ACKNOWLEDGEMENTS

This experience as PhD student would have never been possible without a long long list of people... unfortunately some are not with us anymore and I will start exactly by dedicating this thesis to my beloved grandmother and my dear grandfather who I lost over the last few years.

I thank my parents for all their help and support. Mãe you always ask me to say “Obrigada mamã!” and now I have the chance to write it here! Pai thank you for always believing in me. Marta, you are the best “sista” ever... thank you for keeping me updated with all the best scoops!!

João, your “d*$” has made it... Thank you for encouraging me throughout the whole course of this thesis, for being always with me... even if we were more than 2000Km apart. Ok... ok... we can negotiate a percentage of this PhD degree! It’s fare enough...

To all my friends a huge THANK YOU! I would be just another sad lonely PhD student without all of you!!!! With no particular order I thank my all-time mates Koki, Catarina, Magda (and her growing family), João F., André and Joana (who happen also to be family and who I grew with), Joana V., Klauss, Racks, Mafi, Lira, RuiS, António, Daniela and C., Johny, ManeLauro and all the high school gang! I would also like to thank all my GABBA mates (we really spent a great time together!) and all the GABBA organizers of the 2002 edition (You really made a good student selection!).

I must thank my two pets because they were always close to me while I was writing this thesis... “Sebastião” (“Titi”) and “Milano”!

A sincere “thank-you” to both Cláudio Joazeiro and to Rui Costa, who have played a decisive role in encouraging me to start this PhD. I really admire you and your work and I feel very grateful in having the opportunity to exchange ideas and useful conversations with you.

I could never imagined that I would find such a special group of friends as the one that I met in Italy... Again, without following any specific order, thanks to my room mates Isa, Tati and Chesa who have always made me feel at home. Chesa, a big hug... I really miss you! A special “thank-you” to Stefano, the most peaceful person I have ever met. People like you are (more than) hard to find... For you, words will never be enough. SilviAlbi, you are the best family that I could ever find in Milano... thank you for listening to me and for always making me smile. Well, most of the times for making me laugh! Especially in front of Sky! Talking about family... Bartesaghi, I will never forget what you have done for me, a big sincere “thank-you”! I can’t forget to thank Henrique (my first “Italian” friend), Kei (piccolo Japa), Fra, Tó-Zé, Hero, Karol, Laura, Raffa, Guilherme, Pietro, Marco, Franco, Francesco, Pizzaiolo and all the “aperitivo-concert-pizza-primi-secondi-plati-cinese-gelatti-FRIENDS”!

A huge thank-you to PaoLaura, EriQ, Lary... ”le mie girls”! You have always given me the friendship and the strength that I needed while working and writing this thesis... I miss you already! Many other lab mates deserve a special thank-you... Vale (and your piccolo Andrea), Lughi, Ale M., Ale T., Manu, Evangelia, Simona, Daniela, Diletta, Denys, Dimy,
Bolognini and Césare. I will never forget you, even if I’m sure that some of you (Denys) will forget me quite soon! I would also like to thank Marta, Marzia, Chiara, Daniel L. and Doris for all your help, support, and relevant discussions. Thank you for teaching me how to survive in the lab! Barbara L. and Lia, thank-you for keeping all the paperwork in order! Without you, we would be lost! Thanks to Barbara V., Giulio S., Lorenzo, Nicola, Simone, Francesca, Chiara, Fabio, Andrea and to all the “Balzaretti friends” for the good times we spent together! Thanks to MariFé and to “Shakira” for their cappuccino, marocchino and all the coffee-derived drinks that kept me awaken, actively working and thinking (at least that was the point)!

Luciano, a big big thanks for your thoughtful words, for your crucial hints and enthusiastic discussions. You have always given generously your time and insights. I now that I still owe you money, but don’t worry, I’ll pay you my endless account... sooner or later!

I would also like to thank to my Portuguese PhD supervisor, Maria João S., for her time and great help throughout the course of my PhD studies.

Elena, this would have never been possible without you. I really admire you and the work you have been developing, especially your creative way to approach scientific questions. You have the extreme ability to work in a “out of the box” manner, something that has always marveled me. You have contributed enormously to this PhD, both in terms of intellectual input and of support and encouragement. I feel deeply grateful and privileged to have been your student, not only because of your sharp judgment, but also because of the never failing kindness and moral and intellectual honesty with which you handle challenges and problems of any kind.