Stellingen behorende bij het proefschrift

Metabolic enzymes in gene control

"GMPS/USP7 acts a co-repressor during developmental gene control by hormone receptors." (This thesis)

"GMPS/USP7 counteracts BRE1 by deubiquitylation of Histone H2B." (This thesis)

"USP7 and its extraordinary co-factor GMPS synergistically regulate axon guidance in the *Drosophila* visual system." (This thesis)

"Nuclear accumulation of IMPDH is controlled by the cell cycle and mainly restricted to the G2 phase. In addition, metabolic stress can also induce nuclear IMPDH." (This thesis)

"As a transcription factor, IMPDH has an uncommon mode of DNA binding. Genome-wide ChIP-chip analysis and in vitro binding assays established that IMPDH binds sequence-specifically to CT-rich, ssDNA elements." (This thesis)

"... It might be possible to extend the study of repetitive DNA by the synthesis of DNA sequence-specific compounds ... these satellite-specific drugs can lead to defined gain- or loss-of-function phenotypes when fed to developing *Drosophila melanogaster*." (Janssen S. et al., Molecular Cell, Vol. 6, 1013–1024, November, 2000.)

"Gene expression of oncogenes could be selectively inhibited by using chemicals (drugs) or small molecules targeted to specific non-B DNA conformation present in their regulatory regions" (Sharma, S., Journal of Nucleic Acids, doi:10.4061/2011/724215)

"Culture media individually deprived of each of the 20 amino acids were applied to ES cells, leading to the discovery that ES cells are critically dependent on one amino acid - threonine." (Wang et al., Science, Vol. 24, 435-439, July 24, 2009.)

"...structurally altered DNA elements might serve as regulatory signals in gene expression or in telomere dynamics and hence are promising targets for drug action." (Rangan, A., The Journal of Biological Chemistry, Vol. 276, 4640-4646, February 16, 2001)

"It is equally likely that an understanding of how cancer cells veer away from normality with respect to intermediary metabolism might lead to the conceptualization of new and inventive strategies for therapeutic intervention." (McKnight, S.L., Science, Vol. 330, 1338-1339, December 3, 2010)

"Let's go!" (Yuri Gagarin)

Elena Kozhevnikova
25th January, 2012