



Biology Section Contents

Volume 30 Number 1

| | |
|---|----|
| In this Issue of JPB | 1 |
| New Trends in Photobiology (Invited Review) | |
| Carotenoid catabolism during leaf senescence and its control by light | 3 |
| B. Biswal (Orissa, India) | |
| Regular Papers | |
| Target-peptide-induced changes in the structure and dynamics of calmodulin as probed by frequency domain fluorimetry of bound Tb(III) | 15 |
| P.B. O'Hara, M.A. Rahman, A. Rowland, A.J. Turjoman (Amherst, MA, USA) | |
| δ-Aminolevulinic acid induced fluorescence in tumour-bearing mice | 23 |
| R. Cubeddu, G. Canti, P. Taroni, G. Valentini (Milano, Italy) | |
| Natural fluorescence of white blood cells: spectroscopic and imaging study | 29 |
| M. Monici, R. Pratesi, P.A. Bernabei, R. Caporale, P.R. Ferrini (Firenze, Italy), A.C. Croce, P. Balzarini, G. Bottiroli (Pavia, Italy) | |
| Light response curves of photosynthesis in leaves of sun-type and shade-type plants grown in blue or red light | 39 |
| N.G. Bukhov, I.S. Drozdova, V.V. Bondar (Moscow, Russia) | |
| Chronic UVB irradiation induces superoxide dismutase activity in human epidermis in vivo | 43 |
| K. Punnonen, K. Lehtola (Turku, Finland), P. Autio, U. Kiistala (Helsinki, Finland), M. Ahotupa (Turku, Finland) | |
| Porphyridium purpureum (Rhodophyta) from red and green light: characterization of photosystem I and determination of in situ fluorescence spectra of the photosystems | 49 |
| J. Marquardt (Marburg, Germany), A.M. Rehm (Frankfurt/Main, Germany) | |
| Fluorescence quenching by plastoquinone in an oxygen-evolving photosystem-II-enriched preparation | 57 |
| B.-D. Hsu, J.-Y. Lee (Hsin-Chu, Taiwan) | |
| Inactivation of viruses by chemically and photochemically generated singlet molecular oxygen | 63 |
| K. Müller-Breitkreutz, H. Mohr (Springe, Germany), K. Briviba, H. Sies (Düsseldorf, Germany) | |
| Wavelength dependence of laser-induced DNA damage in lymphocytes observed by single-cell gel electrophoresis | 71 |
| A. De With (Heidelberg, Germany), K.O. Greulich (Jena, Germany) | |

News and Views

| | |
|--|----|
| Towards PDT sensitizers with internal source of singlet oxygen | 77 |
| W. Freyer, D. Leupold (Berlin, Germany) | |

| | |
|----------------------|----|
| ESP Newsletter | 79 |
|----------------------|----|

Volume 30 Numbers 2–3

| | |
|----------------------------|----|
| In this Issue of JPB | 87 |
|----------------------------|----|

| | |
|---|----|
| New Trends in Photobiology (Invited Review) | |
| The heliobacteria, a new group of photosynthetic bacteria | 89 |
| J. Amesz (Leiden, Netherlands) | |

Regular Papers

| | |
|---|-----|
| Protection of plasmid pBR322 DNA by flavonoids against single-strand breaks induced by singlet molecular oxygen | 97 |
| T.P.A. Devasagayam, M. Subramanian, B.B. Singh (Bombay, India), R. Ramanathan, N.P. Das (Singapore, Singapore) | |
| All-trans-N-retinylidenetryptamine Schiff base in surfactant solubilized water pools in heptane—a fluorescence study | 105 |
| A.K. Singh, N. Majumdar (Bombay, India) | |
| In vivo damage to chorioallantoic membrane blood vessels by porphycene-induced photodynamic therapy..... | 115 |
| V. Gottfried, R. Davidi, C. Averbuj, S. Kimel (Haifa, Israel) | |
| Temperature effects on motion parameters and the phototactic reaction of the marine ciliate <i>Fabrea salina</i> | 123 |
| R. Marangoni, A. Batistini, S. Puntoni, G. Colombetti (Pisa, Italy) | |
| Photochemical reactions of 5-bromocytosine and its N-1-substituted derivatives with N ^α -acetyl-L-tryptophan N-ethylamide in aqueous solution | 129 |
| L. Celewicz (Poznań, Poland) | |
| Biochemical and spectroscopic characterization of the putative photoreceptor for phototaxis in amoebae of the cellular slime mould <i>Dictyostelia n discoideum</i> | 139 |
| T. Schlenkrich, P. Fleischmann, D.-P. Häder (Erlangen, Germany) | |
| Rat lens glycolysis after in vivo exposure to narrow band UV or blue light radiation..... | 145 |
| S. Löfgren, P.G. Söderberg (Stockholm, Sweden) | |
| Efficient energy transfer from the long-wavelength antenna chlorophylls to P700 in photosystem I complexes from <i>Spirulina platensis</i> | 153 |
| V.V. Shubin, I.N. Bezsmertnaya, N.V. Karapetyan (Moscow, Russia) | |
| The effects of aggregation, protein binding and cellular incorporation on the photophysical properties of benzoporphyrin derivative monoacid ring A (BPDMA) | 161 |
| B.M. Aveline, T. Hasan, R.W. Redmond (Boston, MA, USA) | |
| Effects of vacuum UV and UVC radiation on dry <i>Escherichia coli</i> plasmid pUC19 | |
| II. Mutational specificity at the lacZ gene | 171 |
| J. Wehner, G. Horneck (Köln, Germany) | |
| Effects of solar and artificial UV irradiation on pigments and assimilation of ¹⁵ N ammonium and ¹⁵ N nitrate by macroalgae | 179 |
| G. Döhler (Frankfurt am Main, Germany), E. Hagmeier (Helgoland, Germany), Ch. David (Frankfurt am Main, Germany) | |
| Photolysis (193 nm) of aliphatic amino acids in aqueous solution | 189 |
| D.N. Nikogosyan, H. Görner (Mülheim an der Ruhr, Germany) | |
| Amino acid-pyrrole N-conjugates; a new class of antioxidants | |
| II. Effectiveness of singlet oxygen quenching by luminescence measurements | 195 |
| J.M. Gaullier, M. Bazin, A. Valla, M. Giraud, R. Santus (Paris, France) | |
| HepG2 human hepatocarcinoma cells: an experimental model for photosensitization by endogenous porphyrins..... | 201 |
| V. Vonarx-Coinssman, M.-T. Foulquier, L.A. de Brito, L. Morlet, A. Gouyette, T. Patrice (Nantes, France) | |
| Author Index | 209 |
| Subject Index | 211 |
| EPS Newsletter | 215 |