

Contents

Abbreviations	
General Introduction	1
Review and Literature	8
Materials and Methods	
Materials	44
Methods	57
 Chapter I	
Standartization of conditions for gene transfer in <i>S. flaviscleroticus</i> by transformation and conjugation.	67
 Chapter II	
Testing the genetic potential of potential of polyketide production by construction of knockout mutant of <i>S. flaviscleroticus</i>	83
 Chapter III	
Heterologous expression of act I homologous polyketide synthase (PKS) genes of <i>S. flaviscleroticus</i>	100
 Chapter IV	
Structural characterization of the aromatic polyketide produced by <i>S. flaviscleroticus</i>	122
 Perspective	131
 References	137

ATCC	American Type Culture Collection
Kb	Kilobase
ATP	Adenosine Triphosphate
IPTG	Isopropyl β - D-Thiogalactopyranoxide
X-gal	5- Bromo -4-chrolo-3- β - D-galactopyranoxide
bp	Base pair
CFU	Colony Forming Unit
Gm	Gentamycin
Ap	Ampicillin
Am	Apramycin
BSA	Bovine serum albumin
CAA	Casine amino acid
KDa	KiloDalton
EDTA	Ethylene Diamine Tetraacetic acid
DMSO	Dimethyl Sulphoxide
DMF	Dimethyl Formamide
DNA	Deoxyribo Nucleic Acid
DNase	Deoxyribonuclease
HEPES	4(-2-hydroxyethyl)-1-Piperazine Ethane Sulphonic Acid
HPLC	High Performance Liquid Chromatography
Kan	Kanamycin
MCS	Multiple Cloning Site
MMS	Methyl Methane Sulphonate
NQO	Nitroquinoline-1-oxide
OD	Optical Density
ORF	Open Reading Frame
PAGE	PolyAcrylamide Gel Electrophoresis
PKS	PolyKetide Synthase
PVDF	Polyvinylidene Difluoride
Rf	Retention front
RNase	Ribonuclease
rpm	Revolutions per minute
SDS	Sodium Dodecyl Sulphate
SSC Buffer	Sodium Chloride Sodium Citrate Buffer
Tet	Tetracycline
TLC	Thin Layer Chromatography
uv	Ultraviolet