

## Biology Section Contents

### Volume 27 Number 1

In this Issue of JPB .....	1
<b>New Trends in Photobiology (Invited Review)</b>	
Time-resolved detection of lanthanide luminescence for ultrasensitive bioanalytical assays .....	3
E.F. Gudgin Dickson (Kingston, Ont., Canada), A. Pollak (Mississauga, Ont., Canada), E.P. Diamandis (Toronto, Ont., Canada)	
<b>Regular Papers</b>	
Dark adaptation and spectral changes in Triton-X-100-treated bacteriorhodopsin .....	21
I. Kovács, K. Hollós-Nagy (Budapest, Hungary), G. Váró (Szeged, Hungary)	
Charge motions studied in the bacteriorhodopsin mutants D85N and D212N .....	27
C. Gergely (Szeged, Hungary), C. Ganea, S. Száraz, G. Váró (Bucharest, Romania)	
Collagen synthesis in (sun-)aged human skin and in fibroblasts derived from sun-exposed and sun-protected body sites .....	33
J. Brinckmann, Y. Açil, H.H. Wolff, P.K. Müller (Lübeck, Germany)	
Attachment of intrinsically and extrinsically aged fibroblasts on collagen and fibronectin .....	39
H.-U. Püschel, J. Chang, P.K. Müller, J. Brinckmann (Lübeck, Germany)	
Photodynamic effects of the cationic porphyrin, mesotetra (4 <i>N</i> -methylpyridyl)porphine, on microtubules of HeLa cells .....	47
A. Juarranz, A. Villanueva, V. Díaz, M. Cañete (Madrid, Spain)	
Quenching-resolved emission anisotropy: a steady state fluorescence method to study protein dynamics .....	55
Z. Lakos, Á. Szarka, L. Koszorus, B. Somogyi (Pécs, Hungary)	
Topically applied <i>N</i> -acetylcysteine as a protector against UVB-induced systemic immunosuppression .....	61
L.T. Van den Broeke, G.M.J. Beijersbergen van Henegouwen (Leiden, Netherlands)	
Effects of UV radiation on orientation movements of higher plants .....	67
J. Tendel, D.-P. Häder (Erlangen, Germany)	
Impact of natural and artificial UVB radiation on motility and growth rate of marine dinoflagellates .....	73
T. Nielsen, L.O. Björn, N.G.A. Ekelund (Lund, Sweden)	
Detection of cardiovascular calcified deposits via tetracarboxylate ion dye (BTC) probing and laser-induced fluorescence spectroscopy .....	81
T.G. Papazoglou, H. Iatridou, E. Foukarakí, H.E. Katerinopoulos (Heraklion, Crete, Greece)	
Fluorescence localization in tumour and normal brain after intratumoral injection of haematoporphyrin derivative into rat brain tumour .....	85
K.M. Hebeda, J.G. Wolbers, H.J.C.M. Sterenborg, W. Kamphorst, M.J.C. van Gemert, H.A.M. van Alphen (Amsterdam, Netherlands)	
ESP Newsletter .....	93
<b>Volume 27 Number 2</b>	
In this Issue of JPB .....	99
<b>New Trends in Photobiology (Invited Review)</b>	
Psoralen–protein photochemistry — a forgotten field .....	101
I.M. Schmitt, S. Chimentì, F.P. Gasparro (New Haven CT, USA)	

