Enhancing reovirus for use in oncolytic virotherapy

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Stellingen behorende bij het proefschrift:

"Enhancing reovirus for use in oncolytic virotherapy" (Vera Kemp)

Derived from the thesis

1. Reovirus replication is facilitated by the expression of specific members of the autophagy machinery.
2. Medium-sized batches can be generated of recombinant reoviruses expressing a heterologous transgene, but routine monitoring of the infectivity and the genomic stability is recommended.
3. The truncation of σ1 results in potent cell death stimulation, making the expression of an additional cell death inducer redundant.
4. Truncation of σ1 interferes with the incorporation of the protein in the viral capsid.

Related to the thesis

1. The anti-cancer efficacy of oncolytic viruses not only depends on replicating capacity but also on the induction of potent and long-lasting cancer-cell directed immune responses.
2. With more unconventional functions of Atg proteins becoming apparent, researchers studying Atg proteins should always ask themselves whether they are truly looking at autophagy (Mauthe & Reggiori, 2017).
3. Neutralizing antibodies do not necessarily decrease the efficacy of oncolytic virotherapy (nieuw artikel Berkeley, Ilett et al. 2011 & 2014, Ricca et al. 2018).
4. It is less complex and more effective to let the virus find a way to eliminate cancer cells than to develop a tumor-specific cell death trigger ourselves (Forward genetics > reverse genetics).

Unrelated to the thesis

1. Innovative research requires a delicate balance between chaos and structure. (of: requires controlled/structured chaos)
2. Doing a PhD is like running a challenging race: you start with naïve enthusiasm, it gets tougher along the track, but at the finish it was all completely worth it.
3. It does not matter how many resources you have, if you do not know how to use them.