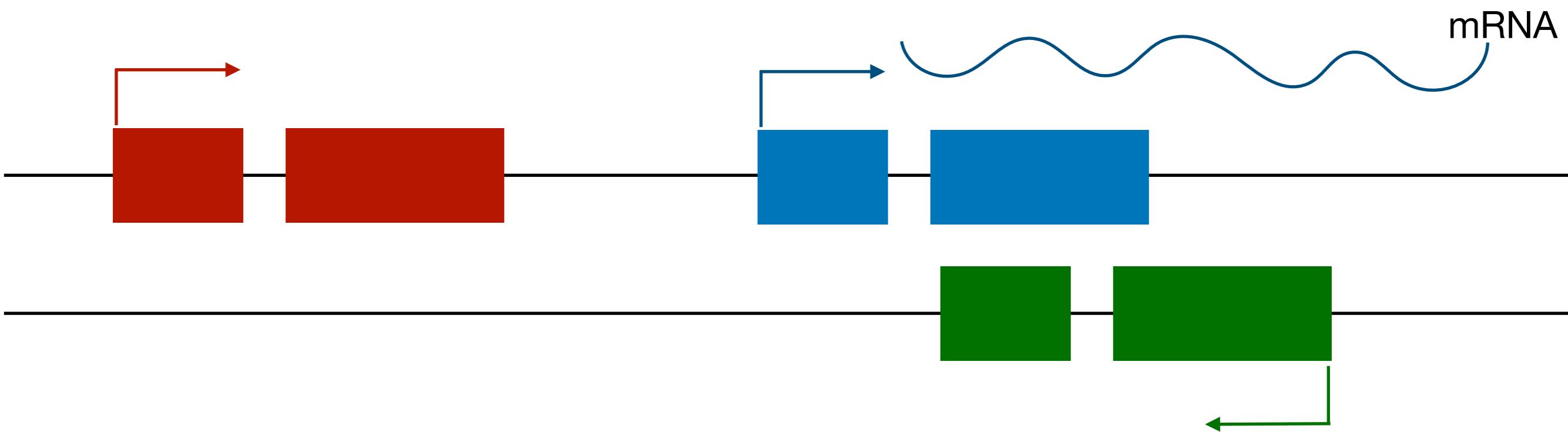


Characterizing clinically relevant lncRNAs in cancer



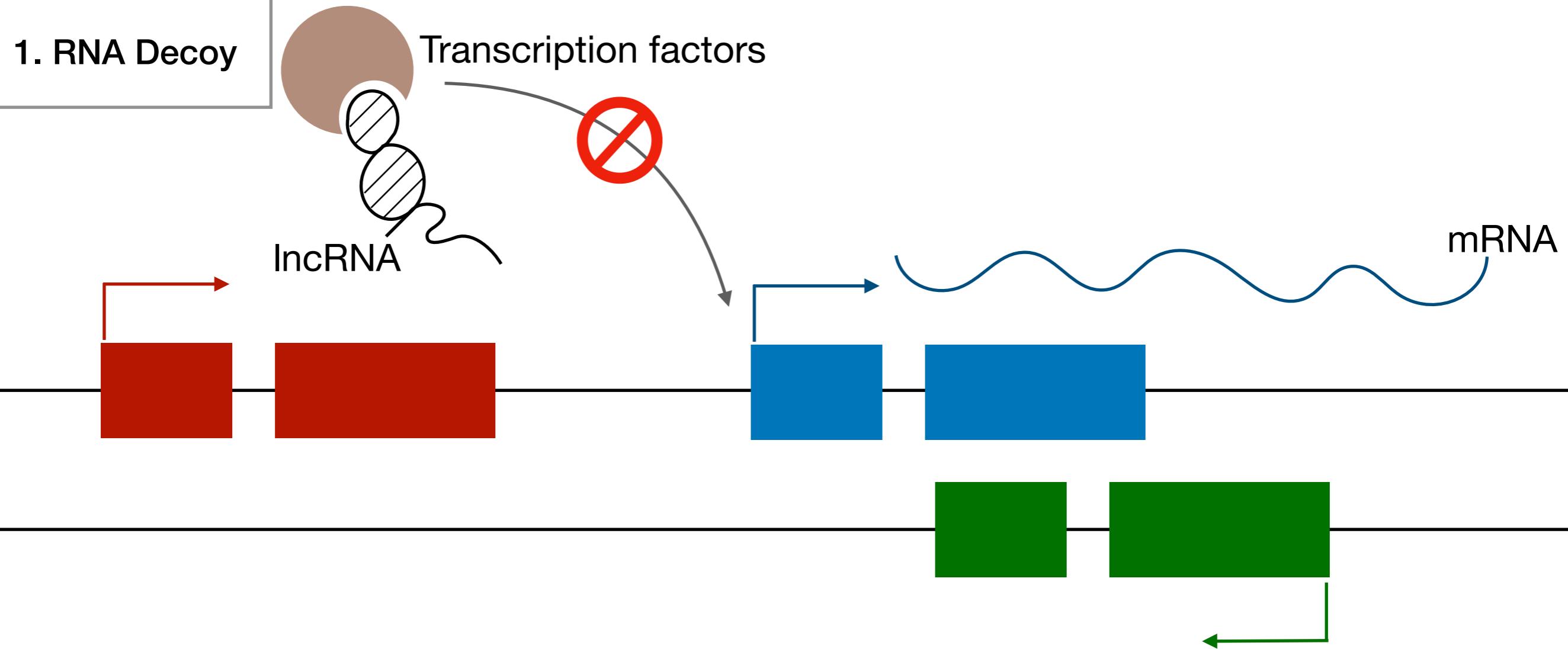
Karin Isaev
MSc. Candidate

Functions of Long non-coding RNAs (lncRNAs)

