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The missing piece

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Document Version

Publisher's PDF, also known as Version of record

Publication date:

2018

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Winkle, M. (2018). *The missing piece: Long noncoding RNAs in cancer cell biology*. [Thesis fully internal (DIV), University of Groningen]. Rijksuniversiteit Groningen.

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Stellingen

- 1 Long noncoding (lnc)RNAs emerge as novel functional pieces in the puzzle of human cell biology, therefore the central dogma of RNA acting as a mere intermediary between DNA and protein must be rejected. (Clark MB, Mattick JS. 2011. Semin Cell Dev Biol)
- 2 LncRNAs can interact with proteins, RNA and DNA and so participate in a large diversity of transcriptional and post-transcriptional processes. (Goff LA, Rinn JL. 2015. Genome Res)
- 3 Many lncRNAs are deregulated in B-cell lymphoma and at least a proportion of these contribute to its pathogenesis and maintenance (this thesis)
- 4 LncRNA expression is highly cell-type specific as reflected by the large differences in lncRNA expression between germinal center B cells and naïve or memory B cells. (this thesis)
- 5 The lncRNAs FLJ42351, LINC00116 and LINC00461, identified as being overexpressed in Hodgkin lymphoma cell lines compared to their cell-of-origin, show tumor cell specific expression in primary patient tissues as shown by RNA-FISH. (this thesis)
- 6 Many lncRNAs are regulated by the oncogenic transcription factor Myc; these may participate in moderating the effects of Myc on cell proliferation and growth. (this thesis)
- 7 Myc-repressed lncRNAs are frequently bound by Myc suggesting active repression of the noncoding genome through a mechanism involving Myc binding. (this thesis)
- 8 KTN1-AS1 is induced by Myc while its knockdown reduces Myc levels, showing a reinforcing positive feedback loop between Myc and KTN1-AS1. (this thesis)
- 9 Functional knowledge on lncRNAs such as KTN1-AS1 that are up- and/or downstream of ‘undruggable’ oncogenes creates additional opportunities for cancer treatment. (this thesis)
- 10 Nur wer sich das Unmögliche zum Ziel setzt, kann das gerade noch Mögliche erreichen.
– *‘Only who attempts the impossible, can achieve what is in the realm of possibility.’*
(Viktor Emil Frankl)
- 11 Though the course may change sometimes, rivers always reach the sea. (Robert Plant)
- 12 Joost mag het weten – *‘Joost may know it’*. (Dutch saying: ‘nobody knows’)