

Culture collections of 8 countries in Asia (Korea, China, Thailand, Malaysia, Singapore, The Philippines Indonesia and Japan) are establishing a network (Asia Network on Microbial Researches, ANMR) which honors the requirement of the Convention on Biological Diversity, and builds a networked information system to facilitate the sustainable use and fair and equit-able sharing of the benefits arising from the utilization of genetic resources and technologies. Inventory information for newly isolated microbial strains are available at the central server located at Japan Collection of Microorganisms at RIKEN in Japan. The strain information in the inventory is hyper-linked to taxonomic information on a project-wide taxonomic characterization database stored on distributed servers at culture collections in each country. A CD- ROM version contains the annual inventory of strains as a static edition to authenticate their origin. It also contains a starter kit software. This assists participating culture collections in building their own WWW servers, thus serving both to decentralize tasks and to develop independent bioinformatics capabilities in each country.

INTRODUCTION

In East Asia, where rich natural resources exist, the need for an accurate inventory to monitor and preserve biodiversity is urgent. Reliable information on microbial diversity can contribute to the efficient exchange of cultures and knowledge



between Japan and other Asian countries rich in biodiversity and traditional fermentation technology This information needs to be urgently recorded in digital form and data shared within the scientific community.

The information of microbial diversity is not only about isolation and geographic distribution of strains. The system developed by ANMR includes taxonomic information. The microorganisms isolated from Asian countries include bacteria, yeast /fungi and micro-algae. Those which have been studied by researchers have involved multi-disciplinary and multianalytical methods so that a system allowing certain flexibility is required. WWW and common gateway interface (CGI) programs allow such flexibility. In the present study we have developed a series of CGI programs that provide flexible access to disparate structures.

MATERIALS and METHODS

Culture collections in Figure 1 are the collaborating collections. The strains have been isolated in each country, preserved in the originating country and selected duplicates have been stored in RIKEN in Japan, for safe deposit.

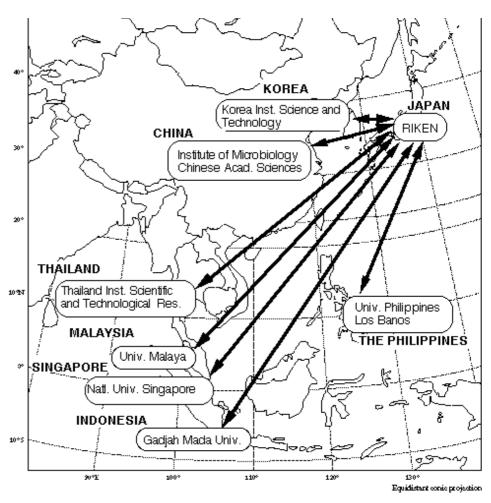


Fig. 1. ANMR CULTURE COLLECTION NETWORK

The inventory information of the deposited strains has been maintained in the database (Sybase system 11) at RIKEN as well as the biological materials. The ANMR information system is constructed with distributed databases in participating countries on World-Wide Web (WWW) servers. The inventory information at the RIKEN has a unique identifier for each record and is hyper-linked to the corresponding taxonomic information on the WWW server built at the originating country's culture collection.

RESULTS and DISCUSSION

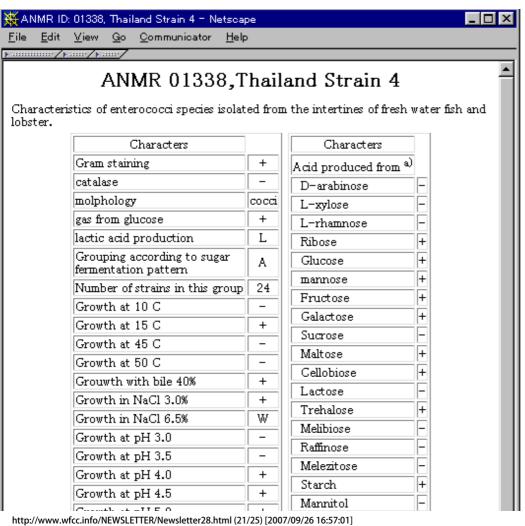
By the end of 1997, 1470 strains have been stored at the RIKEN. Sample information on the inventory and onward link to the taxonomic information on the WWW server of Thailand are shown in Fig. 2 a and b. In addition to this network oriented system, we have developed a CD-ROM version. The CD-ROM contains the annual inventory of the strains as a static edition overwrite protected to certificate the origin of microbial diversity as the property of participating organizations.

The WWW server system for ANMR provides real-time information uploaded from the laboratories for sharing among the participating scientists. The scientists are always able to catch the most up-to-date information of the isolated strains by this network oriented system as long as they collaborate under the framework of ANMR.

Fig. 2.

