

Cumulative Contents

Foreword

<i>R.G. Bartsch, S.J. Ferguson and R.J.P. Williams</i>	1
International workshop on non-mitochondrial cytochromes <i>c</i> . A short foreword with some history	
<i>M.D. Kamen (U.S.A.)</i>	3
Why do <i>c</i> -type cytochromes exist? – Reprise	
<i>P.M. Wood (U.K.)</i>	5
Ligand binding properties of cytochromes <i>c'</i>	
<i>R.J. Kassner (U.S.A.)</i>	8
<i>c</i> -Cytochromes of the ammonia-oxidizing chemolithoautotrophic bacteria	
<i>A.B. Hooper, M. Logan, D.M. Arciero and H. McTavish (U.S.A.)</i>	13
The functions and synthesis of bacterial <i>c</i> -type cytochromes with particular reference to <i>Paracoccus denitrificans</i> and <i>Rhodobacter capsulatus</i>	
<i>S.J. Ferguson (U.K.)</i>	17
Some recent advances relating to prokaryotic cytochrome <i>c</i> reductases and cytochrome <i>c</i> oxidases	
<i>R.B. Gennis (U.S.A.)</i>	21
The cytochrome <i>c</i> peroxidase of <i>Paracoccus denitrificans</i>	
<i>G.W. Pettigrew (U.K.)</i>	25
The distribution of soluble metallo-redox proteins in purple phototrophic bacteria	
<i>R.G. Bartsch (U.S.A.)</i>	28
Evolution of cytochromes and photosynthesis	
<i>T.E. Meyer (U.S.A.)</i>	31
The low-potential cytochrome <i>c</i> of cyanobacteria and algae	
<i>D.W. Krogmann (U.S.A.)</i>	35
Bacterial 4- α -helical bundle cytochromes	
<i>G.R. Moore (U.K.)</i>	38
Sequence variability in bacterial cytochromes <i>c</i>	
<i>R.P. Ambler (U.K.)</i>	42
Cytochromes <i>c</i> of <i>Nitrobacter winogradskyi</i> and <i>Thiobacillus novellus</i> : structure, function and evolution	
<i>T. Yamanaka, T. Nagano, K. Shoji and Y. Fukumori (Japan)</i>	48
Two structurally different cytochromes <i>c</i> from <i>Bacillus azotoformans</i> : on the evolution of Gram-positive bacteria	
<i>G.O. Hreggvidsson (U.K.)</i>	52

Primary structure diversity of prokaryotic diheme cytochromes <i>c</i>	
<i>J. Van Beeumen (Belgium)</i>	56
Structural and functional approach toward a classification of the complex cytochrome <i>c</i> system found in sulfate-reducing bacteria	
<i>J.J.G. Moura, C. Costa, M.-Y. Liu, I. Moura and J. LeGall (Portugal, U.S.A.)</i>	61
Biological electron transfer: progress and future directions	
<i>M.A. Cusanovich and M.S. Caffrey (U.S.A.)</i>	67
Uncoupled and coupled electron transfer reactions	
<i>R.J.P. Williams (U.K.)</i>	71
High-resolution ^1H - and ^{15}N -NMR studies of <i>Rhodospirillum rubrum</i> cytochrome <i>c</i> ₂	
<i>G.M. Smith and L.P. Yu (U.S.A.)</i>	75
Spectral properties of <i>Achromobacter xylosoxidans</i> cytochromes <i>c'</i> and their NO complexes	
<i>H. Iwasaki, T. Yoshimura, S. Suzuki and S. Shidara (Japan)</i>	79
Cooperative ligand reorientations in cytochrome <i>c</i> ₃ : a molecular dynamics simulation	
<i>P.C. Weber, J.J. Wendoloski and F.R. Salemme (U.S.A.)</i>	83
<i>Author index</i>	85
<i>Review</i>	
Dynamics of photosynthetic membrane composition and function	
<i>A. Melis (U.S.A.)</i>	87

Regular Papers

Reconstitution of mature plastocyanin from precursor apo-plastocyanin expressed in <i>Escherichia coli</i>	
<i>T. Hibino, A.D. De Boer, P.J. Weisbeek and T. Takabe (Japan, The Netherlands)</i>	107
Role of intramitochondrial pH in the energetics and regulation of mitochondrial oxidative phosphorylation	
<i>N.L. Greenbaum and D.F. Wilson (U.S.A.)</i>	113
The emission spectra of thermoluminescence from the photosynthetic apparatus	

