ACKNOWLEDGMENTS

The journey taken during PhD was full of experiences. This journey has enriched me in terms of knowledge and social interactions. My journey in research started during Master's. I'll begin acknowledgement by thanking my teachers of Dept. of Microbiology, Smt. C.H.M College, who always believed in me and encouraged me to do Ph.D. Thank you, Prof. Joshi, Prof. Pandya, Prof. Gulve, Prof. Bela, Prof. Patel, Prof. Deshmukh, Prof. Bhagwat, Prof. Bhuvaneshwari and special thanks to Prof. Meena Menghrajani for igniting the spark of research and motivating me to take up a doctoral program at National Institute for Research in Reproductive Health.

NIRRH, a place that will always remain in my heart. In this institute I matured scientifically and personally. I discovered new me in myself. I thank Directors of NIRRH, past and present, for giving me a unique opportunity to pursue Ph.D.

It gives me immense pleasure to express my deep gratitude towards my research guide Dr. Vrinda Khole, excellent scientist, awesome orator and wonderful human being. I consider myself very fortunate that she handpicked me. She always encouraged me to become independent thinker. She was always open to new ideas. Many times I rushed into her cabin with my new ideas, hypothesis, with a patient ear she listened, encouraged and improvised. A single word of appreciation meant a lot to me. I learnt many things from her, manuscript writing, making awesome presentation. Although sometimes I had been disorganized, she has been extremely patient with me. On personal front she encouraged me to keep healthy balance between work and family. She shouldered my entire research career. I hope I will make her proud one day.
I am grateful to Dr. Priyanka Parte as she has been a support throughout. She explained me basics of literature survey and her kind help. Her initiatives like journal club and lab seminar helped me to revisit many ideas. I thank Dr. Kaushiki Kadam and Dr. Rahul Gajabhliye for always being there and a support throughout my Ph.D. The care extended is of great help. I enjoyed all the conversations we had in the laboratory.

I would like to thank Dr. Nafisa Balasinor and her laboratory, Neuroendocrinology, known as NEC, for entertaining me at any given time. It wouldn’t have been possible for me to study hormonal regulation without her and her lab. I am also grateful for critically evaluating my manuscript. She allowed me to use microtome, cryo-section facility, perfusion fixation for ‘n’ number of time. It is because of her and Mr. Suryakantji I could became an expert in these techniques. I thank you and individuals from the department for creating a pleasant environment. Suryakantji literally taught me animal handling and tissue processing. I wish to acknowledge him for same.

I would like to thank Dr. Ikram Khatkhatey and Meena Desai, Molecular Immunodiagnostic, for teaching me statistics that I do know. I would like thank Dr. Geetanjali Sachadeva, Primate Biology. I could enter in her lab anytime; interactive talks we had were helpful. This was also shared by Dr. Deepak N Modl, I would like to thank him for constant encouragement.

During all these years of extended student life, Dr. Smita Mahale was a great help as a student-in-charge. I wish to thank her. She always encouraged students to participate in various extracurricular activities, and Science Day (2011) is the best example. I thank her to give me an opportunity to act as a coordinator for this event. I cherish all these moments. It is also because of her we could come over hurdles raised during the tenure.
I would like to convey my thanks to Dr. Geeta Vanage and Toxicology department. I always consider her lab as a sibling’s lab. She allowed me to use many of her lab equipments generously. Specially, I would like thank Mr. Sharad and Tanvi for providing assistance to capture best quality photographs of all my IHCs.

My sincere thanks go to all head of the departments and the staff of central facility. I would like thank Confocal Microscopy Facility which was a LASER of my hopes many times. I am grateful to Dr. Nafisa for allowing me to avail this facility. I would like extend my thanks to Ms. Shobha and Ms. Reshma for their extensive help in image capturing, processing and record keeping. They patiently explained me interpretation of colocalization data.

