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Jeff Elhai

Virginia Commonwealth University, elhaij@vcu.edu

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CYANONEWS

December 1985

CYANONEWS is intended to provide cyanobacteriologists with a forum for rapid, informal communication, unavailable through journals. It relies entirely on news provided by its readers. Please send news, requests, publications, comments, etc. to the address below. DEADLINE for the next issue is MARCH 1, 1986. If you wish to be included in the mailing list, send your name, address, telephone number, and a brief description of your research interests to:

Jeff Elhai
MSU/DOE Plant Research Laboratory
Michigan State University
East Lansing, MI 48824 USA

The 7th INTERNATIONAL CONGRESS ON PHOTOSYNTHESIS will be held at Brown University, Providence, Rhode Island 02912 USA (contact Dr. J. Biggins), August 10-15, 1986. The symposia will focus on electrochemistry, biochemistry, and development.

For those who did not attend the 5th INTERNATIONAL SYMPOSIUM ON PHOTOSYNTHETIC PROKARYOTES in Grindelwald this summer, a limited number of copies of the collected abstracts are available. There may also be a second printing, if demand warrants. The congress was dominated by reports on cyanobacteria and purple sulfur bacteria: ecology, physiology and metabolism, photosynthetic structure, and genetics. The organizer, Prof. H. Zuber, has asked me to collect requests for a second printing, or, I suppose you can write to him directly: Prof. H. Zuber, Institut für Molekularbiologie und Biophysik, Eidg. Technische Hochschule, ETH-Honggerberg, CH-8093 Zurich, Switzerland. The cost will be about \$20 U.S., but DO NOT SEND MONEY UNTIL ASKED!

Proceedings of the 6th INTERNATIONAL SYMPOSIUM ON NITROGEN FIXATION (August 4-10, 1985, Corvallis, Oregon, USA) have been published under the title Nitrogen Fixation Research Progress, edited by H.J. Evans, P.J. Bottomley, and W.E. Newton, and published by Martinus Nijhoff Publishers, Dordrecht, Boston, and Lancaster.

Thank you to those who have helped defray the cost of publishing this newsletter. I am trying to find a sponsor, either a scientific organization interested in cyanobacteria or some benevolent corporation. If you have any ideas, please send them along, but for the moment, it is not necessary for me to ask you for personal contributions or subscription fees (Contributions already received will be refunded when a sponsor is found).

A few correspondents have commented that it would be informative to read about NEGATIVE EXPERIMENTAL RESULTS. For example, S. Nierzwicki-Bauer was curious to hear what media have failed to support growth of *Anabaena azollae* isolated from its symbiotic partner. If you have expended a good deal of energy on a project that did not turn out as you hoped, despair not! Your efforts might still provide a useful starting point for your successor.

The name of the CORRESPONDENT for each item in this newsletter is capitalized, so you know who to write to for reprints or whatever. The CORRESPONDENT'S ADDRESS appears in the DIRECTORY of Cyanobacteriologists (Cyanonews, July 1985) or at the END OF THIS NEWSLETTER. An updated Directory will appear in the next newsletter.



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LARS HALLBOM is looking for toxic strains of Nodularia and axenic, toxic Oscillatoria agardhi.

REGINALD LAU would like to receive from any colleagues strains of cyanobacteria that are resistant to heavy metals.

The Geomicrobiology Division of Oldenburg University is offering a six week graduate course next Oct-Nov, covering oxy- and anoxyphotobacteria. The course is open to 2-3 English speaking participants without fee. Contact W.E. Krumbein, Geomicrobiology Division, Univ. of Oldenburg, P.O. Box 2503, D-2900 Oldenburg, FRG.

T.W. CHEN wants to know if anyone can supply a pure culture of Nostoc commune and Nostoc flagelliforme. He is also interested in any recent isolations of these two species.

W.E. KRUMBEIN announces that beginning with spring 1986 the Geomicrobiology Division of Oldenburg University will have several openings for cyanobacteriologists or microbial ecologists in the frame of rock dwelling phototrophic microorganisms related to rock weathering and monument protection. Also, one post-doc position is available in the same frame.

GEOFFREY CODD serves notice that antiserum against cyanobacterial phosphoribulokinase has been produced and is available.

Having magnanimously offered his antiserum, GEOFFREY CODD wonders if anyone could send him Microcystis cultures, for comparative purposes in current studies on the properties of Microcystis toxins.

PETER WOLK has an opening in his lab for a post-doc to work on genetic manipulation of filamentous nitrogen-fixing cyanobacteria

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The U.S. National Institute of Health will be awarding a large sum of money to some laboratory agreeing to grow huge amounts of cyanobacteria (30-50 liters, hundreds of strains) as part of an effort to isolate new anti-cancer agents. Within the next few years, then, comparative cyanobacterial biochemistry requiring large cultures may be feasible -- by the laboratory receiving this grant, at least, and conceivably by the cyanobacterial world at large.

WANDA ZEVENBOOM reports that in 1984, large concentrations of small coccoid red-pigmented cyanobacteria were found at several locations in the Banda Sea (Indonesia). They showed a preference for deeper layers in the water column.

