

This document only includes an excerpt of the corresponding thesis or dissertation. To request a digital scan of the full text, please contact the Ruth Lilly Medical Library's Interlibrary Loan Department (rlmlill@iu.edu).

CATHA EDULIS (KHAT) AND ITS AKLALOIDS,
CATHINONE AND CATHINE: CHEMISTRY,
PHARMACOLOGY, AND A SPECULATIVE
STUDY ON THE INFLUENCE OF 1-CATHINONE
ON THE UPTAKE AND RELEASE OF DOPAMINE
AND NOREPINEPHRINE IN SYNAPTOSOMES
FROM DIFFERENT RAT BRAIN REGIONS:
A COMPARISON WITH d-AMPHETAMINE.

by

Mamdouh AL-sharifi

Submitted to the faculty of the Graduate School
in partial fulfillment of the requirements
for the degree of
Master of Science
in the
Department of Pharmacology and Toxicology
Indiana University

December, 1983

Acceptance of this dissertation has been approved by:

Robert B. Forney, Ph.D.

Robert B. Forney

Henry R. Besch, Jr., Ph.D.

HR Besch

David J. Doedens, Ph.D.

David J. Doedens

Contents

	Page
I - Introduction.....	1
II - Chemical Composition of Khat.....	4
1 - Phenylalkylamine alkaloids.....	3
A - Cathine.....	2
B - Cathinone.....	2
2 - Catheduline Alkaloids.....	2
3 - Tannins.....	4
4 - Miscellaneous.....	4
III - Pharmacology of Khat.....	4-7
1 - Central Nervous System Stimulation.....	4
A - Effects on Human.....	4
B - Effects on Experimental Animals.....	5
2 - Anorexic Effect.....	5
3 - Cardiovascular Effects.....	6
4 - Other Effects.....	6
5 - Toxic Effects.....	7
6 - Mechanism of Central Nervous System Stimulation.....	6 7-8
7 - Metabolism of Khat.....	8
8 - Influence of Cathinone, Cathine and Am- phetamine on Catecholamines.....	8-9
IV - Hypothesis.....	9-10

Contents (continued)

	Page
V - Proposed Protocol.....	10-13
1 - Dopamine Release.....	11-12
2 - Dopamine Uptake.....	12
3 - Norepinephrine Release and Uptake Inhibition.....	13
VI - Bibliography.....	14-20