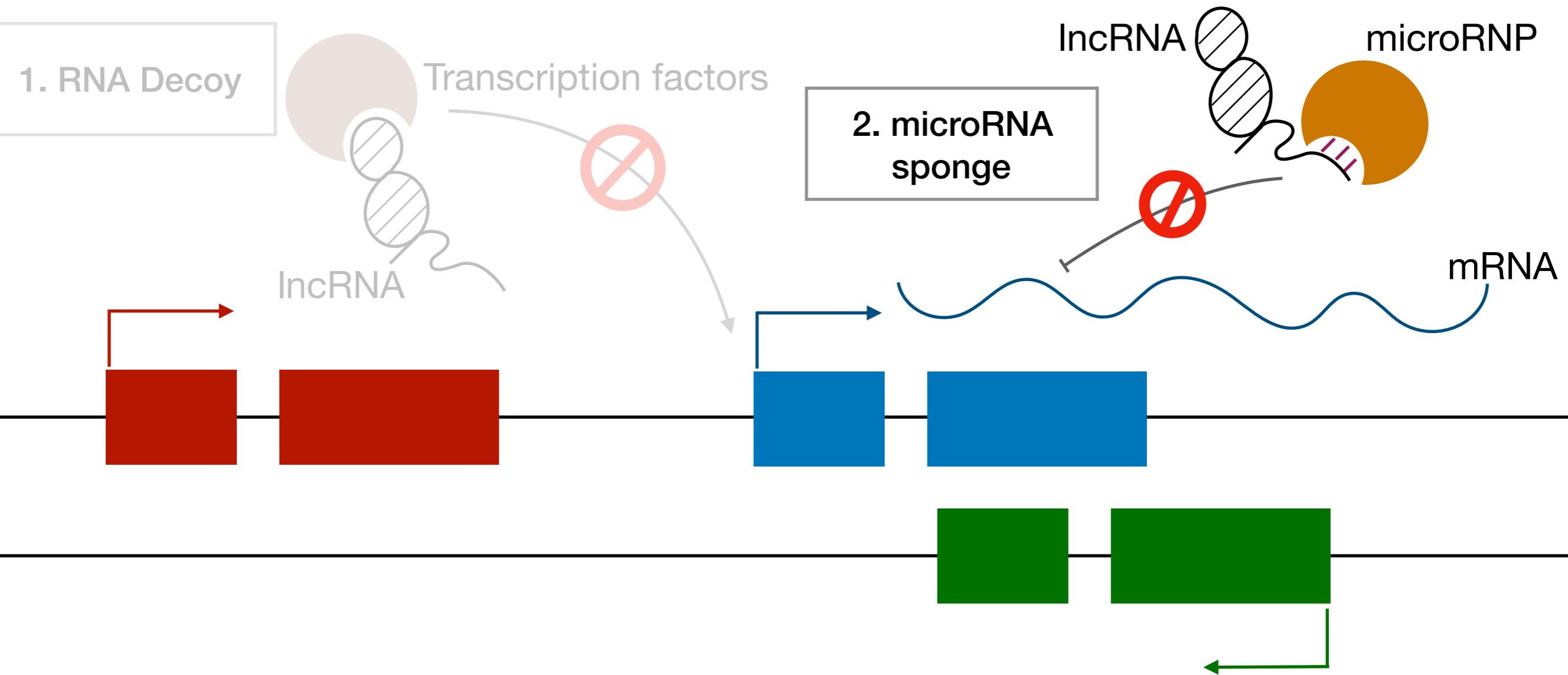


Functions of Long non-coding RNAs (lncRNAs)

