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Author: Xie, Bangwen

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Propositions

Optical Imaging of Cancer and Cell Death

1. For all types of imaging modalities, the signal-to-background ratio is a crucial factor (*this thesis*).
2. Imaging sensitivity is enhanced only when the reporter agent accumulates locally (*this thesis*).
3. To accurately determine tumor size, fluorescence imaging and bioluminescence imaging are two alternative methods which are exchangeable (*this thesis*).
4. Dual-wavelength fluorescence imaging is a feasible approach to simultaneously detect different features of one tumor and to follow tumor progression with high specificity and sensitivity (*this thesis*).
5. Tumor cell death has been widely accepted as one of the major hallmarks of most aggressive cancer types. For wide applicability, a tumor cell death marker should ideally report on the different types of cell death induced by different treatments (*this thesis*).
6. Cell death can be employed as a universal but unique biomarker to monitor therapeutic efficacy during anti-tumor strategies, or to evaluate drug toxicity (*this thesis*).
7. One of the key strategies for imaging deeper tissues has been the use of near-infrared light, as living tissues have their lowest absorption coefficient in the near-infrared region, which is around 650–900 nm (*Weissleder R, Ntziachristos V. Shedding light onto live molecular targets. Nat Med 2003, 9(1): 123-128.*).
8. During tumor progression, necrotic cell death may ultimately do more damage than good (*Hanahan D, Weinberg R. Hallmarks of Cancer: The Next Generation. Cell 2011, 144(5): 646-674.*).
9. Work is more than earning a life, it is a way to live. So choose a job you love, and you will never have to work a day in the rest of your life (*Adapted from Confucius孔子, 551- 479 BC*).
10. Common sense is the collection of prejudices acquired by age eighteen (*Einstein A., 1879-1955*).
11. Life is like running a marathon, there is no need to hurry but to run with persistence. During certain period of the life, it can be like the Dutch weather, changing all the time.
12. When life gives you lemons, make sure you also grab the mojito to throw a party (Unknown).