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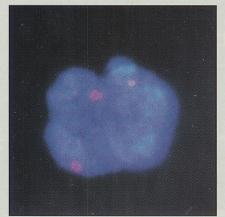
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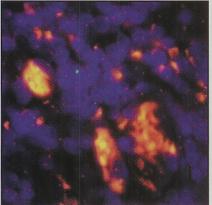
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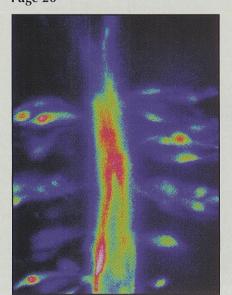
Photonic Solutions for Biotechnology and Medicine



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Features

Corals Use Fluorescent Pigments as Sunscreen

by Kevin Robinson

Corals depend on sunlight for survival, but excess amounts have damaging effects on their delicate natural balance. New studies are providing critical clues to coral bleaching — its causes, extent and anticipated increase — and what it may mean in terms of global climatic conditions.

Green Fluorescent Proteins Improve Myofibril Research

by Joseph W. Sanger and Jean M. Sanger

The ability to express fluorescent proteins in muscle cells through transfection with plasmids encoding green fluorescent proteins has expanded the way light microscopes can follow dynamic processes in live myocytes.

Columns

Biophotonics Research

Watching a single enzyme function

Molecular beacons detect seven targets in one shot

Easier measurement of intracellular spaces

Imaging technique helps measure serotonin in living brains

Imaging system captures whole-body GFP images

Fluorescence imaging may improve timing of PDT

Tuotescence imaging may improve uning of PD1

Researchers use three photons to improve image contrast Clinical tests imminent for laser glaucoma treatment

Post Scripts

by Nancy D. Rowell

The many shades of bitterness

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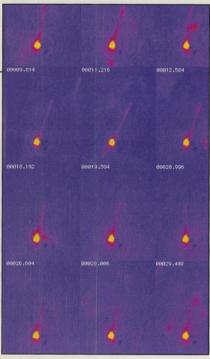
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On the Cover

A 3-D reconstruction of serial optical sections was made through coral tissue using confocal microscopy. See feature article on corals and their fluorescent pigments on page 40. Image was graphically enhanced by Art Director Suzanne L. Schmidt.



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