**Regular Papers**

Formation of thymine–lysine and cytosine–lysine adducts in DNA–lysine photoconjugate .....	109
N. Islam, R. Ali (Aligarh, India)	
Involvement of H1 and other chromatin proteins in the formation of DNA–protein cross-links induced by visible light in the presence of methylene blue .....	117
R. Lalwani, S. Maiti, S. Mukherji (Calcutta, India)	
Photolabile “caged” adrenergic receptor agonists and related model compounds .....	123
S. Muralidharan, J.M. Nerbonne (St. Louis, MO, USA)	
Photodynamically induced cytotoxicity of hypericin dye on human fibroblast cell line MRC5 .....	139
C. Hadjur, M.J. Richard, M.O. Parat, A. Favier, P. Jardon (Grenoble, France)	
Role of $\Delta\text{pH}$ in the mechanism of zeaxanthin-dependent amplification of $q_E$ .....	147
R. Goss, M. Richter, A. Wild (Mainz, Germany)	
The development of carotenoid-deficient membranes in plastids of barley seedlings treated with norflurazon .....	153
Y.V. Bolychevtseva, M.G. Rakhimberdieva, N.V. Karapetyan, V.I. Popov, A.A. Moskalenko, N.Y. Kuznetsova (Moscow, Russia)	
Sequence specificity of DNA–psoralen photoproduct formation in supercoiled plasmid DNA (pUC19) .....	161
L. Kittler, G. Löber (Jena, Germany)	
Photoreaction of 5-methoxypsoralen with thymidine. Isolation and characterization of a pyrone-side monoadduct involving the pyrimidine methyl group .....	167
C. Anselmino, J. Cadet (Grenoble, France)	
<b>ESP Newsletter</b> .....	177
<b>Chemistry Section Contents</b> .....	183

**Volume 27 Number 2**

In this Issue of JPB .....	185
----------------------------	-----

**New Trends in Photobiology (Invited Review)**

Photodegradation of keratin and other structural proteins .....	187
G.J. Smith (Lower Hutt, New Zealand)	

**Regular Papers**

The isolation of the B812 subcomplex of the B880 core complex and the B800–850 complex from membranes of <i>Chromatium minutissimum</i> with extracted carotenoids; the structural role of carotenoids .....	199
A.A. Moskalenko, O.A. Toropygina, N.Yu. Kuznetsova (Pushchino, Russia)	
The quantitative determination of Photofrin and Polyhaematoporphyrin in plasma: pitfalls and inaccuracies .....	209
D.I. Vernon, J. Andrew Holroyd, S.M. Stribbling, S.B. Brown (Leeds, UK)	
Irradiation with He–Ne laser increases ATP level in cells cultivated in vitro .....	219
T. Karu, L. Pyatibrat (Troitsk, Russia), G. Kalendo (Moscow, Russia)	
Photofrin-induced fluorescence in progressive and regressive murine colonic cancer cells: correlation with cell photosensitivity .....	225
J. Blais, C. Amirand, J.P. Ballini, P. Debey (Paris, France), M.T. Foultier, T. Patrice (Nantes, France)	
Relaxation technique for kinetic measurements of dye accumulation at the mitochondria of HeLa cells in situ .....	233
I. Siedel, H.W. Zimmermann (Freiburg i. Br., Germany)	
Effects of UV-B irradiation on motility and photoresponsiveness of the coloured ciliate <i>Blepharisma japonicum</i> .....	243
A. Sgarbossa, S. Lucia, F. Lenci, D. Gioffré, F. Ghetti, G. Checcucci (Pisa, Italy)	
Time-resolved pH-dependent fluorescence of hydrophilic porphyrins in solution and in cultivated cells .....	251
H. Schneckenburger, M.H. Gschwend, R. Sailer, A. Rück, W.S.L. Strauß (Ulm, Germany)	
The greening process in cress seedlings	
IV. Light regulated expression of single Lhc genes .....	257
H. Brunner, W. Rüdiger (München, Germany)	
Impact of UV radiation of different wavebands on the pigmentation of the haptophycean <i>Pavlova</i> .....	265
G. Döhler, M. Lohmann (Frankfurt am Main, Germany)	

**News and Views**

<b>Variation in the distribution of a phthalocyanine photosensitizer in naturally occurring tumors of animals (G.M. Peavy, T.B. Krasieva, B.J. Tromberg, E.D. Eusantos, M.W. Berns (Irvine, CA, USA)); Immobilization of molecules, membranes and cells for modern optical and non-optical microscopy by photo-cross-linking (G. Vereb, S. Damjanovich (Debrecen, Hungary), T.M. Jovin (Göttingen, Germany))</b> .....	<b>271</b>
<b>Author Index</b> .....	<b>279</b>
<b>Subject Index</b> .....	<b>281</b>
<b>ESP Newsletter</b> .....	<b>287</b>