- a. Inventory information stored at ANMR server at RIKEN, Japan,
- b. Linked taxonomic information from the remote server





G+C content (mol%)

Document: Done

Meanwhile, the annual CD-ROM provides the static inventory and relevant taxonomic information as reliable proof of property rights of biological resources.

40.2

The other unique feature of the CD-ROM is that it includes a WWW server program and WAIS (Wide Area Information Server) program which run on PC/AT compatible machines, besides the inventory and taxonomic data files. These software can be used as a starter kit for participating culture collections to build up their own WWW server in each country. By using the starter kit we plan to complete the WWW server network among all 8 participating countries by the year 2000. It helps decentralization of the tasks and independent development of bioinformatics in each participating country.

The ANMR Information Network is a new approach to international cooperation. Decentralized tasks to produce taxonomic information on WWW servers can be shared by the participating microbiologists. This accelerates the collaboration and reduces the chance of repetitive works and unnecessary competition. This stimulates the production of primary data from the laboratories, which is the most important foundation in bioinformatics. Networked culture collections can, therefore, contribute to producing and disseminating taxonomic information on microbial biodiversity to the scientific community.

The information on the WWW server can be linked to various other information resources, such as nomenclature database (ProkaryoBase, http://www.jcm.riken.go.jp/prokaryo/), species catalogue (Species 2000, http://www.sp2000.riken.go.jp/), strain information on catalogue databases at culture collections, sequence databases etc. When the primary data from the researchers at culture collections become fully available on the INTERNET, the rearrangement of those meta-resources on distributed WWW servers to analyse relevant information will be the next challenge towards building a Global Biodiversity Information System.

Acknowledgement: We thank Dr Y. Benno, Dr S. Puangpen and Dr Y. Cai for providing data shown in Fig 2.

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NEW CATALOGUES AND DATABASES OF CULTURE COLLECTIONS

Catalogue of Strains 1994, Regional Specialised Collection of Alkanotrophic Microorganisms, Institute of Ecology and Genetics of Microorganisms, Russian Academy of Sciences, Ural Branch, 13 Golev str, 614081 Perm, Russia (Fax: +7 3422 646712, E-mail: ivshina@ecology.psu.ru)

Catalogue of Strains, 4th edition, 1998. Colección Española de Cultivos Tipo (CECT), Universidade Valencia, Edificio de Investigación, Campu de Burjassot, 46100 Burjassot (Valencia), Spain. Price 3000 pts. (Fax: +34 96 398 3187, E-mail: cect@uv.es)

BIOLOGY ON THE WEB

The Webserver for Cyanobacterial Research (http://www-cyanosite.bio.purdue.edu/) includes e.g. CyBib v3.0 (extensive cyanobacterial bibliography: over 5300 references); CyanoNews; Links to other cyanobacterial sites; CyanoBase (provides entire sequence of *Synechocystis* 6803); Taxonomy of Cyanobacteria; Cyanobacteriologists List; Cyanobacteriologist Email List.

Mycological Resources on the Internet (http://muse.bio.cornell.edu/~fungi/) offers the following pages: Collections of fungi (herbaria, culture collections); Directories of mycologists and mycological labs; Discussion groups, newsletters, books, and serials; Molecular genetics; General resources: fungal taxonomy, biology, plant pathology; Mushroom collecting,mycophagy, mushroom cultivation; Teaching and learning about fungi.

Medical Microbiology Home Page (http://biomed.nus.sg/microbio/home.html). The pages are mainly on medical and clinical microbiology and are meant primarily for hospital doctors practising in other specialities, medical students and fellow microbiologists.

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RECENT PUBLICATIONS OF INTEREST TO CULTURE COLLECTIONS

J.A. Brill, J. Wiegel Differentiation between spore-forming and asporogenic bacteria using a PCR and Southern blot hybridization based method. Journal of Microbiological Methods 31, 29-36 (1997)

G.A. Codd, J.C. Ward, Cyanobacterial toxins: occurrence, modes of actions, health effects S.G. Bell and exposure routes. Arch. Toxicol. Suppl. 19, 399-410 (1997)

New Journal

K.N Timmis & *Environmental Microbiology*, Volume 1, 1999. Blackwell Science D.A. Stahl (Editors) Ltd., Oxford, UK (http://www.blackwell-science.com)

Software

A. Konopka, Identibacter interactus: a computer simulation of microbial P. Furbacher, identification. Wm. C. Brown Publishers, Inc., Dubuque, Iowa, C. Gedney 1996, US\$ 51.57 for individual license.

- BROTH, Software for the Standardization, Optimization and Documentation of Microbiological Culture Media. Hölle & Hütter GmbH, Derendinger Str. 40, D-72072 Tübingen, Germany (Fax: +49 7071 976190; E-mail: info@h-net.com; Internet: http://www.h-net.com)

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WORKSHOPS AND TRAINING COURSES

Sequencing

ATCC Workshops and Conferences 1998

Contact: ATCC, Workshop Coordinator, 10801 University Boulevard, Manassas, Virgina 20110-2209, USA; Tel.: +1 703 365 2700; Fax: +1 703 365 2701; E-mail: workshop@atcc.org; Internet http://www.atcc.org/workshop.html.

