

# GENEALOGY DATABASE ENTRY

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Dixon, Malcolm

1899 - 1985

DEGREE: PhD

DATE: 1925

PLACE: Cambridge

TEACHER/RESEARCH ADVISOR: Hopkins, F. G.

studied physical biochemistry, esp. the purification of enzymes and the kinetics of enzyme-catalyzed reactions; studied the oxidation of glutathione and other thiols by molecular oxygen and measured the redox potential of the thiol-disulfide system, also establishing that the oxidation of glutathione was catalyzed by trace metals; investigated xanthine oxidase, and thereby established many aspects of the chemistry of dehydrogenases; showed that the hydrogen peroxide formed in the reaction of xanthine oxidase with molecular oxygen inactivated the enzyme and that the inhibition could be relieved by the addition of catalase, thus helping to establish a biochemical role for the latter enzyme; published a series of papers on D-amino acid oxidase, detailing the kinetics and thermodynamics of association of the coenzyme with the apoprotein, the substrate and inhibitor specificity, and the effect of pH on the kinetic constants; expert on the theory and use of manometers; in 1931, collaborated with Keilin and Hill to determine the first absorption spectrum of a cytochrome, cytochrome c; studied chemistry of lachrymators and mustard gas and proposed a phosphokinase theory to explain their mode of action.

1. *Biog. Mem. Fell. Roy. Soc.* **1988**, 34, 99-131.