COMBINATION THERAPIES IN A PATIENT-DERIVED GLIOBLASTOMA MODEL

A step towards precision medicine

1. HDAC inhibitors sensitize patient-derived glioblastoma stem-like cells to radiation therapy, but not in cells with impairment of the initial DNA damage response pathway and with overexpression of Bcl-XL. (this thesis)

2. Inhibiting the Bcl-2 anti-apoptotic family proteins overcomes resistance to HDAC inhibitory treatments. (this thesis)

3. Several clinically approved drugs, identified by drug screening, enhance oncolytic virus therapy with Delta24-RGD more effectively than the HDAC inhibitors. For fluphenazine this enhancement does not depend on the subtype of the glioblastoma stem-like cell. (this thesis)

4. The patient-derived glioblastoma stem-like cell model aids in drug repurposing: clinically approved off patent drugs function as anti-glioblastoma agents. (this thesis)

5. The patient-derived glioblastoma stem-like cell model shows heterogeneous responses to drug screens and provides a supportive tool for precision medicine. (this thesis)

6. Tumors and tumor resistance are functioning like most organizations. If employees are inhibited they will be replaced. If managers are inhibited, their task will be directed to another one. If a board member (driver) is removed, (s)he already has a follow-up who actively shapes and sets her footprint.

7. There would be no evolution without competition.

8. Zomin een paard beklagenswaardig is omdat hij het ABC niet heeft geleerd, is de mens beklagenswaardig wanneer hij zot doet, omdat dit nu eenmaal in zijn aard ligt. (Desiderius Erasmus, 1466 – 1536)

9. Non minima negotii pars est adeundi negotii viam nosse. (Het is niet het onbelangrijkste deel van een taak te weten hoe hem aan te pakken) (Desiderius Erasmus, 1466 – 1536)

10. The music is not in the notes, but in the silence between. (Wolfgang Amadeus Mozart)

11. It is not true that people stop pursuing dreams because they grow old; they grow old because they stop pursuing dreams. (Gabriel García Márquez, 1927 – 2014)

Lotte M.E. Berghauser Pont, Rotterdam, 2 september 2015