Contents

1. Introduction ........................................................................................................... 7
2. Analysis of the novel Fanconi Anemia gene SLX4/FANCP in familial breast cancer cases ......................................................... 33
3. A novel splice site mutation in non-coding region of BRCA2 ......................................................... 51
4. Resistance to alkylating agents in human cell lines with homozygous CHEK2*1100delC mutation anemia and familial breast cancer diagnostics ......................................................... 65
5. Analysis of the Fanconi anemia repair pathway in breast cancer identifies RECQL5 amplification as a mediator of DNA crosslinker sensitivity ........................................................................................................... 81
6. Human kinome RNAi screen in combination with anthracycline in a triple negative breast cancer cell line ..................................................... 111
7. What is the benefit of treatment with multiple lines of chemotherapy for patients with metastatic breast cancer? — a retrospective cohort study ........................................................................................................... 156
8. Summary and Discussion .................................................................................. 171
9. Nederlandse Samenvatting .............................................................................. 185

Curriculum Vitae ........................................................................................................... 191
List of publications ...................................................................................................... 192
Acknowledgements ...................................................................................................... 193