

Acknowledgments

First of all, I would like to thank my supervisor, **Francesco Dondero**, for the support, patience and the help of these years. Thanks to him I was able to reach this important milestone and to learn a lot, not only with regard to ecotoxicology and molecular biology but also and especially on human and professional level.

I thank members of the **nanoFATE project**, working in a European project was a unique experience that allowed me to travel and work with several research partners expanding significantly my knowledge.

I would like to thank Professor **Gianluca Sarà** and all his collaborators: **Valeria M., Valeria P., Alessandro, Folco, Natalia, Matteo** and **Marco**. Their scientific contribution was decisive in order to deepen the ecological aspect in my research work and contributed (together with **Roberta** and **Ale**) to make wonderful the months spent in Palermo.

I want to thank my colleagues and friends **Ale, Alessio, Cate** and **Mohamed**, who in these years have supported me offering suggestions, help and giving me a smile in stressful moments.

I thank **Lara**, because if I came this far is also thanks to her. She aided, supported and comforted me... a perfect friend!

I would like to thank all the friends who have been close to me during the drafting of the thesis, some with words of support, others with words of affection, others simply giving me a smile wishing me a good morning. **Ale, Ale Piz, Cristina, Chiara, Giorgio, Lucrecia...** thanks!

A special thanks goes to **Riccardo**, for the support and encouragement that he has given me over the last year. Without his presence and his love I would not be able to get this far!

Lastly, and most importantly, I wish to thank my brother **Igor** and specially my parents, **Luisa** and **Angelo**. They raised me, they supported me, they believed in me. To them I dedicate this thesis.