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NOTICE OF RESEARCH PROJECT

CONTRACTING AGENCY: Federal Security Agency, Public Health Service

TITLE OF PROJECT: Metabolism of Pressor Amines and "Sympathin."

NAME, DEPARTMENT, TITLE OF PRINCIPAL INVESTIGATOR(S): (And Other Professional Personnel)

Dr. William G. Clark, Assoc. Clin. Prof. of Physiol. Chemistry, (Appt. Pending)
Dr. Abraham White, Chairman, Department of Physiol. Chemistry, School of Medicine
Dr. T. A. Geissman, Professor of Organic Chemistry, Department of Chemistry
Dr. Hermann Schott, Research Associate, Department of Physiol. Chem., School of Medicine

NAME AND ADDRESS OF INSTITUTION:

School of Medicine
University of California at Los Angeles
Los Angeles 24, California

SUMMARY OF PROPOSED WORK: (For Program of Exchange of Information)

A study of the degradative metabolism of arterenol and epinephrine in vitro and in vivo, C^{14}-tagged compounds to be employed wherever possible. Isolation, purification, and identification of structures of the conjugates of these amines found in urine of animals to which they have been given. A study of the conjugation in vitro and of the enzymes responsible. A study of the nature, distribution, and elimination of free and conjugated pressor amines in vivo after administration. Extension of results to hypertensive animals and patients.

It is planned to synthesize theoretical precursors of arterenol and epinephrine, to study their decarboxylation to the pressor amines in vitro and in vivo, and to synthesize analogues (fluorinated, sulfonated, aminated, thiol-substituted) which, by competitive enzyme inhibition, may inhibit this decarboxylation in vitro and in vivo, thus possibly inhibiting the biosynthesis of epinephrine and arterenol, and hence adrenergic transmission. This should constitute a true chemical "sympathectomy" if ever successfully realized.

BEST COPY AVAILABLE

SIGNATURE OF PRINCIPAL INVESTIGATORS

Abraham White
William G. Clark
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