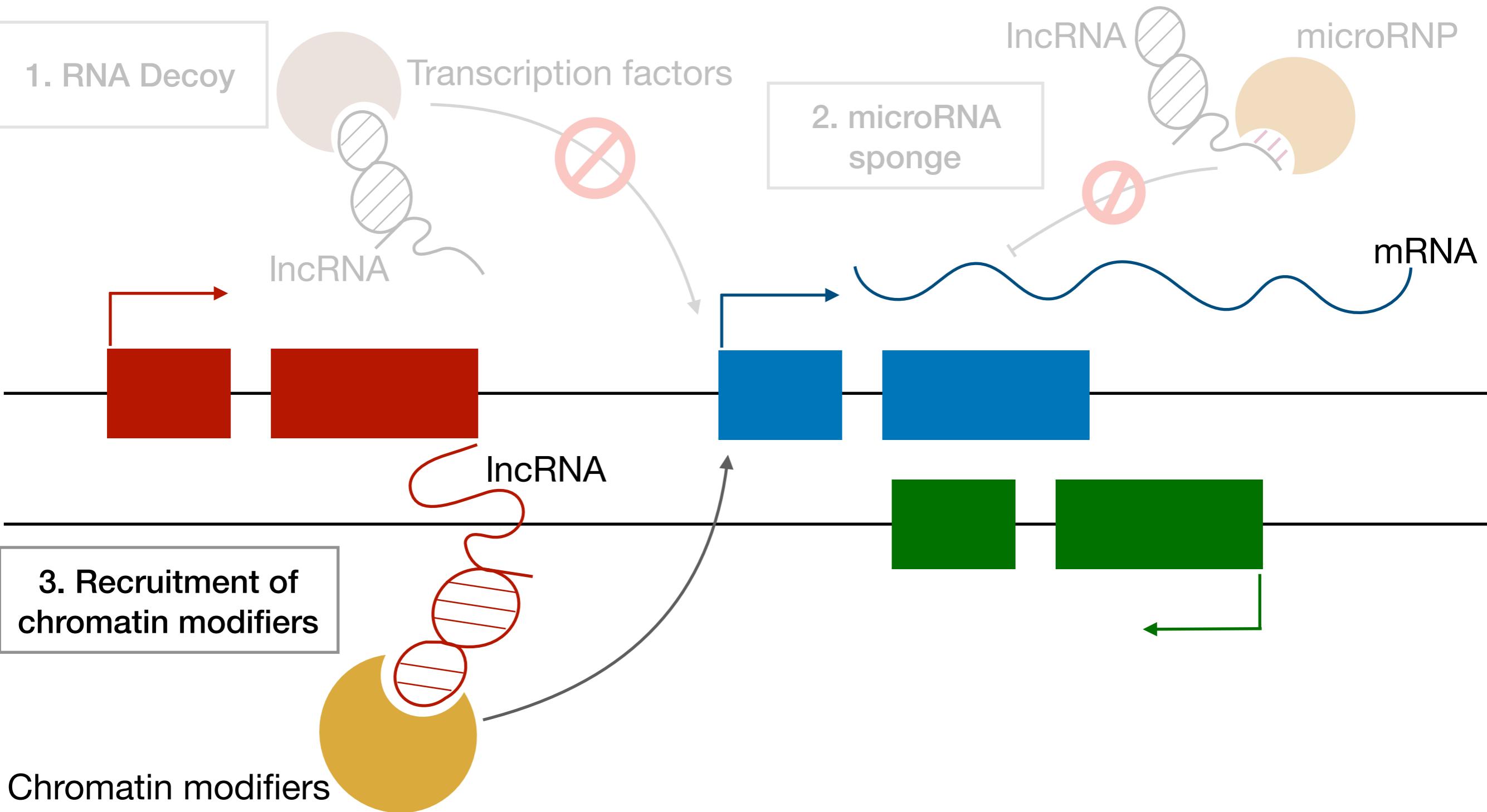
1. RNA Decoy



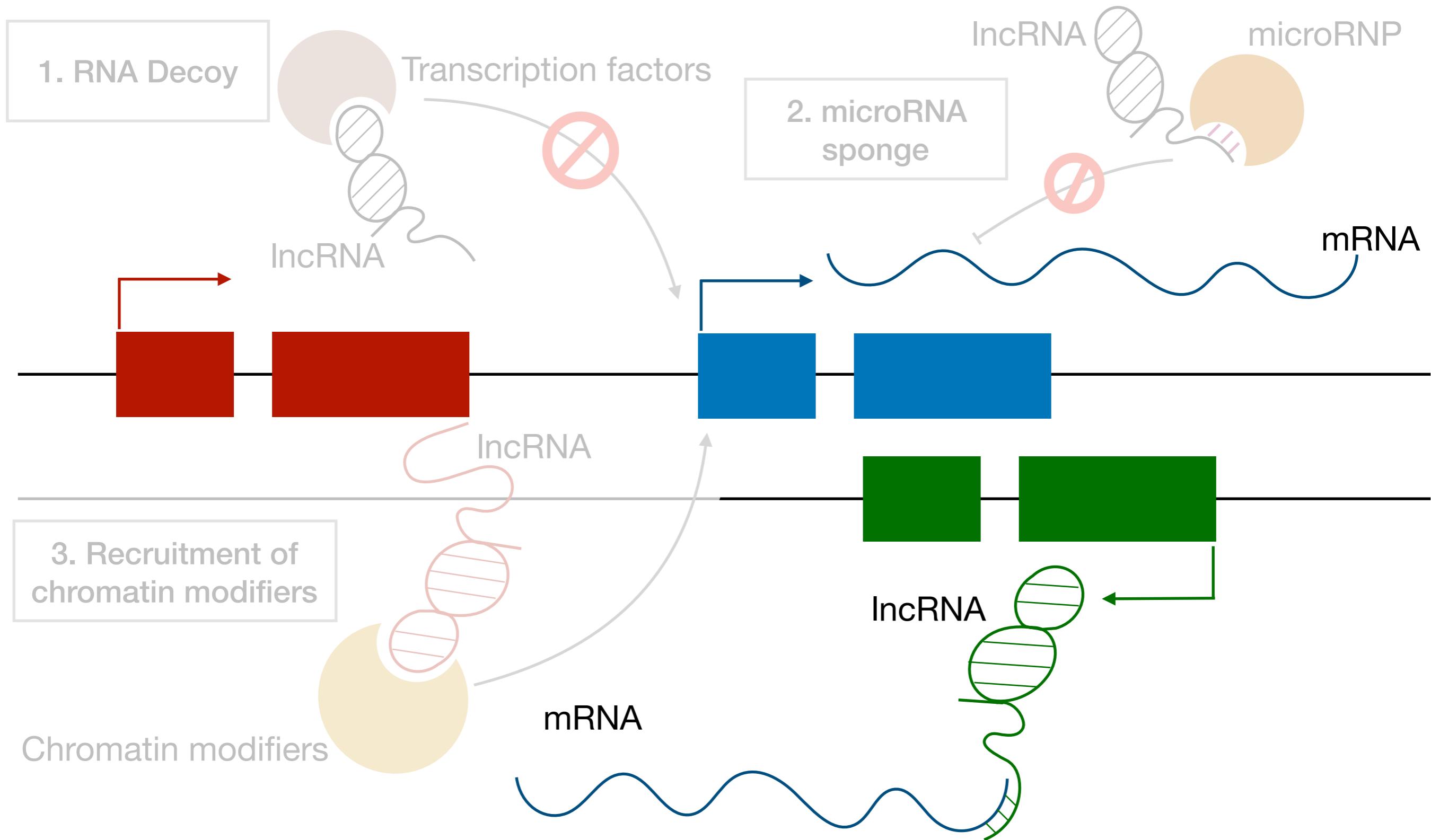
Functions of Long non-coding RNAs (lncRNAs)



