Universiteit Leiden
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Structural diversity of frameshifting signals : reprogramming the programmed

Yu, C.H.

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Structural Diversity of Frameshifting Signals

Reprogramming the Programmed

PROEFSCHRIFT

ter verkrijging van de graad van Doctor aan de Universiteit Leiden,

op gezag van de Rector Magnificus prof. mr. P.F. van der Heijden,

volgens besluit van het College voor Promoties

te verdedigen op donderdag 22 december 2011

te klokke 16.15 uur

door

Chien-Hung Yu

geboren te Nantou, Taiwan, in 1980

Promotiecommissie

Promotor

Prof. dr. M.H.M. Noteborn

Co-promotor

Dr. R.C.L. Olsthoorn

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The front cover depicts the idea of the publication by J.-D. Wen *et al.* (J.-D., Wen *et al.*, 2008, *Nature*, **452**, 598-603) who used optical tweezers to monitor the translation of a single mRNA by an *E.coli* ribosome. It is astonishing that translation is not a continuous process but one of successive translocation and pause cycles. Understanding the details of the mechanism of translation in combination with atomic level structure of ribosomes may solve the thirty years old mystery of frameshifting. (Graphic by Laura Lancaster and Courtney Hodges, Berkeley Lab)

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