LIST OF FIGURES

Fig. 1  Activity of malate dehydrogenase (MDH) isoenzymes (cytosolic and mitochondrial) in the liver of normal male mice of different postnatal ages. 35

Fig. 2  Activity of malate dehydrogenase (MDH) isoenzymes (cytosolic and mitochondrial) in the kidney of normal male mice of different postnatal ages. 36

Fig. 3  Activity of aspartate aminotransferase (AsAT) isoenzymes (cytosolic and mitochondrial) in the liver of normal male mice of different postnatal ages. 37

Fig. 4  Activity of aspartate aminotransferase (AsAT) isoenzymes (cytosolic and mitochondrial) in the kidney of normal male mice of different postnatal ages. 38

Fig. 5  Oxidation of NADH by reconstituted malate-aspartate shuttle in the liver of normal male mice. 39

Fig. 6  Oxidation of NADH by reconstituted malate-aspartate shuttle in the kidney of normal male mice. 40

Fig. 7 (A) Effects of adrenalectomy (A/d) and hydrocortisone (HC) on the activity of cytosolic malate dehydrogenase isoenzyme in the liver of male mice at various postnatal ages. 46

Fig. 7 (B) Effects of adrenalectomy (A/d) and hydrocortisone (HC) on the activity of mitochondrial malate dehydrogenase isoenzyme in the liver of male mice at various postnatal ages. 47
Fig. 8 (A) Effects of adrenalectomy (A/d) and hydrocortisone (HC) on the activity of cytosolic malate dehydrogenase isoenzyme in the kidney of male mice at various postnatal ages.

Fig. 8 (B) Effects of adrenalectomy (A/d) and hydrocortisone (HC) on the activity of mitochondrial malate dehydrogenase isoenzyme in the kidney of male mice at various postnatal ages.

Fig. 9 (A) Effects of adrenalectomy (A/d) and hydrocortisone (HC) on the activity of cytosolic aspartate aminotransferase isoenzyme in the liver of male mice at various postnatal ages.

Fig. 9 (B) Effects of adrenalectomy (A/d) and hydrocortisone (HC) on the activity of mitochondrial aspartate aminotransferase isoenzyme in the liver of male mice at various postnatal ages.

Fig. 10 (A) Effects of adrenalectomy (A/d) and hydrocortisone (HC) on the activity of cytosolic aspartate aminotransferase isoenzyme in the kidney of male mice at various postnatal ages.

Fig. 10 (B) Effects of adrenalectomy (A/d) and hydrocortisone (HC) on the activity of mitochondrial aspartate aminotransferase isoenzyme in the kidney of male mice at various postnatal ages.

Fig. 11 (A) Effects of dibutyrylated - cAMP (Bt₂ - cAMP) and hydrocortisone (HC) on the activity of cytosolic malate dehydrogenase isoenzyme in the liver of male mice at various postnatal ages.

Fig. 11 (B) Effects of dibutyrylated - cAMP (Bt₂ - cAMP) and hydrocortisone (HC) on the activity of mitochondrial malate dehydrogenase isoenzyme in the liver of male mice at various postnatal ages.
Fig. 12 (A) Effects of dibutyrylated - cAMP (Bt2 - cAMP) and hydrocortisone (HC), on the activity of cytosolic malate dehydrogenase isoenzyme in the kidney of male mice at various postnatal ages.

Fig. 12 (B) Effects of dibutyrylated - cAMP (Bt2 - cAMP) and hydrocortisone (HC), on the activity of mitochondrial malate dehydrogenase isoenzyme in the kidney of male mice at various postnatal ages.

Fig. 13 (A) Effects of dibutyrylated - cAMP (Bt2 - cAMP) and hydrocortisone (HC), on the activity of cytosolic aspartate aminotransferase isoenzyme in the liver of male mice at various postnatal ages.

Fig. 13 (B) Effects of dibutyrylated - cAMP (Bt2 - cAMP) and hydrocortisone (HC), on the activity of mitochondrial aspartate aminotransferase isoenzyme in the liver of male mice at various postnatal ages.

Fig. 14 (A) Effects of dibutyrylated - cAMP (Bt2 - cAMP) and hydrocortisone (HC), on the activity of cytosolic aspartate aminotransferase isoenzyme in the kidney of male mice at various postnatal ages.

Fig. 14 (B) Effects of dibutyrylated - cAMP (Bt2 - cAMP) and hydrocortisone (HC), on the activity of mitochondrial aspartate aminotransferase isoenzyme in the kidney of male mice at various postnatal ages.

Fig. 15 Elution profile of cytosolic aspartate aminotransferase (c-AsAT) from the liver of 15- and 180-day old mice through CM-cellulose ion exchange.

Fig. 16 Polyacrylamide gel electrophoresis of purified c-AsAT from the liver of 15-day (lane 1) and 180-day (lane 2) old male mice.

Fig. 17 (A) Michaelis-Menten plot for cytosolic aspartate aminotransferase (c-AsAT) from the liver of immature (15-day) mice with respect to aspartate as variable substrate.
Fig. 17 (B) Lineweaver-Burk plot of the same.

Fig. 18 (A) Michaelis-Menten plot for cytosolic aspartate aminotransferase (c-AsAT) from the liver of mature (180-day) mice with respect to aspartate as variable substrate.

Fig. 18 (B) Lineweaver-Burk plot of the same.

Fig. 19 (A) Michaelis-Menten plot for cytosolic aspartate aminotransferase (c-AsAT) from the liver of immature (15-day) mice with respect to α-ketoglutarate as variable substrate.

Fig. 19 (B) Lineweaver-Burk plot of the same.

Fig. 20 (A) Michaelis-Menten plot for cytosolic aspartate aminotransferase (c-AsAT) from the liver of mature (180-day) mice with respect to α-ketoglutarate as variable substrate.

Fig. 20 (B) Lineweaver-Burk plot of the same.

Fig. 21 Inhibition of cytosolic aspartate aminotransferase from the liver of immature (15-day) and mature (180-day) male mice by amino-oxyacetic acid with respect to aspartate (DIXON'S PLOT).

Fig. 22 Inhibition of cytosolic aspartate aminotransferase from the liver of immature (15-day) and mature (180-day) male mice by amino-oxyacetic acid with respect to α-ketoglutarate (DIXON'S PLOT).

Fig. 23 Inactivation profile of liver cytosolic aspartate aminotransferase from immature (15-day) and mature (180-day) old mice, using varying concentrations of urea.

*****