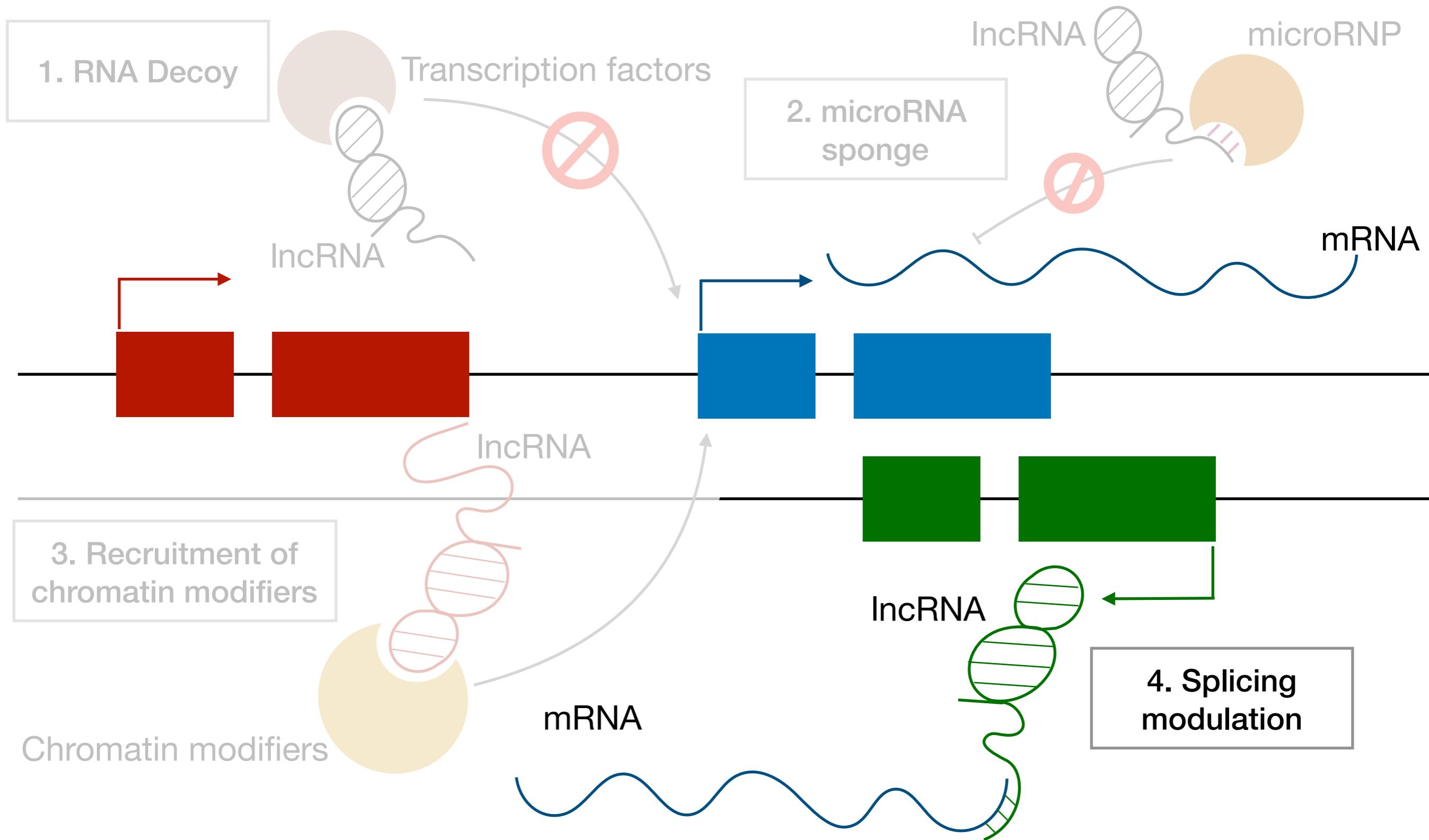
Functions of Long non-coding RNAs (lncRNAs)



