STUDIES ON THE SUBSTRATE SPECIFICITY OF AROMATIC-L-AMINO ACID DECARBOXYLASE

by

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TABLE OF CONTENTS

acid-S which has been synthesized via indole-3-pyruvic acid-S.

SUMMARY AND CONCLUSIONS

1. The benzo[b]thiophene and N-1-methyl indole analogs of tryptophan have been found not to be substrates for aromatic-L-amino acid decarboxylase *in vitro*.
2. The S and 1-Me analogs of tryptophan competitively inhibit the decarboxylation of tryptophan and phenylalanine, indicating that the tryptophan analogs are capable of reaching tne enzymatic active site.
3. Tryptophan-S is a more potent inhibitor than tryptophan-1-Me.
4. Tryptophan-S appears to be decarboxylated *in vivo*. This might be attributed to either the inability to detect small amounts of tryptamine-S *in vitro* or to the decarboxylation of tryptophan-S by intestinal flora. Tryptophan-1-Me is not decarboxylated *in vivo*.
5. There is some evidence that tryptophan-S and tryptophan-1-Me are transaminated *in vivo*.