W.E. KRUMBEIN reports that two cyanobacteria (Oscillatoria strain 23 Oldenburg and Microcoleus chthonoplastes) produce lactate, reduce elemental sulfur and produce ethanol under anaerobic conditions using endogenous glycogen reserves.

GEORGE S. BULLERJAHN reports on work that is in press (Biochim. Biophys. Acta). The paper describes the polypeptide composition of thylakoid membrane fractions, phycobilisomes, and active core preparations of PS I and PS II, all from Aphanocapsa 6714. One of three chlorophyll-binding complexes associated with PS II is comprised solely of a novel 36 kDa protein.

TOIVO KALLAS reports on work that will appear in Plant Molecular Biology. The work examined the *nif* gene organization from unicellular strains (*Synechococcus* 7335 and 7425; *Cyanothece* 7424), filamentous non-heterocystous strains ("LPP" 73110 and *Pseudanabaena* 7409), and heterocystous cyanobacteria and Het-derivatives (*Nostoc* 7121 and 7906; *Calothrix* 7601-D and 7601-Het). All nonheterocystous cyanobacteria examined (unicellular and filamentous) had a contiguous *nifKDH* gene cluster, whereas all of the heterocystous strains showed separation of *nifK* from contiguous *nifDH* genes.

BORIS GROMOV has sent a volume that itemizes the algal culture collections at several biological institutes in the Soviet Union. The book (*Kul'tivirovanie Kolleksiionnikh Shtammov Vodoroslei* [Russian], B.V. Gromov, ed., 1983) not only describes these collections but also provides methods for maintaining, purifying, and storing microalgae. Over 200 cyanobacterial strains are described (and many more green algae). I don't know if Dr. Gromov is able to provide for all who might find this book useful. If not, I can supply photocopies, (preferably of small portions, eg. strain lists). Anyone whose Russian exceeds my own meager skills is urged send for a copy and provide us all with a more adequate gloss of its contents.

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J. FEUILLADE has edited a new book, *Le Lac de Nantua* (Nantua Lake), a collection of essays [in French] describing the restoration of a degraded ecosystem. Published by Institut National de la Recherche Agronomique, Service des Publications, C.N.R.A., route de Saint-Cyr, 78000 Versailles, FRANCE. 168 pages, price 95 Fr.francs, payable to Regisseur des Publications.

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Contributors not listed in the current Directory of Cyanobacteriologists:

- BERGMAN, Bergitta Inst. of Physiological Botany, Uppsala University, Box 540, S-751 21 Uppsala SWEDEN
 BULLERJAHN, George S. Division of Biological Sciences, University of Missouri, Tucker Hall, Columbia, MO 65211 USA
 CHEN, T.W. Soils and Fertilizer Institute, Chinese Academy of Agricultural Sciences, Peking, P.R. CHINA
 CODD, Geoffrey A. Dept. of Biol. Sciences, Dundee University, Dundee DD1 4HN SCOTLAND
 FEUILLADE, Jacques B. Station d'Hydrobiologie Lacustre, I.N.R.A., Institut de Limnologie, F74203 Thonon FRANCE
 HALLBOM, Lars Inst. of Physiological Botany, Uppsala University, Box 540, S-751 21 Uppsala SWEDEN
 JENSEN, Thomas E. Department of Biological Sciences, Herbert H. Lehman College of the City University of New York, Bedford Park Blvd. W., Bronx, New York 10468 USA
 KROMKAMP, Jacco Lab. of Microbiology, University of Amsterdam, Nieuwe Achtergracht 127, 1018 WS Amsterdam, THE NETHERLANDS
 KRUMBEIN, Wolfgang E. Geomicrobiology Division, Univ. of Oldenburg, P.O. Box 2503, D-2900 Oldenburg, FRG
 LANARAS, Thomas Botanical Institute, University of Thessaloniki, 540 06 Thessaloniki GREECE
 LAU, Reginald Department of Biology, Queen's University, Kingston, Ontario, K7L 3N6 CANADA
 LINDBLAD, Peter Inst. of Physiological Botany, Uppsala University, Box 540, S-751 21 Uppsala SWEDEN
 MILLER, A.G. Department of Biology, Queen's University, Kingston, Ontario K7L 3N6 CANADA
 PAERL, Hans W. Inst. of Marine Sciences, Univ. of North Carolina, 3407 Arendell St., Morehead City N.C. 28557 USA
 PETERSSON, Annette Inst. of Physiological Botany, Uppsala University, Box 540, S-751 21 Uppsala SWEDEN
 POST, Anton Laboratorium voor Microbiologie, University of Amsterdam, Nieuwe Achtergracht 127, 1018 WS Amsterdam, THE NETHERLANDS
 RENSTROM, E. Inst. of Physiological Botany, Uppsala University, Box 540, S-751 21 Uppsala SWEDEN
 SERRANO, A. Depto. de Bioquimica, Fac. de Biologia y C.S.I.C., Univ. de Sevilla, Apdo. 1095, 41080-Sevilla, SPAIN
 SUGIURA, Masahiro Center for Gene Research, Nagoya University, Furo-cho, Chikusa, Nagoya 464 JAPAN
 ZEVENBOOM, Wanda Laboratory of Microbiology, University of Amsterdam, Nieuwe Achtergracht 127, 1018 WS Amsterdam THE NETHERLANDS

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