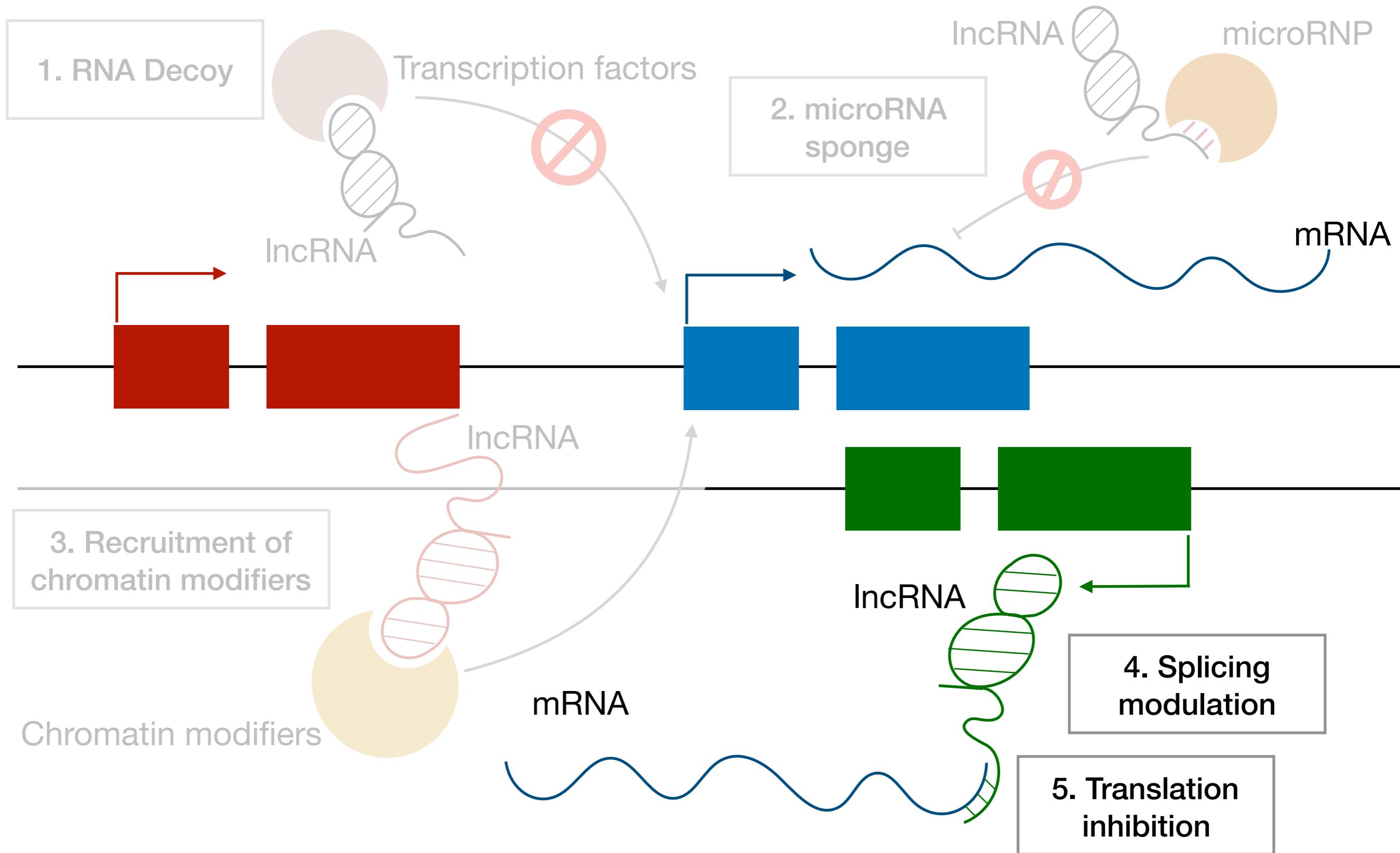
Functions of Long non-coding RNAs (lncRNAs)



