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# CURRICULUM VITAE

## Personal details:

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## Education and Academic qualifications:

1960 - GCE 'A' level (4) - John Ruskin Grammar School, Croydon.

1964 - B.Sc. (Hons.) Botany II$_2$ - Queen Mary College, London University.

1968 - Ph.D. Biochemistry - Birmingham University.

## Present position:

Post-doctoral research fellow, Liverpool University.

## Referees:

Reference may be made to the undermentioned persons

Professor T. W. Goodwin, C.B.E., F.R.S.,
Department of Biochemistry,
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Dr. A. P. Brown,
Department of Biochemistry
University of Birmingham,
P.O. Box 363,
Birmingham, B15 2TT.

Professional Experience

1964-1965 Research assistant to Dr. Ivor Smith, Courtauld Institute of Biochemistry, Middlesex Hospital, London.

NRDC sponsored programme on the isolation and purification of a fat mobilising hormone from the anterior pituitary of pigs.

1965-1968 Graduate student, holder of A.R.C. grant, with Dr. Peter Brown, Biochemistry Department, Birmingham University.

This research involved the isolation of structurally intact chloroplasts and the correlation of this integrity with photosynthetic function.

1968-1970 Research fellow, U.S. Atomic Energy Commission award, with Professor Martin Gibbs, Biology Department, Brandeis University, U.S.A.

A research programme designed to study the transport of carbon metabolites by isolated spinach chloroplasts with special reference to sugar phosphates.

1970-1971 SRC/NATO Postdoctoral research fellow, Biochemistry Department, Liverpool University.

A study on the cellular distribution of glyceraldehyde 3-phosphate dehydrogenases in pea, spinach and Scenedesmus obliquus.

1971 - present Research fellow, holder of SRC and Ministry of Defence awards, with Dr. Peter Dean, Biochemistry Department, Liverpool University.

We have been examining the operational variables in affinity chromatography using the interaction of enzymes with group-specific matrices as a model. Studies with commercially available enzymes, especially adenine nucleotide-dependent kinases and nicotinamide nucleotide-dependent dehydrogenases, have contributed to our understanding of the mode of binding of these enzymes to their respective immobilised cofactors and analogues. Extrapolation of these studies to the isolation of enzymes from cell homogenates has provided significant purifications of several dehydrogenases and kinases. This work has considerable

commercial potential and has attracted the interest and support of several international companies: several patents arising from our investigations have been taken up by industry. Currently we are examining, under contract, the potential of new matrices for affinity chromatography; the application of immobilised Cibacron blue and associated compounds as affinity chromatography adsorbents; and the isolation of glycerokinase and urokinase for clinical applications.

In association with my present position I have been responsible for a lecture course on affinity chromatography for final year biochemistry students and in the past five years have supervised and directed twenty one 'Honours' students during their two-term research projects.

## PUBLICATIONS


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2. Brown, A. P. and M. J. Harvey (1968). Photophosphorylation by isolated chloroplasts. Plant Physiol. 43, 8-20.

3. Brown, A. P. and M. J. Harvey (1968). Reducing power of isolated chloroplasts. Vth Intern. Congr. of Photobiol. Bf 7.

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5. Harvey, M. J. and Brown, A. P. (1969). Uptake and light activated esterification of $^{32}P$ by isolated chloroplasts. Biochim. Biophys Acta, 180, 520.

6. Gibbs, M., E. Latzko, Harvey, M. J., Plaut, Z and Shain, Y. (1970) Photosynthesis in the Algae. Ann. N.Y. Acad. Sci. 175, 541.

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8. Lowe, C. R., Harvey, M. J., Craven, D. B., and Dean, P. D. G. (1973) Some parameters relevant to affinity chromatography on insolubilized nucleotides. Biochem. J. 133, 499.

9. Lowe, C. R., Harvey, M. J., Craven, D. B., Kerfoot, M. A., Norris, L. M., Hollows, M. E. and Dean, P. D. G. (1973) Some observations on the purification of pyridine nucleotide dependent dehydrogenases on immobilised cofactors. Biochem. J. 133, 507.

10. Harvey, M. J. and Gibbs, M. The effect of isolation and incubation conditions on the distribution of photosynthetic products between isolated chloroplasts and incubation medium. Plant Physiol. (submitted for publication).

11. Harvey, M. J. and Gibbs, M. The transport of photosynthetic intermediates by isolated chloroplasts in relation to the carbon dioxide fixation rate. Plant Physiol. (submitted for publication).

12. Harvey, M. J. and Gibbs, M. The effect of phosphate esters on carbon dioxide fixation by isolated spinach chloroplasts. Plant Physiol. (submitted for publication).

13. Craven, D. B., Harvey, M. J., Lowe, C. R. and Dean, P. D. G. (1974) Affinity chromatography on immobilised adenosine 5'-monophosphate (I). A new synthesis and some properties of an $N^6$-immobilised 5'-AMP. Eur. J. Biochem. 41, 329.

14. Harvey, M. J., Lowe, C. R., Craven, D. B. and Dean P. D. G. (1974) Affinity chromatography on immobilised adenosine 5'-monophosphate (II) Some parameters relating to the selection and concentration of the immobilised ligand. Eur. J. Biochem. 41, 335.

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18. Lowe, C. R., Harvey, M. J. and Dean, P. D. G. (1974). Affinity chromatography on immobilised adenosine 5'-monophosphate. (VI) Some kinetic parameters involved in the binding of group-specific enzymes. Eur. J. Biochem. 42, 1.

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