

GDCh *Gesellschaft
Deutscher Chemiker
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Biochemie*

Programme

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(Poster and Speaker Abstracts)

Abstracts

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Time Table of Bus Lines



*Scientific Programme and
Abstract Book*

Justus-Liebig Universität Giessen

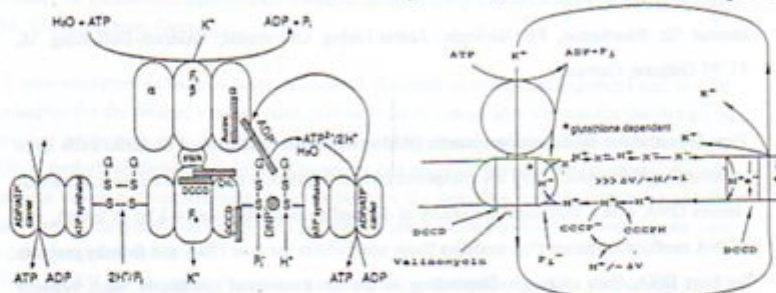
13.-15. March 1996

Is it possible to demonstrate the dynamic of enzymatic catalysis by (bio)chemical and (bio)physical methods? Considerations to a still unsolved problem on the energy-transduction across mitochondrial membranes.

Reinhold Kiehl

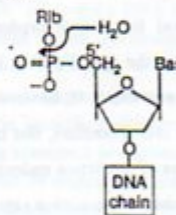
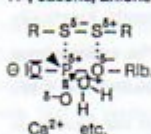
Laboratory and Research for Mol.Med./Biology, Furth,FRG

A) ATPsynthase/ATPase B) ATPsynthase/ATPase K⁺/H⁺-antiport



C) Endonuclease

H⁺, cations, anions



Statement: The dynamically living enzyme-systems (A-C) described by us [1-9] are with the static and dead x-ray diffraction not to analyse and molecular modeling on this systems is therefore not possible.

Presumably we are dealing with inner mitochondrial membrane surface reactions and we need thus methods to analyse such reactions. Ertl [10,11] is summarizing the present available methods (LEED, FTIR, PEEM, MEM, REM, FEM, FIM and STM). Some of these methods are probably also reliable to solve our problems by interplay with the methods already used for biochemical purposes (e.g. freeze etching, freeze fracture).

References: Kiehl R, 1.(1976) Dissertation, Uni Hd and MPI for Med.Res. 2.(1993) Biol. Chem. H.-S. 374,742 and Int.Congr.on Amino Acids,Vienna, Aug. 23th. 3.(1994) Biol.Chem.H.-S.375,S.61. 4. (1995) 14.Vortragst.GDCh, Biochemie, Abstr.28; Amino Acids 9,20 and 25.GDCh-Hauptvers., Abstr.-book p.56, BC7. 5.(1995) Eur.J. Biochem.and J.Mol.Med., submitted. 6.(1994) 13.Vortragst.GDCh, Biochemie, Abstr.p.2.6; Int.Alk-Ciba Corning Joint Symp.,7.(1995) Int.Conf.on New Appl. of Emerg.Mol.Diagn. for Infect.Diseases, Abstr.-book P11; WASOG Joint Meeting,Proc.p.54,P119 and J.Mol. Med.,submitted. 8.(1996) Analytica Conference. 9.(1996) Habilitation, Uni Regensburg, Med.Fak., eingereicht, and Dr. Kiehl Lab. and Res.for Mol. Med./Biol. 10. Ertl G (1994) Ber.Bunsenges. Phys. Chem. 98, 1413- 1420 and 25.GDCh-Hauptvers.,Festvortrag. 11. Imbihl R and Ertl G (1995) Chem.Rev. 95,697-733.