

**ISOLATION, PHYSICO-CHEMICAL CHARACTERIZATION AND
BIOTECHNOLOGICAL PROPERTIES OF A THERMOSTABLE PROTEASE
FROM THE LATEX OF *Synadenium grantii*. Hook 'f'**

Thesis submitted to the

UNIVERSITY OF MYSORE

for the Degree of

1725-209
DOCTOR OF PHILOSOPHY

IN

BIOTECHNOLOGY

Mrinalini Menon



VITTAL MALLYA SCIENTIFIC RESEARCH FOUNDATION

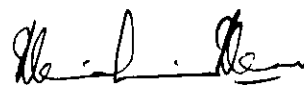
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APRIL 2003

DECLARATION

I hereby declare that the work embodied in this thesis is based on the investigation carried out by me at the Division of Biological Sciences, Vittal Mallya Scientific Research Foundation, Bangalore, India under the guidance of **Dr. C.S.Ramadoss** and that no part of the thesis has been submitted elsewhere for the award of any degree or diploma.

Candidate

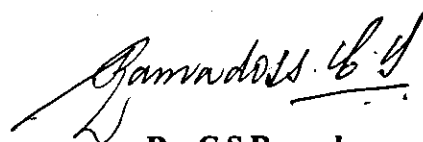


Mrinalini Menon

CERTIFICATE

I hereby certify that the work embodied in this thesis entitled " **ISOLATION, PHYSICO-CHEMICAL CHARACTERIZATION AND BIOTECHNOLOGICAL PROPERTIES OF A THERMOSTABLE PROTEASE FROM THE LATEX OF *Synadenium grantii*. Hook 'f'** " submitted by Ms.Mrinalini Menon to the University of Mysore for the degree of Doctor of Philosophy in Biotechnology, is based on the research work carried out by her under my guidance in the division of chemical sciences at Vittal Mallya Scientific Research Foundation, Bangalore, India and that no part of the thesis has been submitted elsewhere for the award of any other degree or diploma.

Research Guide



Dr. C.S.Ramadoss

To my parents &

Teachers

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LIST OF ABBREVIATIONS USED IN THIS THESIS

BAEE:	benzoyl-arginine ethyl ester
BTEE:	benzoyl-tyrosine ethyl ester
BSA:	bovine serum albumin
CTAB:	hexadecyltrimethylammonium bromide
DEPC	diethyl pyrocarbonate
DNA	deoxyribonucleic acid
DTE	dithioerythritol
DTT:	dithiothreitol
EDTA	ethylene diamine tetraacetate
FPLC:	Fast Protein Liquid Chromatography
GuHCl	guanidine hydrochloride
HPLC:	High Performance Liquid Chromatography
kDa :	kilodaltons (unit of molecular mass)
MMP:	matrix metalloprotease
PAGE	polyacrylamide gel electrophoresis
PAS	periodic acid-Schiff staining (method)
pCMB	para-chloro-mercuribenzoate
PMSF:	phenylmethylsulfonyl fluoride
RCM:	reduced, carboxymethylated
RNA:	ribonucleic acid
RNAse A:	ribonuclease A
RP-HPLC:	reverse-phase HPLC
SDS	sodium dodecyl sulphate
TCA:	trichloroacetic acid.
TFA:	trifluoroacetic acid
TIMP:	tissue inhibitor of metallo-proteases
TLCK:	tosyl-lysine chloromethyl ketone
TPCK:	tosyl- phenylalanine chloromethyl ketone
Tris :	Tris-(hydroxymethyl)-aminoethane
U	unit (of enzyme activity)

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