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Universiteit Leiden



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STELLINGEN

behorend bij het proefschrift

Mechanisms controlling mRNA processing and translation: decoding the regulatory layers defining gene expression through RNA sequencing

Eleonora de Klerk, Leiden 2015

1. Preferred polyadenylation at distal sites cannot be explained by the masking of proximal non-canonical polyadenylation signals by PABPN1 (this thesis).
2. Alternative polyadenylation plays a role in Oculopharyngeal muscular dystrophy (OPMD) pathology (this thesis).
3. Genotype-dependent switches in the preference of alternative polyadenylation sites cannot solely be explained by creation or disruption of canonical polyadenylation signals (this thesis).
4. Transcription of a gene from different promoters and translation of an mRNA from different start codons are often two independent mechanisms in the regulation of protein isoform expression (this thesis).
5. The possibility that genetic variants alter polyadenylation signals is overlooked in most variant effect prediction methods.
6. Differential binding of ribosomes to upstream and alternative open reading frames must have a biological relevance, even though techniques such as Western Blot and mass spectrometry fail detecting changes in protein expression.
7. Full-length cDNA sequencing represents an essential first step to uncover transcriptome-wide coupling between transcription and RNA processing.
8. Support for translational research must be accompanied by a robust investment in basic science.
9. A scientist's basic training doesn't include the art of running a business (Nature Materials 5, 921, 2006). Schoenmaker, blijf bij je leest.
10. A 4-year PhD program is not enough to get the best data, but should be enough to get the best out of your data for that moment.