I would like to thank Dr. Taruna Gupta, Dr. Bhakti Pathak, Dr. Vikrant Bhor, Dr. Jayanti, Dr. Srabani, Dr. Deepa Bhartiya for their encouraging word during my presentations and otherwise. Dr. Bandivdekar for granting the permission to use various equipments; Dr. KVR Reddy for his help in dealing with stores department. I would like thank NIIHR, DST, DBT and ICMR for providing me fellowships. Sincere regards to Staff of Stores, Administration and Library for their timely support.

During all these years, I am truly fortunate to be a part of Department of Gamete Immunobiology. I am thankful to Dr. Amol for providing a broad base to my project. I got an opportunity to work with him in Proteomics, during which I learned different high through put techniques. This learning process was aided by Dr. Shalmali & I am thankful to her for explaining protein sequencing very patiently. I would like to thank Dr. Shaguftaji. Her meticulous work helped me in planning complex assays, I’m grateful for her kind help in my work. Eusebio (EZ) and Monali, wonderful people, were great support. With EZ I did my first IP and Western blot. Eusebio is a good
teacher; he explained male and female reproductive physiology that's why sometime I called him as 'Easy Bio-logy'. Monali quietly listened to all my queries. She went out of her way and actually helped in devising new backup plans. I pray, we three will continue to share this bond.

Nina also known as Nani, is one of the individual I interacted on my very first day. Big thanks to Nina, who always treated me as her younger brother and I cherish this bond. @. I would like to thank my batch mate, my true supporter and friend Asmita. She expresses all the markers of true friendship. I truly treasure her friendship. I thank Omshree for trouble shooting my PCRs and I enjoyed all the fun and work time with her. I enjoyed all time spent in lab, treks, parties, picnics, seminars with my lab friends Aalok, Sweta & Shweta, Mamta, , Parimala, Mayura, Kanaka, Shweta, Paurav, Arun, Nilesh, Avinash, Veena, Pratibha, Kashmiri; trainees Sayali, Vishakha, Sandy, Manasi, Sanket, Arpita. We all had hilarious time, Thank you. Special thanks to Vivian, my Y chromosomal friend in GLB and a good human being. The lab technicians Sudhir, Manish, Merchande are thanked for their timely help. I enjoyed all the bike rides taken with Sudhir and Manish. I have seen almost entire Mumbai, on their bikes. Sincere thanks to DG Gaikwad and Subhash for ensuring we never ran out of washed glass/plastic ware. I wish to thank to Sunaina mam, Leena madam and Sarika mam for their solid support and for being alma mater of lab.

My sincere thanks to my friends Mandar P, Alhad, Deepali, Tahir, Kushaan, Anita, Leena, Hrishi, Rahul, Pooja, Jenifer, Aditi, Prasad, Ajit, Subhangi, my seniors Roshan, Shad, Madhavi P, Sashiana, , Neelam, Vrushali. I thank Shilpa and Smita for explaining staging of seminiferous tubule. And that helped a lot during interpretations. I thank Ryan for sharing his valuable experience in immunofluorescence and in silico interpretations.
I cherish all the moments spent with by batch mates and their timely support that kept my moral up; Abhijit, Sanjukta, Tanvi, Nuzat, Swapana thank you guys.

Special thanks go to my best friends Ameya and Mandar A. I thank them for being always there for me. Our long scientific discussion sessions in train, on road, on phone helped to develop scientific aptitude. Their support during crisis has helped me to come over worst situations I faced. The moments I spent with these guys will remain with me till my last breath.

Finally I would like to thank my parents and my extended family, without their support, completing this endeavor wouldn’t have been possible. I thank them for being patient and providing unconditional support throughout. I thank Madhav mama, Sada mama, and all three mavshis for their unconditional love and solid support. I thank all my cousin brothers and sisters for love and happy moments. Special thanks to my elder brother Makrand, for his timely unconditional support.

Last but not the least, I would like to thank God. I express my deep gratitude for guiding me through this amazing voyage, through all these special individuals.