Microscopy/Photomicrography September 23-

25

16th Annual Biotech Patent Forum September 25 Hybridoma Technology and Monoclonal Antibody Development October 5-8 Microbial DNA Fingerprinting October 13-16 October 16 **Virus Propagation Seminar** Freezing and Freeze-Drying of Microorganisms October 27-30 **Anaerobic Bacteriology** November 5-6 **Recombinant DNA: Techniques and Applications** November 9-13 Polymerase Chain Reactions (PCR)Applications/Cycle DNA November 17-20

International Mycological Institute, Training Courses 1998

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

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

Contact: Mrs Stephanie Groundwater, International Mycological Institute, Bakeham Lane, Egham, Surrey TW20 9TY UIC, Fax +44 1784 470909, Email: s.groundwater@cabi.org.

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CONFERENCES AND MEETINGS

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)

8th International Symposium on Microbial Ecology, 9-14 August 1998, Halifax, Nova Scotia, Canada. Contact: Colin R. Bell, Chair ISME8, Microbioal Ecology Lab., Dept. Of Biology, Acadia University, Wolfville, Nova Scotia, Canada BOP 1X0 (Fax: +1 902 585 1059; E-mail: ISME8@ACADIAU.CA. Homepage: http://www.glinx.com/isme8/)

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

Australian Society of Microbiology Inc., 1998 Annual Scientific Meeting & Exhibition: 'Microbes To The Max', 27 September - 2 October, 1998, Hobart, Australia. Contact: ASM Secretariat, Unit 23, 20 Commercial Road, Melbourne VIC 3004, Australia (Fax: +61 3 9867 8722; E-mail ASMConference@clari.net.au; http://www.vicnet.net.au/~asm)

Argentine Congress of Microbiology, 6-9 September, 1998, Buenos Aires, Argentina. Contact: Dr. Daniel O. Sordelli, President, Feire 695 P-1, 1426 Buenos Aires, Argentina (Fax: +54 1 554 3955; E-mail pharmaconsult@interlink.com.ar)

Thermophiles '98, International Conference, 6-11 September, 1998, Brest, France. Contact: Thermophiles '98, Station Biologique, BP 74, 29682 Roscoff Cedex, France (Fax + 33 2 9829 2324, E-mail thermo98@sb-roscoff.fr)

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)

3rd European Nitrogen Fixation Conference, 20-24 September 1998, Lunteren, The Netherlands. Contact: Prof. Ben Lugtenberg, Leiden University, Institute of Molecular Plant Sciences, Clusius Laboratory, Wassenaarseweg 64, 2333 AL Leiden, The Netherlands (Fax: +31 71 5275 088)

4th International Toxic Cyanobacteria Symposium, 27 September - 1 October 1998, Beaufort, North Carolina, USA. Contact: Dr. Hans W. Paerl, UNC-CH Institute of Marine Sciences, 3431 Arendell Street, Morehead City, NC 28557, USA (E-mail: HansPaerl@UNC.EDU)

International Symposium on Progress and Prospect of Marine Biotechnology, 6-9 October, 1998, Qingdao, China. Contact: ISPPMB '98, Ocean University of Qingdao, 5 Yushan Road, Qingdao 266003, P.R. China (Fax: +86 532 287 6418; E-mail: HSXu@lib.ouqd.edu.cn)

1st International Conference on Identification and immunobiology of Clostridia, Diagnosis and Prevention of Clostridioses, 7-10 October 1998, Göttingen, Germany. Contact: European Clostridia Conference, Göttinger Clostridien Center, Conference Secretariat, Kellnerweg 6, 37077 Göttingen, Germany (Fax: +49 551 39 3408; E-mail: hboehne@grdg.de)

Current Trends in Microbial Technology for a Sustainable Environment, October 1998, Kuala Lumpur, Malaysia. Contact: Dr. Sabararnam Vikineswary, Institute of Postgraduate Studies & Research, University of Malaya, 50603 Kuala Lumpur, Malaysia (Fax: +60 3 756 8940)

Yeast as a Cell Factory, 30 November-2 December 1998, Vlaardingen, The Netherlands. Contact: Dr. P. Osseweijer, Klyuver Laboratory of Biotechnology, Julianalaan 67, 2628 BC Delft (Fax: +31 15 2782355)

Detection, Isolation and Manipulation of Soil and Rhizosphere Microorganisms, 15-17 December 1998, Warwick, UK (Joint Meeting of the Society of Applied Microbiology and the British Society for Plant Pathology). Contact: Society for Applied Microbiology, The Blore Tower, The Harpur Centre, Bedford MK40 ITQ (Fax +44 1234 326678; E-mail sfam@btinternet.com)

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