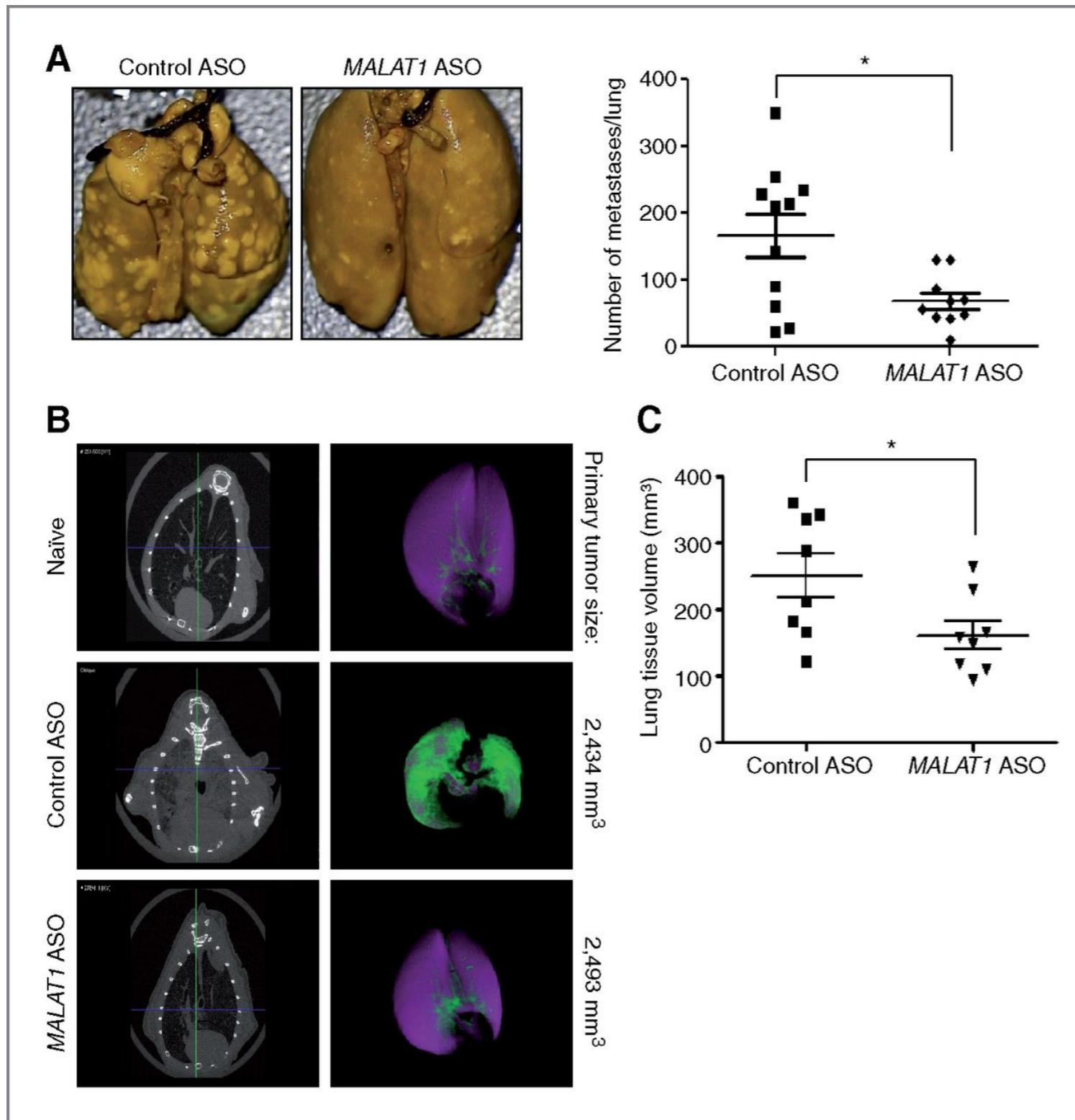
Functions of Long non-coding RNAs (lncRNAs)



Functions of Long non-coding RNAs (lncRNAs)



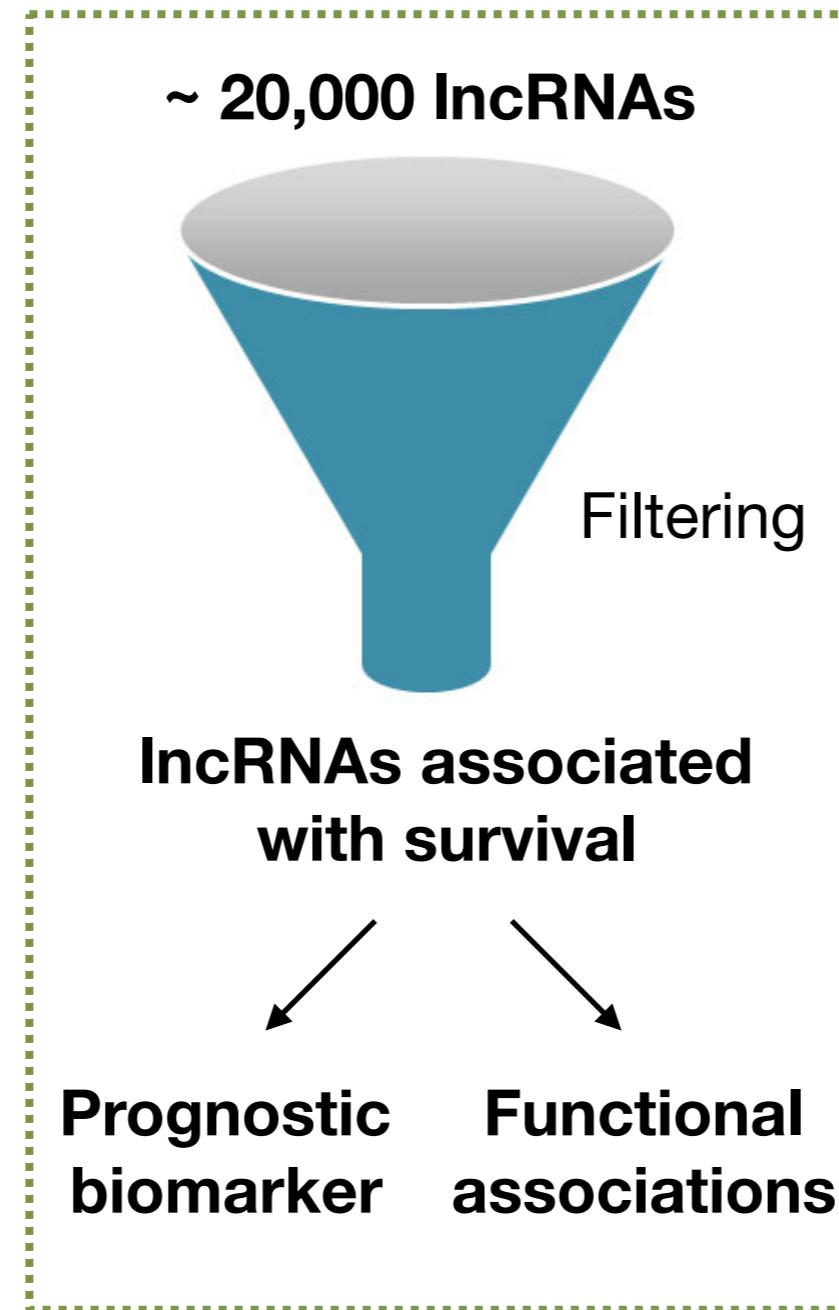
Long non-coding RNAs (lncRNAs) in cancer



