Altered listening changes the way we predict the auditory environment

Propositions

1. The medial geniculate body (MGB) of the thalamus is an often neglected relay in the auditory pathway that might be affected by tinnitus. (This thesis)

2. If the functioning of the MGB in the auditory pathway is altered in tinnitus, then not only the MGB but also a network consisting of auditory and non-auditory brain areas might be maladaptive. (This thesis)

3. Aging influences how temporal and formal auditory predictions are processed. (This thesis)

4. Sensory gating as represented by auditory position predictions is intact in persons with tinnitus. (This thesis)

5. Fundamental research can help elucidate which mechanisms underlie tinnitus.

6. Non-significant findings are a critical element of the scientific process and should be shared with the scientific community.

7. Fundamental research is further needed to improve the diagnosis and treatment of persons with tinnitus.

8. Ambitious and novel projects frequently take more time than anticipated, which entails that pilot data should be carefully inspected to resolve possible technical or design issues. (*Realization during the completion of this dissertation*)

9. The most exciting phrase to hear in science, the one that heralds new discoveries is not 'Eureka!' but 'That's funny!' (*Frans de Waal*)

10. Everything seems impossible until it is done. (*Nelson Mandela*)