Understanding anthracycline action: molecular insights to improve cancer therapy

Gelder, M.A. van

Stellingen behorende bij het proefschrift:

Understanding Anthracycline Action: Molecular Insights to Improve Cancer Therapy

1. Comprehensive structure-activity relationship studies on the chemical structures of anthracyclines and their biological functions are essential for guiding the synthesis and development of more effective anthracycline drugs.
Chapter 2 – This thesis

2. A deeper understanding of the distinct molecular mechanisms of action among different anthracycline variants is crucial for developing anthracyclines with reduced off-target toxicities.
Chapter 2 – This thesis

3. The p53-dependent DNA damage response can be activated by anthracyclines that do not induce DNA double stranded breaks.
Chapter 3 – This thesis

4. All anthracyclines currently used in clinical practice are ABCB1 transporter substrates, but not all anthracyclines are substrates for the ABCB1 transporter.
Chapter 4 – This thesis

5. Whether used alone or in combination with emerging treatment options, chemotherapy will continue to be a cornerstone of cancer therapy for the foreseeable future.
Adapted from M. Keating, The evolution of chemo: From a brutal beginning to a tolerable today.

6. Interdisciplinary collaboration is essential for translating findings from laboratory explorative research into clinically viable treatments.

7. The question should not be, 'will we ever find a better doxorubicin?' but rather, 'will we ever be able to introduce a better doxorubicin into clinical practice?'.
R.B. Weiss, The anthracyclines: will we ever find a better doxorubicin? *Seminars in Oncology*, 1992.

8. Oncology research and clinical practice will remain incomplete until patient perspectives are integrated as essential contributions rather than supplementary opinions.

9. Women leave academia more often due to issues with workplace culture than because of work–life balance.
K. Spoon *et al*., Gender and retention patterns among U.S. faculty, *Science Advances*, 2023.

10. Adopting a plant-based diet is essential to reduce the harm and suffering associated with animal agriculture, sustain a liveable planet for the future, and improve public health.

11. It takes a village to raise a PhD candidate.