

STELLINGEN

BEHORENDE BIJ HET PROEFSCHRIFT:

Genome Binding and Gene Regulation by Stem Cell Transcription Factors

1. The ChIP-MS method provides a detailed read-out of the transcriptional landscape representative of the investigated cell type (*this thesis*).
2. Dppa2 operates outside the classical pluripotency network (*this thesis*).
3. Interaction partners of transcriptional regulators in neural stem cells such as Tcf4, Sox2, Olig2 and Npas3 are good candidates for mutation screening to identify novel mental disorder genes (*this thesis*).
4. Interaction of transcriptional regulators is a predictor of the similarity in their human phenotypes (*this thesis*).
5. Oct4 recruits Sox2 together with Nanog to binding sites that harbor the composite Sox2-Oct4 DNA binding motif in embryonic stem cells (*this thesis*).
6. The pathogenicity of human disease-associated deletions can result from ectopic enhancer-promoter interactions, due to the elimination of topological domain boundaries, causing aberrant gene expression. *Cell* 161:1012-1025 (2015)
7. “Currently, there does not seem to be a set of rules that cleanly defines super-enhancers or emergent properties that set them apart from the traditional enhancer concept”. *Nature Genetics* 47(1):8-12 (2015)
8. “You can have data without information, but you cannot have information without data” (*Daniel Keys Moran*)
9. “An understanding of the natural world and what’s in it is a source of not only a great curiosity but great fulfillment, but also in the long run, essential to our future survival.” (*David Attenborough*)
10. “Never memorize something that you can look up” (*Albert Einstein*)
11. “Amit gyűlöltünk, azt most sajnáljuk, és visszasírjuk. Függetlenek vagyunk, de öröm helyett csak remegni tudunk.” (Translation: “We now regret the loss and weep for the return of what we once hated. We are now independent, but instead of feeling joy we can only tremble.”). *Mihály Babits, 1939, reflecting on the collapse of the Austrian-Hungarian Monarchy. Translation from ‘The Sleepwalkers’ by Christopher Clark.* According to the author of this thesis a historic poetic lesson for people who want to stop and reverse European integration.