## Acknowledgements

First of all, I would like to thank my supervisor, Ulrike Ehlert, for creating a scientific environment in which constructive collaboration and development of creative ideas could thrive. She has not only given rise to the idea of examining alpha-amylase in more detail, but has also promoted me and my work in every way possible.

I would like to thank Ulrike Ehlert, Lutz Jäncke and Markus Heinrichs as the members of my steering committee of the Center of Neurosciences Zurich for supervising my dissertation project.

I am also grateful for all the scientific advice my colleagues and friends, Jens Gaab and Markus Heinrichs, have given to me. Both of them have helped me very much during all steps of the completion of this dissertation.

I would like to thank my students who have come together every two weeks in our so-called "Amylase-Grüppli": Elvira Abbruzzese, Katja Erni, Ladina Florin, Barbara Gläser, Roberto La Marca, Carole Morandi, and Can Nakkas. They have all contributed significantly to the results compiled in this work.

I am also grateful to Nicolas Rohleder and Clemens Kirschbaum from the Biopsychology department at the University of Dresden who have given me the opportunity to form a very productive work group on alpha-amylase together with them.

I would like to further thank my Zurich based collaborators. Markus M. Koller, director of the Center of Oral and Dental Medicine, has given important theoretical input, Anthony Moses, technical assistant at the Institute of Animal Sciences, has helped me a lot in amylase analyses, and Wolfgang Langhans, director of the Institute of Animal Sciences, has generously provided access to the laboratory of his department.

I am most grateful to all the patience my family and friends haven shown during the time of writing this dissertation.

Beate Ditzen, finally, has supported me in every aspect of my private and academic life. Thank you for everything!