XI. GENERAL SUMMARY AND CONCLUSIONS

CHAPTER-XI

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1. A new colourimetric method is devised, for the estimation of methylpyridyl substituted quinazoline-4-one.
2. Substituted quinazoline-4-one derivatives inhibit the growth and acid production in Streptococcus faecalis-R.
3. Respiration of washed cells is inhibited by SRC-820 and quinazoline-4-one. The inhibitory effect of iodoacetate can be reduced in presence of SRC-820, while that of fluoride is increased.
4. Aldolase of S.faecalis-R belongs to Class-II requiring metal ions and is inhibited by EDTA.
5. SRC-820 stimulates glyceraldehyde-3-phosphate (GAP) dehydrogenase activity and reduces tne inhibitory effect of iodoacetate.
6. Conversion of 3-phosphoglycerate to phospho-enolpyruvate is inhibited by EDTA and SRC-820; the inhibition due to the latter substance can be overcome by increasing the concentration of Mg^{2+}. The inhibitory effect of fluoride is augmented in presence of SRC-820.

7. Glucose-6-phosphate dehydrogenase of *S. faecalis*-R requires Mg^{2+} and is activated by Cl^- ions, SRC-820 inhibits this reaction.

8. *S. faecalis*-R possess NADH-oxidase and diaphorase systems. The activity of the oxidase is inhibited by p-chloromercuribenzoate, iodoacetate and SRC-820. SRC-820 does not reduce the inhibitory effect of either pCMB or iodoacetate. Diaphorase activity is not affected by SRC-820.

In conclusion, it can be said that the 2-alkyl, 3-aryl substituted quinazoline-4-one (SRC-820) exerts its inhibitory effect at the level of enolase in glycolysis, at the level of glucose-6-phosphate dehydrogenase in HMP pathway and at the level of NADH-oxidase. This, it brings about by its ability to bind metal cations.