

**“Isolation, Purification And Crystallization of SPB-40 from
Bovine Mammary Gland”**

*To be submitted as Major Project-2 in partial fulfillment of
the requirement for the degree of*

Master of Technology

Bioinformatics

Submitted by

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**“Isolation, Purification And Crystallization of SPB-40 from
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Major Project-2 submitted to the

Department of Biotechnology,
Delhi Technological University, Delhi



For the Partial Fulfilment of Masters Degree in Bioinformatics

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DELHI TECHNOLOGICAL UNIVERSITY

Project report on “**Isolation, Purification and Crystallization of SPB-40 from Bovine Mammary Gland**”
for the partial fulfilment of M. Tech in Bioinformatics

(Batch: 2014-2016)

Year of Submission 2016

Submitted by:

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M. Tech Bioinformatics

CERTIFICATE



This is to certify that the M.Tech dissertation entitled “**Isolation, Purification and Crystallization of SPB-40 from Bovine Mammary Gland**”, submitted by **Ravi (DTU/14/M.TECH/122)** in the partial fulfilment of the requirement for the award of the degree of Master of Technology, Delhi Technological University (Formerly Delhi College of Engineering), is an authentic record of the candidate’s own work carried out at Department of Biophysics, AIIMS, New Delhi under the guidance of Professor T.P Singh (*Distinguished Biotechnology Research professor*) and **Dr. Sujata Sharma (Professor)**.

The information and data enclosed in this dissertation is original and has not been elsewhere for honouring of any other degree.

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CERTIFICATE

This is to certify that this dissertation report entitled **“Isolation, Purification and Crystallization of SPB-40 from Bovine Mammary Gland”** comprise the work done by **Ravi**, under our guidance and preceptorship in the Department of Biophysics, All India Institute of Medical Sciences, New Delhi-110029, India.

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DECLARATION

I **Ravi**, hereby declare that “**Isolation, Purification and Crystallization of SPB-40 from Bovine Mammary Gland**” is my own work carried out under the supervision of **Dr. Sujata Sharma** (Professor) and **Prof. T.P. Singh** (Distinguished Biotechnology Research Professor), **Department of Biophysics, All India Institute of Medical sciences, New Delhi**, for the partial fulfilment of the degree of Masters of Technology in **Bioinformatics** provided by **DELHI TECHNOLOGICAL UNIVERSITY, DELHI**.

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Dedicated to my parents.....

For their endless love, support, encouragement and faith in me.

I owe everything to them.

ACKNOWLEDGEMENT

A journey is easier when you travel together; interdependence is certainly more valuable than independence. This thesis is the results of five months of work whereby I have been accompanied and supported by many people. This is an impossible task given that many people that have helped to design, implement, apply criticize and evangelize the work. I am going to acknowledge every person who helped me out in the study and if your name is not listed, rest assured that my gratitude is not less than for those who list below.

First and foremost “I humbly thank The Almighty, the Merciful and the Beneficent, who gave me health, thoughts and co-operative people to enable me achieve this goal”. I pray God to bless me always and enlighten me towards the path of a meaningful and successful life as a good human being and guide me on the right path.

Then i thank a lot to Professor **T. P. Singh**, *Distinguished Biotechnology Research professor*, Department of Biophysics, to give me immense pleasure and opportunity to work under his magnanimous supervision, his dedication towards works, has thought me a lot. Despite of being one of the leading scientists in India his down to earth approach speaks volumes about his nature. He is an ideal role model for any science student and I hope to follow his footstep in literature. His dynamic personality, inexhaustible knowledge, indefatigable energy to work has been a great source of energy for me. I have learnt countless things from him. His meticulous suggestions, clear perceptions and deep understanding of the subject have an everlasting effect on thinking and scientific approach. I do not have words to express my gratitude.

I would like to express my deepest sense of gratitude and indebtness to **Dr. Sujata Sharma** for her constant encouragement, critical suggestions and keen interest throughout the course of this study. I got that each time she is busy in works and never waste time.

So I learnt to be hard worker. Her way of work inspection is ideal in itself to promote for more works. I attended her presentation and learnt to present best. Now no more words to explain about her as great teacher. Her presence in lab makes lab livelier and her interests in our work inspires us. With deep reverence I take this opportunity to thank her for all her persistence and guidance.

I have hardly any words to express my gratitude to **Mrs. Anshul Chaudhary**. Actually she is a practical girl of diverse field of life and has well experience of circumstances. She encouraged me to work independently and promote me to do every work in just one attempt because of that I understand the minute details of my work, which increased my interest and knowledge in the field of Structural Biology. She provided me her support and guidance every time I needed.

I would like to thank **Dr Pradeep, Dr Amit, Dr Sanjit** for their great support in all works and answering my queries. Thanks to seniors, **Nilisha Juhi ,Sanket, Ravi, Rashmi, Satya prakash Yadav and Sadanand, Harsh, Prakash and Avinash** as they gave me great ambience to realize that research is great him in itself. They have always been there whenever I needed them. They have all contributed in one or the other way for the successful completion of this work.

I wish to extend my warmest thanks to all those who have helped me with my work in the Department of Biophysics.

The chain of my gratitude would be definitely incomplete if I forget to thank the first link of this chain, my parents, **The Prime Mover**. I feel a deep sense of gratitude for my **mother** and **father** who formed part of my vision and taught me the good things that really matter in life. I specially thank my dear **mother** for the myriad of ways in which you have actively supported me throughout my life, and to be the most helpful and trustful friend, I have. Great thank to whole **my family members, relatives** for promoting me to do best. I

wish to express my sincere appreciation for the immense support and concern provided to me by my family and relatives for the blessed me to get success in my work and to get this great opportunity to work here. Their kind co-operation and extension of moral support was essential for the completion of this piece of work smoothly.

I would like to express my heartfelt gratitude to my supervisor and mentor, *Dr. B.D. Malhotra (Professor)*.

I express my kind regard and gratitude of *Prof. D. Kumar* (HOD, Department of Biotechnology).

I would also like to thanks *Mr. Chhail Bihari, Mr. Jitendre Singh* and *Sandeep* for helping Departmental work.

I also wish to thank all my **Classmates of Masters of Bioinformatics** for their support and encouragement.

People contributing to my work are innumerable. It is difficult to summarize in one or two pages. I am thankful to all of them.

RAVI

ABBREVIATIONS

%	Percent
⁰ C	Degree Celcius
μg	Microgram
μl	Microlitre
APS	Ammonium per Sulphate
CMC	Carboxy Methyl Cellulose
EDTA	Ethylenediamine tetra acetic acid
g	Gram
HCL	Hydrochloric acid
hr	Hour
kDa	Kilo Dalton
M	Molar
Min	Minute
nM	Nano molar
N	Normal
NaCl	Sodium chloride
O.D.	Optical Density
PAGE	Polyacrylamide gel electrophoresis
rpm	Rotation per minute
SPX-40	Signaling glycoprotein-40
SDS	Sodium Dodecyl Sulphate
TEMED	N,N,N',N' tetramethyl diamine
W/v	Weight by Volume
W/w	Weight by weight

BMCD	Biological macromolecular crystallization database
PDB	Protein data bank
ExPASy	Expert Protein Analysis System

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