Propositions

Accompanying the thesis

Genetic factors for breast cancer susceptibility and clinical outcome

1. In contrast to prostate cancer, mutations in *HOXB13* are not associated with familial breast cancer risk (this thesis).
2. *NBS1* rs2735383 is not associated with increased breast cancer risk (this thesis).
3. The 29.5 kb *APOBEC3B* deletion polymorphism is neither a prognostic nor a predictive biomarker for breast cancer (this thesis).
4. *GATA3* mRNA expression, but not *GATA3* mutation, is an independent predictor for first-line tamoxifen therapy (this thesis).
5. There are other mechanisms besides *GATA3* mutation to explain *GATA3* mRNA overexpression in breast cancer (this thesis).
6. Better-powered GWAS and genome-wide sequencing projects are likely to continue identifying new breast cancer causal variants (Fachal *et al*, Curr Opin Genet Dev, 2015).
7. HOXB13 is preferentially recruited to the risk allele of a prostate cancer-associated SNP, enhancing the expression of RFX6, a driver of prostate cancer cell migration and predictor of disease progression (Mills *et al*, Nat Genet, 2014). Since the prostate cancer-associated SNP locates to a FOXA1 and AR binding site, this suggests that HOXB13 may also bind breast cancer-associated SNPs located to FOXA1 and ER binding sites.
8. Prognostic and predictive factors constitute important tools for the individualization of breast cancer therapy to provide efficient treatment and to spare patients with excellent low-risk profiles from unwanted side effects of overtreatment (Weigel *et al*, Endocr Relat Cancer, 2010). So it is necessary to identify novel and specific prognostic and predictive factors for breast cancer therapy decision-making.
9. APOBEC3B and APOBEC3H haplotype I, together, explain the bulk of 'APOBEC signature' mutations in cancer (Starrett *et al*, Nat Commun, 2016).
10. ZPO2 is a candidate gene that may play a potential role in mammary tumor induction via down-regulation of GATA3 (Shahi *et al*, Proc Natl Acad Sci U S A, 2017).
11. 书山有路勤为径，学海无涯苦作舟. (韩愈, Tang Dynasty)
    There is no royal road to learning. Everybody has to lay the foundations of his success by study and hard work.