MALAT1

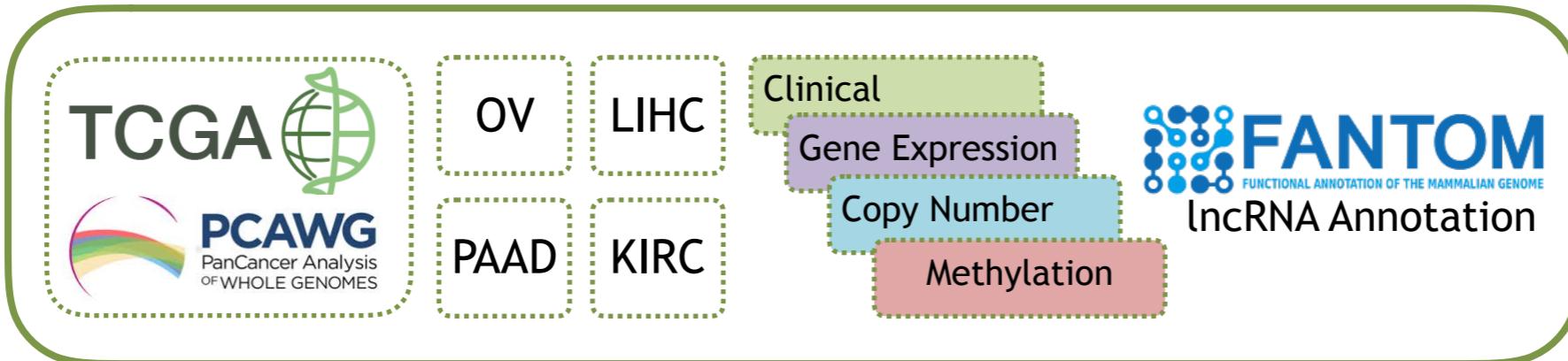
- Highly conserved
- Nuclear ncRNA
- Predictive marker of metastasis in lung cancer

