PROPOSITIONS

TO THE THESIS

"**Counterbalancing Cancer Growth: Harnessing Intrinsic Regulatory Pathways for Novel Anti-oncogenic Strategies**"

Buyun Ma

1. Phosphorylated and unphosphorylated STAT1 play dichotomal roles in HCC. Blocking induction of unphosphorylated STAT1 sensitizes HCC cells to IFNs treatment. *(This thesis)*
2. IMPDHs represent potential molecular markers for hepatocellular carcinoma and are associated with reprogrammed cell metabolism. *(This thesis)*
3. Telomerase represent an attractive therapeutic target of cancer. Targeting telomerase in a telomere length independent manner effectively inhibits growth of cancer cells. *(This thesis)*
4. Human adult stem cells have precise regulating networks in coping with DNA damages, balancing its sensitiveness and resistance to treatment. *(This thesis)*
5. Genetically engineered bacteria for disease treatment has emerged as a novel therapeutic strategy. However, challenges remain before it can be moved to clinic. *(This thesis)*
6. Generally, selective pressures in evolution do not favor the development of countermeasures against excess nutrients and energy, but rather select for phenotypes that ensure survival in the face of deficiencies. *(Gökhan S. Hotamisligil, Nature 2017)*
7. Cancer as a symptom of evolution?: DNA replication is associated with unavoidable errors. *(Based on Bert Vogelstein, Science 2017)*
8. It is not the strongest of the species that survives, not the most intelligent that survives. It is the one that is the most adaptable to change. *(Charles Darwin)*
9. Everybody is a genius. But if you judge a fish by its ability to climb a tree, it will live its whole life believing that it is stupid. *(Albert Einstein)*
10. Success is not final, failure is not fatal: it is the courage to continue that counts. *(Winston Churchill)*
11. Misfortune, that is where happiness depends; happiness, that is where misfortune underlies. *(Lao-Tse)*
    祸兮福之所倚, 福兮祸之所伏. *(老子)*