

Fig. 2 Electron micrograph section of an iridocyte showing the reflecting multilayer stack. A possible site for the visual pigment is in the membranes within the reflecting stack. Scale bar, 500 nm.

at least some porphyropsin rather than rhodopsin¹¹. We believe, therefore, that we have demonstrated the presence of an opsinbased photopigment in the iridocyte, but it is unknown whether it is rhodopsin or porphyropsin.

Birds and mammals also possess dermal photoreceptors but the mechanism of the light response has not been extensively studied¹²⁻¹⁵. Light induces electrical changes in frog skin¹⁶, and action spectra of the electrodermograms have prompted the suggestion that a blue-sensitive rhodopsin and possibly a rhodopsin-metarhodopsin photochromic system is involved The direct action of light on the melanophores of larval *Xenopus*^{18,19} and of at least four species of larval frogs, causes the melanosomes to aggregate within the melanocyte and the skin colour to lighten^{18,19}. These photosensitive sites are local-ized within the cell itself^{20,21}, but the nature of the photoreceptive substance is unknown. Perhaps these melanocytes, like the neon tetra iridocytes, also contain visual pigment.

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- 1. Foster, K. W. J. exp. Zool. 77, 169-214 (1937).
- Rohlich, S. T. J. Cell Biol. 62, 295-304 (1974). Lythgoe, J. N. & Shand, J. J. Physiol, Lond. 325, 23-34 (1982). 2.3.
- Land, M. F. Prog. Biophys. molec. Biol. 24, 75-106 (1972).
- de Grip, W. J. Meth. Enzym. 81, 197-207 (1982). Lynch, S. S. & Shirley, A. J. Endocr. 65, 127-132 (1975). 5. 6.
- Lentrichia, B. B., Plantner, J. J. & Kean, E. L. Expl Eye Res. 31, 1-8 (1980).
- 8 Rohlich, P. Nature 263, 789-791 (1976)
- Newman, G. R., Jasani, B. & Williams, E. D. Histochem. J. 15, 543-555 (1983).
- Husain, O. A. N., Millett, J. A. & Granger, J. M. J. clin. Path. 33, 309-311 (1980).
 Levine, J. S. & MacNichol, E. F. Jr Sensory Process 3, 95-130 (1979).
 Fingerman, M. A. Rev. Physiol. 32, 345-372 (1970).

- 13. Adler, K. Photochem. Photobiol. 23, 275-298 (1976)
- 14. Wolken, J. J. & Magus, M. A. Photochem. Photobiol. 29, 189-196 (1979). 15. Steven, D. M. Biol. Rev. 38, 204-240 (1963).
- Becker, H. E. & Cone, R. A. Science 154, 1051-1053 (1966).
 Wald, G. & Rayport, S. Biol. Bull. 147, 503 (1974).
- Bagnara, J. T., Taylor, J. D. & Prota, G. Science 182, 1034-1035 (1973).
 Bagnara, J. T. J. exp. Zool. 187, 149-154 (1974).
- 20. van der Lek, B., de Heer, J., Burgers, A. C. J. & van Oordt, C. J. Acta physiol. pharmac. Néerl. 7, 409-419 (1958)
- 21. Bagnara, J. T. & Obika, M. Experientia 23, 155-157 (1967).

A second plasma calcium-lowering peptide from the human calcitonin precursor—a re-evaluation

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Nature 300, 460-462 (1982)

WE recently reported that the C-terminal flanking peptide (katacalcin or PDN-21) from the human calcitonin precursor circulates in man in equimolar relation to calcitonin and that the plasma katacalcin level rises after calcium infusion and is grossly elevated in medullary carcinoma of the thyroid (Lancet i, 846-848, 1983). These findings are in good agreement with our earlier report (reference above). In that paper, however, we also reported that katacalcin lowered plasma calcium after intravenous injection in 50 g rats and described a direct effect of the synthetic peptide on mouse calvariae in organ culture, although at much larger concentrations.

We must now report that in subsequent experiments using different preparations of synthetic katacalcin, the calcium lowering activity has been highly variable at best. Additionally we do not find any effect on bone resorption using mouse calvariae in organ culture. Whatever the reasons for the differences between our original studies and the present ones, we now feel it is unsafe to extrapolate from our results to a physiological hypocalcaemic effect of katacalcin in man.

Errata

Acceptors for botulinum neurotoxin reside on motor nerve terminals and mediate its internalization

J. O. Dolly, J. Black, R. S. Williams & J. Melling Nature 307, 457-460 (1984)

THE abbreviation for botulinum toxin in line 1 of the bold first paragraph should read BoNT, and in the legend to Fig. 1 the line 'a, c, e, With tetanus toxin; b, d, f, without.' should be deleted.

Inverse relationship between neurotensin receptors and neurotensin-like immunoreactivity in cat striatum

M. Goedert, P. W. Mantyh, P. C. Emson & S. P. Hunt Nature 307, 543-546 (1984)

IN the sixth line of the 'Methods' section of Fig. 1 legend, the sentence 'Control experiments had established that there was no detectable neurotensin- or (Met)enkephalin-like sections' should read 'Control experiments had established that there was no detectable neurotensin- or (Met)enkephalin-like immunoreactivity left in the tissue sections'.

Cloning and sequence analysis of calf cDNA and human genomic DNA encoding a-subunit precursor of muscle acetylcholine receptor

M. Noda et al.

Nature 305, 818-823 (1983)

THE sentence on lines 20-22 of Fig. 4 legend should read 'The degree of amino acid sequence homology in each of these protein regions is given below for the human/calf (dotted lines), human/Torpedo (solid lines) and calf/Torpedo (dashed lines or solid lines where no dashed lines are shown) pairs; ...'.