Acknowledgements

With a feeling of profound pleasure I can say that the credit of this work goes to a giant personality in himself, my esteemed guide Dr. Shrihari Mishra. Thanks from depth of my heart for his erudite guidance, constant encouragement, critical remarks, precise discussion, timely suggestions and the nourishment of the knowledge he conferred upon me.

A single flower can not make a garland and a single star can not make the beautiful shiny sky at the night, a research work can also never be an outcome of a single individual’s talent or efforts. During this journey from objective to goal, I have experienced shower of blessings, guidance and inspiration from my teachers, parents and friends, all my well wishers who gave me right directions and made it to achieve the goal.

I am greatly indebted to Prof. R. Balaraman, Head of Pharmacy Department, Prof. A N Misra, Former head of Pharmacy Department, Prof. S. J. Rajput, Co-ordinator, Shri G H Patel Building for PG Studies and Research, Prof. R. Girdhar, Former Co-ordinator, Shri G H Patel Building for PG Studies and Research, for providing me the required facilities to carry out my work.

With the deep sense of regards, I wish to express my sincere most gratitude to Prof. RSR Murthy, Prof. M. R. Yadav, Prof. K. Sawant, Dr. P. A. Nagar, and Dr. R. C. Mashru who are always trying to polish the scientific side of student’s mind. They taught me a lot indirectly by arranging seminars, conferences and scientific sessions and putting their efforts for enriching the knowledge regarding present situation and future perspectives in pharmaceutical sciences.

The financial support from All India Council for Technical Education (New Delhi) in the form of National Doctoral Fellowship is gratefully acknowledged.

Non teaching staff; Hasumati madam, Heena madam, and Vaishali madam can not be forgotten. Their kind nature and promptness in ordering and issuing our lab requirements is appreciable. Mr. Mashrubhai, our lab attendant also needs to be thanked for his help in collection of plants.

I would like to thank Dr. K. S. Rajpoot (Botany Department, Faculty of Science, The M. S. University of Baroda) for his help in microtomy. I acknowledge my thanks to Ms. Vidya and Mr.
Gaurav, Research Scholars at Botany Department for providing their skillful techniques in microtomy.

I offer my sincere thanks to Mr. Himanshu Patel (Stem Cure India Pvt. Ltd., Ahmedabad) for providing laboratory facilities and technical guidance for carrying out cell line studies. I thank Ms. Hetvi and Ms. Hirat of Stem Cure for their technical help during cell line studies.

I am thankful to M/s Vaibhav Analytical Labs, Ahmedabad for elemental analysis.

I am also thankful to M/s Zydus Cadila, Ahmedabad, for providing animals (rats), and sincere thanks to Dr. Ravindra Chambhare, Analytical Research, Zydus Research Centre, for CHN analysis of samples.

I offer my thanks to Prof. V. P. Chovatiya (Head, Botany Department, Junagadh Agriculture University, Junagadh) for providing facilities to perform DNA fingerprinting. I am grateful to Dr. D. R. Mehta, Dr. H. L. Dhaduk, and Dr. Madaria for their valuable guidance and help in the study.

I would like to thank my seniors Dr. Manan raval, Dr. Manish Lavhale, Dr. Somasekar Padashetty, Dr. S. V. Sureshkumar and Dr. Krishnamurthy for their support and help.

It was pleasure working with my colleagues cum good friends Mrs. Uttara Joshi, Ashish Trivedi, Neerajkumar Sethiya, Mahendra Jain and Mohan Marugaraja. Juniors made the working environment full of joy and enthusiasm. Helping to juniors in their studies made me understanding the things more clearly which in turn helps me. I am thankful to Kinari, Tanvi, Nazia, Sangeeta, Nirmal, Ritesh, Daya, Piyush, Nilam, Darshana and Hetal for the same.

Words are quite insufficient to acknowledge gratefulness of people who helped me directly or indirectly in this scientific endeavor. Expressing the sincere appreciation for the friends who gave the feeling of “being with” should not be forgotten. I am heartily thankful to friends like Gaurav, Dinakaran, Pinkal, Chetan, Nitin, Hiren with whom I enjoyed the time after lab hours which rejuvenated me for the next day. Their support and encouragement provide me strength.

There are countless people who had taken care of mine emotionally and socially. I express my deep sense of affection towards my faifuva for their co-operation and love during my stay at
Ahmedabad. I do not have any words to thank my mama and other relatives at village in junagadh district who very enthusiastically help me in collection of plant material.

I express my feeling of gratitude towards my best friends Mukund, Piyush, Hiren and their families who showed everlasting patience and confidence in me. Their moral support and unconditional love pour courage in me.

My parents, brother Chirag and sister Manisha had sacrificed a lot for me. In achieving this goal, it’s life long debt of emotions and love. Thanks will never been a sufficient word for it. Their blessings and prayers are invaluable.

During this journey, a person who remained always with me was my fiancée and now better half Mishti. Her company smoothened the path. A sense of pleasure is sprinkled while thanking her for being with me all the time.

I thank the almighty god for all the blessings he has showered on me. I feel every person who has helped me, guided me and blessed me were actually god’s way of leading me to the path of success.

Mayurkumar Patel