dependent fashion, in addition to forming hydrazones with the aldehyde substrates. Iproniazid (*N*-isonicotinoyl-*N*-isopropylhydrazine) is not inhibitory.

Ethanol in concentrations up to 500mM is not inhibitory towards pig brain aldehyde dehydrogenase, although the thiol reagents iodoacetic acid and iodoacetamide are inhibitory.

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Subcellular Distribution of Rat Liver L-Alanine-Glyoxylate Aminotransferase

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Rat liver was homogenized in 0.4M-sucrose at 0–5°C. Centrifugation at 7.5×10^6 g-min gave supernatants with 88–97% of lactate dehydrogenase (values are percentages of activity in original homogenate), <5% of glutamate dehydrogenase, glucose 6-phosphatase, uricase or acid phosphatase and 19–25% of L-alanine-glyoxylate aminotransferase (assayed as described by Rowsell, Snell, Carnie & Al-Tai, 1969). Of the particle-marker enzymes (as indicated above) more than 95% were recovered in the sedimented particles with 75–82% of the aminotransferase.

For subfractionation of the particles differential centrifugation procedures were then applied, based on methods used by Appelmans, Wattiaux & de Duve (1955). Preparations of nuclei contained 80–90% of the DNA, 8–10% of the glutamate dehydrogenase or acid phosphatase, 5% of the uricase or glucose 6-phosphatase, 4% of the lactate dehydrogenase and 10% of the aminotransferase. Microsomal preparations contained 48% of the glucose 6-phosphatase, 56% of the arylsulphatase C, 11% of the lactate dehydrogenase, no measurable glutamate dehydrogenase and 7% of the aminotransferase. Crude mitochondrial preparations contained 90% of the glutamate dehydrogenase, 50% of the acid phosphatase, 40% of the uricase, 10% of the lactate dehydrogenase and 75% of the

aminotransferase. It was concluded that one could narrow the field for investigation to mitochondria, lysosomes and peroxisomes.

Lysosomes were prepared by flotation after intraperitoneal injection of rats with Triton WR1339 (Leighton *et al.* 1968). Of the acid phosphatase, 26–30% was recovered with <3% of the glutamate dehydrogenase, uricase or aminotransferase.

For application to a density gradient a particle fraction was prepared by differential centrifugation, designed to discard nuclei and microsomes. In a representative experiment percentage recoveries of aminotransferase, glutamate dehydrogenase, rhodanese, lactate dehydrogenase, acid phosphatase and uricase were respectively 70, 65, 68, 6, 70 and 82. A resuspension of these particles in 48% (w/v) sucrose (density 1.18g/ml) was layered over a discontinuous sucrose gradient (1.18–1.25g/ml) and after centrifugation at 2.9×10^6 g-min tube contents were recovered as four separate density-range fractions. In the topmost fraction percentage recoveries (compared with activities in the layered particles) for aminotransferase, rhodanese, uricase and acid phosphatase were respectively 73, 75, 12 and 32; corresponding values for the bottom fraction were 2, 2, 42 and 15. Altogether the profile for the aminotransferase closely matched that of rhodanese but clearly differed from those observed for uricase or acid phosphatase.

We conclude that a large part, at least, of the particulate alanine-glyoxylate aminotransferase is mitochondrial.

The aminotransferases in the cytosol and in solubilized particles are different; K_m values for glyoxylate are respectively 1.2 and 0.24 mM and pH-activity curves showed marked differences.

Triton WR1339 was a gift from Hilton Davis Chemicals Ltd., Newcastle upon Tyne, U.K.

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A Prostaglandin Isomerase in Cat Plasma

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Prostaglandin A_1 [15-hydroxy-9-oxoprost-10,13-(*trans*)-dienoic acid] is a natriuretic agent in the dog