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*MEMBRANE BIOCHEMISTRY: TRANSPORT AND BIOENERGETICS*

Zürich, Switzerland, 27 February - 11 March 1977

The Course, organized by E.Carafoli and G.Semenza on behalf of the Swiss Group of Bioenergetics, will consist of lectures and laboratory sessions. It is designed to introduce young scientists to the field of membrane biochemistry, with emphasis on transport and bioenergetics.

Topics of the lectures will be: the molecular architecture and chemical composition of biological membranes, the modern chemical and physical methods for the study of membranes, the theory of passive diffusion and active transport of solutes across membranes, the transport of ions across the membranes of erythrocytes, sarcoplasmic reticulum, mitochondria and bacteria, the transport of electrons and the synthesis of ATP in energy-transducing membranes (mitochondria, chloroplasts and bacteria), the properties of artificial membranes.

The laboratory sessions will include the isolation and characterization of mitochondria, chloroplasts and sarcoplasmic reticulum, the preparation of sub-mitochondrial vesicles, the measurement of respiration and phosphorylation in mitochondria and chloroplasts, the measurement of the membrane potential and pH differential across mitochondrial membranes, the transport of anions, cations and non-electrolytes across energy-transducing membranes, the transport of  $\text{Ca}^{2+}$  in sarcoplasmic reticulum and erythrocytes, the transport of ions and the synthesis of ATP in *Halobacterium halobium*, the characterization of ionophorous compounds on natural and artificial membranes.

Teaching staff: A.Azzi (Padova), R.Bachofen (Zürich), A.D.Bangham (Babraham), E.Carafoli (Zürich), J.B.Chappell (Bristol), M.Chiesi (Zürich), R.K.Crane (New Brunswick), M.Compton (Zürich), L.Ernster (Stockholm), P.Gazzotti (Zürich), D.O.Hall (London), K.Hanselmann (Zürich), R.Hartmann (Würzburg), H.Hauser (Zürich), G.Hauska (Bochum), A.Kepes (Paris), M.Kessler (Zürich), V.Luzzati (Paris), K.Malmström (Zürich), A.Martonosi (St.Louis), J.C.Metcalf (Cambridge), K.Mühlethaler (Zürich), D.Oesterhelt (Würzburg), Y.Ovchinnikov (Moscow), P.Ronner (Zürich), A.Rothstein (Toronto), G.Schatz (Basel), H.Schatzmann (Bern), K.Schwerzmann (Zürich), J.Seelig (Basel), G.Semenza (Zürich), G.L.Sottocasa (Trieste), G.Stark (Konstanz), P.V.Vignais (Grenoble), P.Zahler (Bern).

The Course will be held at the Laboratorium für Biochemie of the Eidgenössische Technische Hochschule. Accommodation and meals for the students will be available in a number of nearby hotels and restaurants, or at the student cafeterias. Registration fee (lodging and meals not included): SF.200.—. Some travel fellowships may be available.

The 20-25 participants will be selected on the basis of curriculum and the relevance of the Course to their future research. A letter of recommendation will be useful.

Applications (including a statement as to whether travel support is required) should be addressed before November 15th 1976 to Prof. E.Carafoli, or Prof. G.Semenza, Laboratorium für Biochemie der ETH Zürich, Universitätstrasse 16, 8092 Zürich, Switzerland.

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*STRUCTURE AND REPLICATION OF GENOMES*

Obertraun, Austria, 6 - 12 March 1977

The Course, organized by E.Bautz, E.Wintersberger, and U.Wintersberger, will consist of lectures and discussions on the structure of plasmids, bacterial, viral and eukaryotic genomes and their replication.

Students and teachers will be accommodated at the Bundessportschule Obertraun, Salzkammergut, Austria, where the lectures will be held. In the lecture free time skiing instruction will be provided. The language of the Course will be English. Total number of participants: 120.

Registration fee: Austrian Schillings 2.500,— per person, including the Course fee, full board and skiing instruction.

Applications, including a short curriculum and all information that might be useful in their evaluation, should be sent before December 1st 1976 to: U.Wintersberger, Institut für Krebsforschung, Universität Wien, Borschkegasse 8a, A-1090 WIEN, Austria.