- K. Sonoike, H. Koike, I. Enami and Y. Inoue (Japan) 121
- Protonophore-resistance and cytochrome expression in mutant strains of the facultative alkaliphile *Bacillus firmus* OF4
P.G. Quirk, A.A. Guffanti, R.J. Plass, S. Clejan and T.A. Krulwich (U.S.A.) 131
- Identification of F_0 subunits in the rat liver mitochondrial F_0F_1 -ATP synthase
F. Cretin, L.G. Baggetto, L. Denoroy and C. Godinot (France) 141
- Regional differences in energy charge of the pregnant human uterus regardless of functional status in comparison with the non-pregnant uterus
K. Wedenberg, G. Ronquist, A. Waldenström and U. Ulmsten (Sweden) 147
- In vitro effects of glucocorticoid on mitochondrial energy metabolism
M.E. Martens, P.L. Peterson and C.P. Lee (U.S.A.) 152
- EPR saturation and temperature dependence studies on signals from the oxygen-evolving centre of Photosystem II
R.J. Pace, P. Smith, R. Bramley and D. Stehlik (Australia, F.R.G.) 161
- Identification of the site of interaction between cytochrome c_3 and ferredoxin using peptide mapping of the cross-linked complex
A. Dolla, G. Leroy, F. Guerlesquin and M. Bruschi (France) 171
- Effect of chronic ethanol consumption on hepatic mitochondrial transcription and translation
W.B. Coleman and C.C. Cunningham (U.S.A.) 178
- Dissipation of excitation energy by Photosystem II particles at low pH
J. Crofts and P. Horton (U.K.) 187
- Pigment organization and energy transfer in green bacteria. 2. Circular and linear dichroism spectra of protein-containing and protein-free chlorosomes isolated from *Chloroflexus aurantiacus* strain Ok-70-fl
K. Griebenow, A.R. Holzwarth, F. Van Mourik and R. Van Grondelle (F.R.G., The Netherlands) 194
- Valinomycin: a very effective inhibitor of the cyanide-insensitive alternative pathway in plant mitochondria
C.W.M. Van den Bergen, K. Krab, A.M. Wagner and L.H.W. Van der Plas (The Netherlands) 203
- Aldehyde-enhanced photon emission from crude extracts of soybean seedlings
H. Watanabe, M. Kobayashi, S. Suzuki, M. Usa, S.-i. Agatsuma, R. Saeki and H. Inaba (Japan) 209
- High quantum yield of charge separation in reaction centers of *Chloroflexus aurantiacus*
M. Volk, G. Scheidel, A. Ogorodnik, R. Feick and M.E. Michel-Beyerle (F.R.G.) 217
- Activation of the H^+ -ATP synthases of a thermophilic cyanobacterium and chloroplasts – a comparative study
R.H.A. Bakels, H.S. Van Walraven, M.J.C. Scholts, K. Krab and R. Kraayenhof (The Netherlands) 225
- Spectroscopical studies on the light-harvesting pigment-protein complex II from dark-aerobic and light-anaerobic grown cells of *Rhodobacter sulfidophilus*
M. Doi, Y. Shioi, N. Gad'on, J.R. Golecki and G. Drews (Japan, F.R.G.) 235
- Mechanism accounting for the induction of non-specific permeability of the inner mitochondrial membrane by hydroperoxides
S.A. Novgorodov, T.I. Gudiz, Y.E. Kushnareva, V.A. Roginsky and Y.B. Kudrjashov (U.S.S.R.) 242
- Free fatty acids dissipate proton electrochemical gradients in pea stem microsomes and submitochondrial particles
F. Macrì, A. Vianello, E. Braidot and M. Zancani (Italy) 249
- Evidence for the role of soluble cytochrome c in the dissimilatory reduction of nitrite and nitrous oxide by cells of *Paracoccus denitrificans*
I. Mařhová and I. Kučera (Czechoslovakia) 256
- Chloroquine-sensitive transplasmalemma electron transport in *Tetrahymena pyriformis*: a hypothesis for control of parasite protozoa through transmembrane redox
R. Barr, B.A. Branstetter, A. Rajnicek, F.L. Crane and H. Löw (U.S.A., Sweden) 261
- The *Rhodospirillum rubrum* cytochrome bc_1 complex: redox properties, inhibitor sensitivity and proton pumping
S. Güner, D.E. Robertson, L. Yu, Z.-h. Qiu, C.-A. Yu and D.B. Knaff (U.S.A., Turkey) 269
- Femtosecond energy-transfer processes in the B800-850 light-harvesting complex of *Rhodobacter sphaeroides* 2.4.1
A.P. Shreve, J.K. Trautman, H.A. Frank, T.G. Owens and A.C. Albrecht (U.S.A.) 280
- Light-dependent phosphorylation of Photosystem II polypeptides maintains electron transport at high light intensity: separation from effects of phosphorylation of LHC-II
M.A. Harrison and J.F. Allen (U.K.) 289
- Flow-force relationships during energy transfer between mitochondrial proton pumps
V. Petronilli, B. Persson, M. Zoratti, J. Rydström and G.F. Azzone (Italy, U.S.A., Sweden) 297
- Heterogeneous hydrolysis of Substoichiometric ATP by the F_1 -ATPase from *Escherichia coli*

