

**CELL COMMUNITY AND TISSUE DEVELOPMENT OF PERIPHERAL
BLOOD STEM CELLS FROM NORMAL HUMAN ADULT SUBJECTS
CULTURED ON 3D-NANOFIBROUS SCAFFOLD**

SARANYA JARUCHAINIWAT

MASTER OF SCIENCE

IN MEDICAL RADIATION SCIENCES

ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่

Copyright© by Chiang Mai University

All rights reserved

THE GRADUATE SCHOOL

CHIANG MAI UNIVERSITY

DECEMBER 2009

**CELL COMMUNITY AND TISSUE DEVELOPMENT OF PERIPHERAL
BLOOD STEM CELLS FROM NORMAL HUMAN ADULT SUBJECTS
CULTURED ON 3D-NANOFIBROUS SCAFFOLD**

SARANYA JARUCHAINIWAT

**A THESIS SUBMITTED TO THE GRADUATE SCHOOL IN
PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
MASTER OF SCIENCE**

IN MEDICAL RADIATION SCIENCES

ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่

Copyright© by Chiang Mai University

All rights reserved

**THE GRADUATE SCHOOL
CHIANG MAI UNIVERSITY**

DECEMBER 2009

CELL COMMUNITY AND TISSUE DEVELOPMENT OF PERIPHERAL
BLOOD STEM CELLS FROM NORMAL HUMAN ADULT SUBJECTS
CULTURED ON 3D-NANOFIBROUS SCAFFOLD

SARANYA JARUCHAINIWAT

THIS THESIS HAS BEEN APPROVED
TO BE A PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF MASTER OF SCIENCE
IN MEDICAL RADIATION SCIENCES

EXAMINING COMMITTEE

Noppavan Chanunpanich..... CHAIRPERSON

Assoc. Prof. Dr. Noppavan Chanunpanich

Samlee Mankhetkorn..... MEMBER

Assoc. Prof. Dr. Samlee Mankhetkorn

Nathuphakorn Dechsupa..... MEMBER

Dr. Nathuphakorn Dechsupa

S. Thongprasert..... MEMBER

Prof. Sumitra Thongprasert

Suchart Kothan..... MEMBER

Assist. Prof. Dr. Suchart Kothan

24 December 2009

© Copyright by Chiang Mai University

ACKNOWLEDGEMENTS

There are many persons to whom I am indebted for their help in successful this study.

My sincere gratitude is to Assoc. Prof. Dr. Samlee Mankhetkorn and Dr. Nathupakorn Dechsupha, my advisor, for the encouragement, exceptional ideas and support during the course of this study and for providing the excellent facilities for my work.

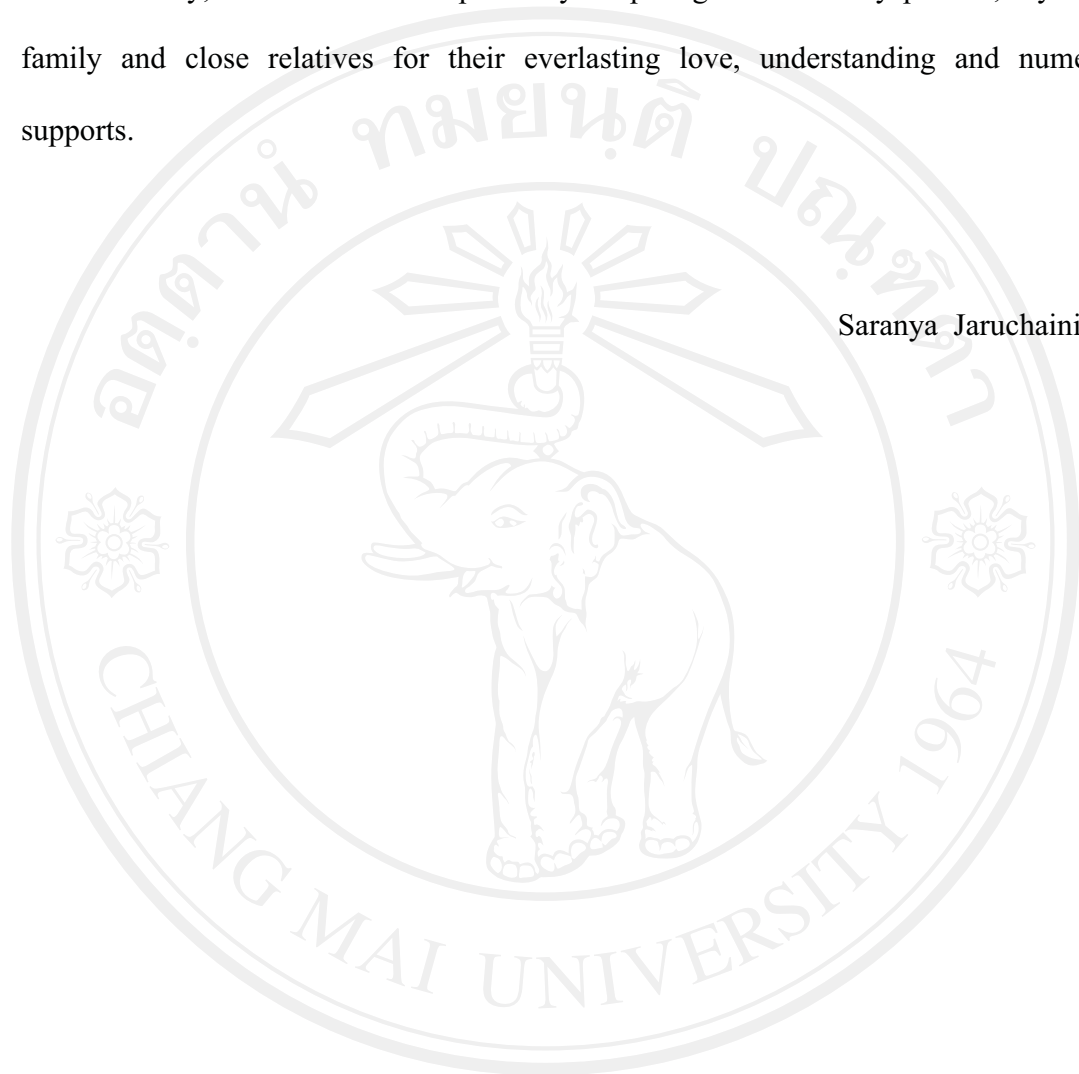
My grateful are to Asst. Prof. Dr. Suchart Kothan, Dr. Montree Tungjai, Assoc. Prof. Dr. Noppavan Chanunpanich and Prof. Sumitra Thongprasert who accepted the request to participate in the jury of my thesis and their discussions and advices during my thesis performing.

My special thanks are to members in Laboratory of Physical Chemistry Molecular and Cellular Biology (PCMCB), Department of Radiologic Technology, Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai that have been very cooperative and help.

My thanks are to the program Strategic Scholarships for Frontier Research Network (Grant no CHE-RES-RG 2551) from the Office of the Higher Education Commission, Thailand and Division of Diagnostic Radiology, Department of Radiology, Faculty of Medicine, Khon Kaen University, Khon Kaen for my scholarship.

Finally, I would like to express my deepest gratitude to my parents, my whole family and close relatives for their everlasting love, understanding and numerous supports.

Saranya Jaruchainiwat



ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่
Copyright© by Chiang Mai University
All rights reserved