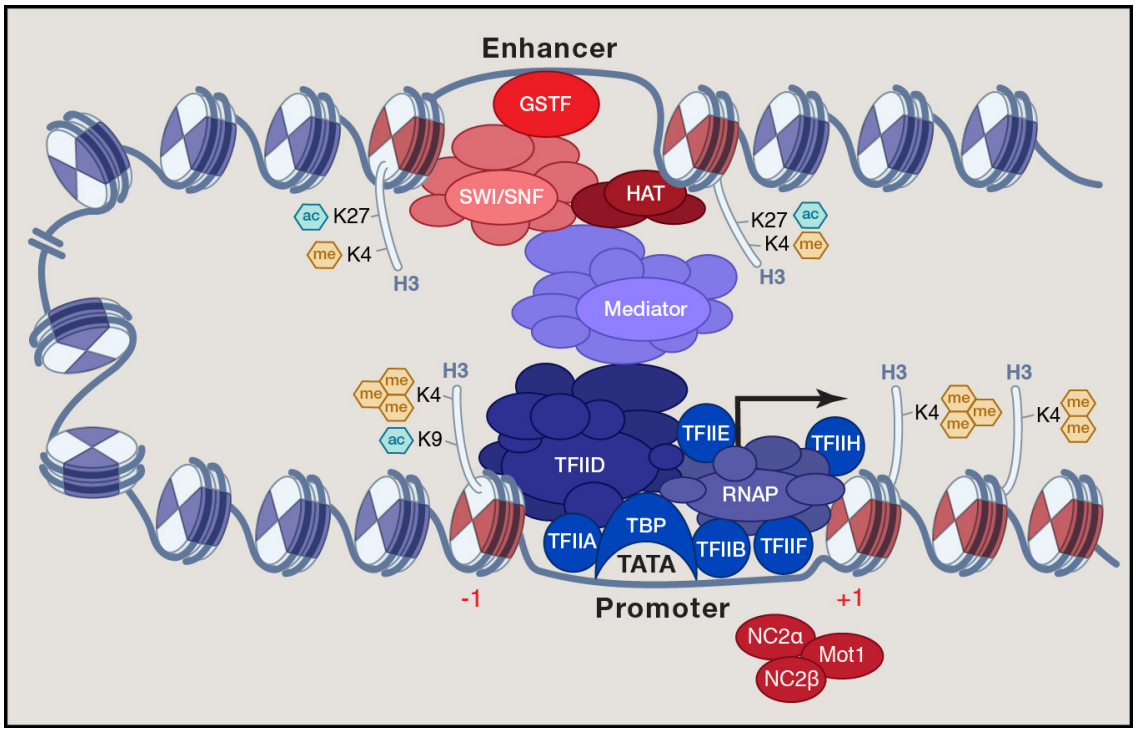
Master internship TFIID phylogenetics in Timmers and Snel groups (Utrecht)

TFIID is the central basal transcription factor that binds core promoter DNA to direct RNA polymerase II-mediated transcription via its DNA-binding subunit the TATA-binding protein (TBP). Besides this TFIID contains 13 different TBP-associated factors (TAFs), which provide additional functionalities like binding to epigenetic marks and response to transcription activator complexes. Our recent work of TBP phylogenetics revealed novel structural and functional relations between TBP and its BTAF1/Mot1p and NC2 regulators (Koster *et al.* 2015 Cell 161:724-736).

The aim of the proposed internship is to look into the complex from evolutionary perspective, by performing extensive phylogenetic identification and relations on the TAF subunits. Such analysis will elucidate how different members of the tree of life have adopted and diversified transcriptional functions of the TFIID complex, which and how the subunits of the complex have evolved throughout time, which interactions are preserved and which respective domains are conserved.



We are looking for a motivated biology/chemistry student with a strong Bioinformatics affinity and interest in transcription regulation and epigenetics. The intern will be trained in gene regulation, bioinformatics and epigenetics. The supervision will be shared between the lab of Prof. Marc Timmers (UMC Utrecht) and Prof. Berend Snel (Utrecht University). For further information please contact Prof. Timmers at: H.T.M.Timmers@umcutrecht.nl