<i>E. Muneyuki, M. Yoshida, D.A. Bullough and W.S. Allison (Japan, U.S.A.)</i>	304	Interaction of the electron donor diphenylcarbazide with the herbicide-binding niche of Photosystem II	
The interactions of duroquinol, DBMIB and NQNO with the chloroplast cytochrome <i>b_f</i> complex		<i>M. Purcell, G.D. Leroux and R. Carpentier (Canada)</i>	374
<i>P.R. Rich, S.A. Madgwick and D.A. Moss (U.K.)</i>	312	A chlorophyll tilted 30° relative to the membrane in the Photosystem II reaction centre	
Kinetic study of the aspartate/glutamate carrier in intact rat heart mitochondria and comparison with a reconstituted system		<i>F.J.E. Van Mieghem, K. Satoh and A.W. Rutherford (France, The Netherlands, Japan)</i>	379
<i>F.E. Sluse, A. Evens, T. Dierks, C. Duyckaerts, C.M. Sluse-Goffart and R. Krämer (Belgium, F.R.G.)</i>	329	Cardiac contractile function, oxygen consumption rate and cytosolic phosphates during inhibition of electron flux by amytal – a ³¹ P-NMR study	
Fluorescence quenching in <i>Heliobacterium chlorum</i> by reaction centers in the charge separated state		<i>V.V. Kupriyanov, V.L. Lakomkin, O.V. Korchazhkina, V.A. Stepanov, A.Y. Steinschneider and V.I. Kapelko (U.S.S.R.)</i>	386
<i>G. Deinum, H. Kramer, T.J. Aartsma, F.A.M. Kleinherenbrink and J. Amesz (The Netherlands)</i>	339	The mobility of a fluorescent ubiquinone in model lipid membranes. Relevance to mitochondrial electron transport	
ATPase activities in peroxisome-proliferating yeast		<i>B. Chazotte, E.-S. Wu and C.R. Hackenbrock (U.S.A.)</i>	400
<i>A.B. Whitney and E. Bellion (U.S.A.)</i>	345		
Identification of 8 ¹ -hydroxychlorophyll <i>a</i> as a functional reaction center pigment in heliobacteria			
<i>E.J. Van de Meent, M. Kobayashi, C. Erkelens, P.A. Van Veelen, J. Amesz and T. Watanabe (The Netherlands, Japan)</i>	356	<i>Rapid Report</i>	
Orientation and linear dichroism of <i>Mastigocladus laminosus</i> phycocyanin trimer and <i>Nostoc</i> sp. phycocyanin dodecamer in stretched poly(vinyl alcohol) films		The use of excitation fluorescence spectroscopy in the study of short-term chloroplast membrane reorganisation	
<i>L.J. Juszczak, B.A. Zilinskas, N.E. Geacintov, J. Breton and K. Sauer (U.S.A., France)</i>	363	<i>A.V. Ruban (U.K.)</i>	411
		<i>Cumulative Contents, Vol. 1058</i>	417
		<i>Author Index</i>	421