Long non-coding RNAs (lncRNAs) in cancer

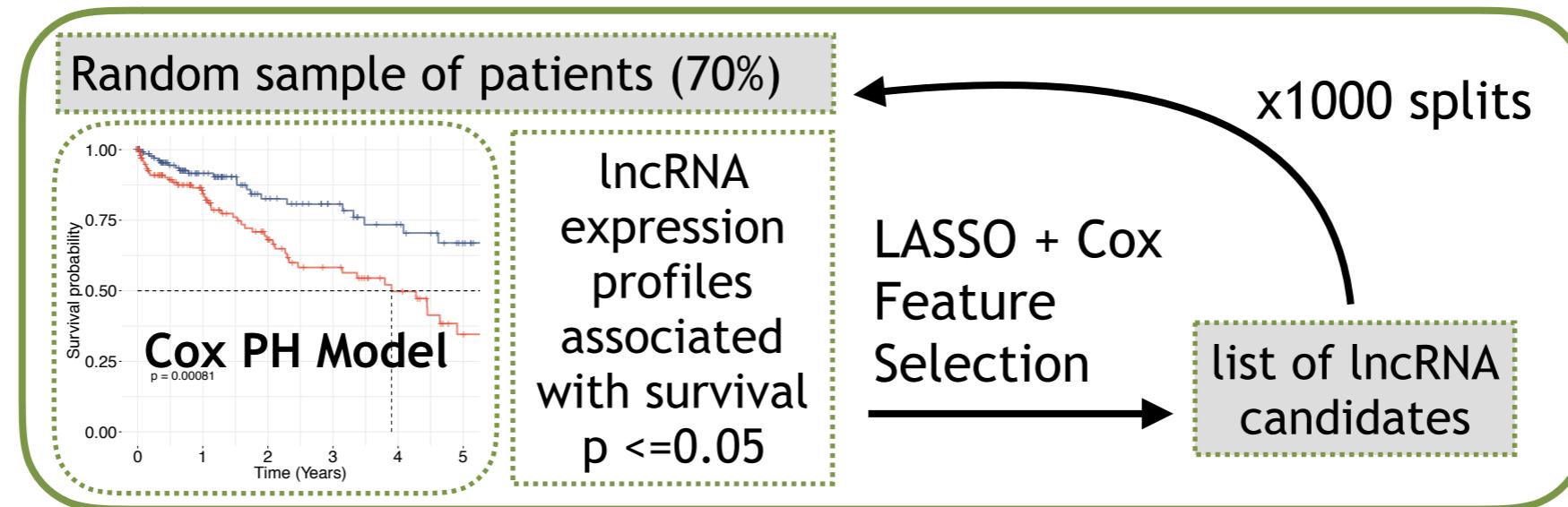


Methods and Workflow

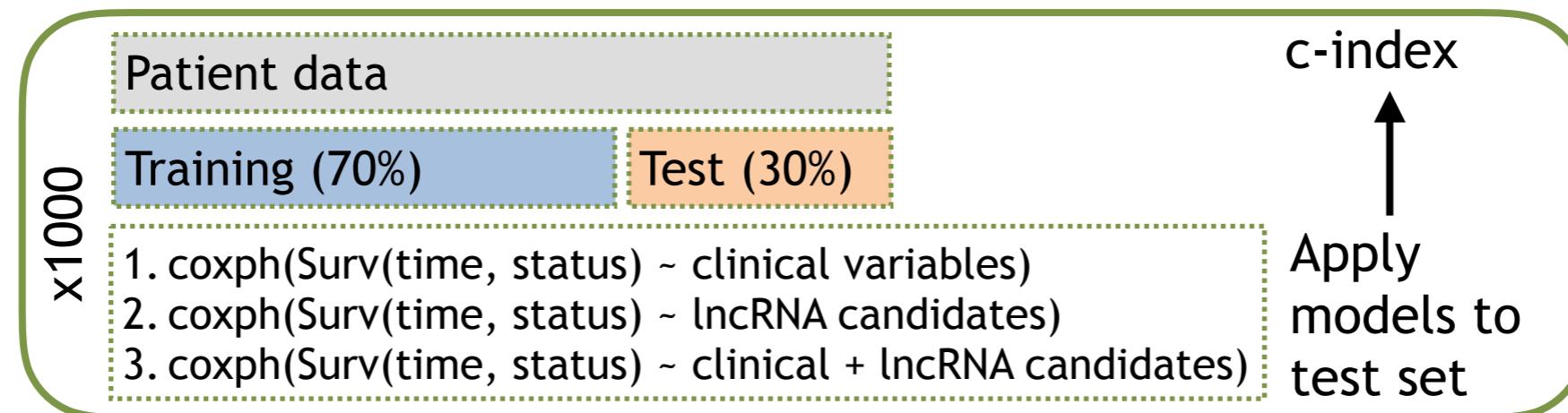
Data



Identifying Candidates

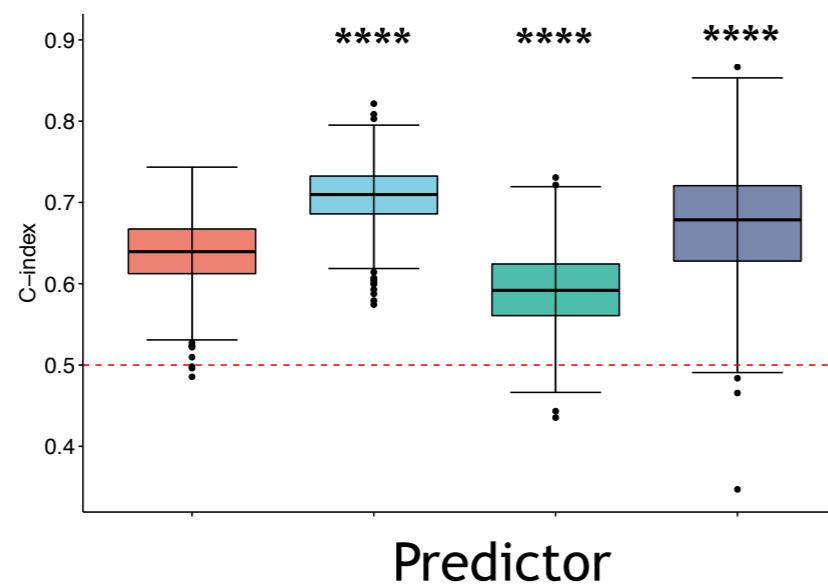


Assessing Candidates

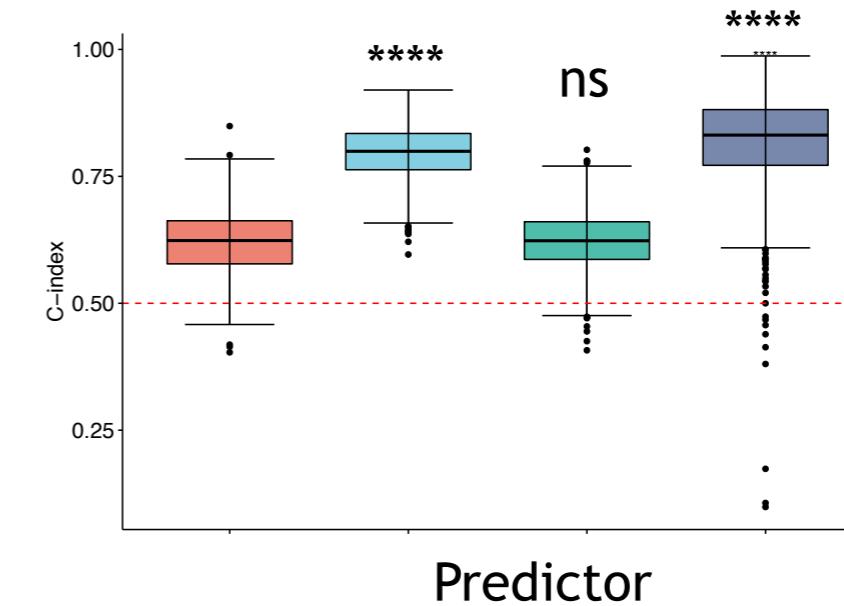


Preliminary results - top lncRNA candidates across cancers

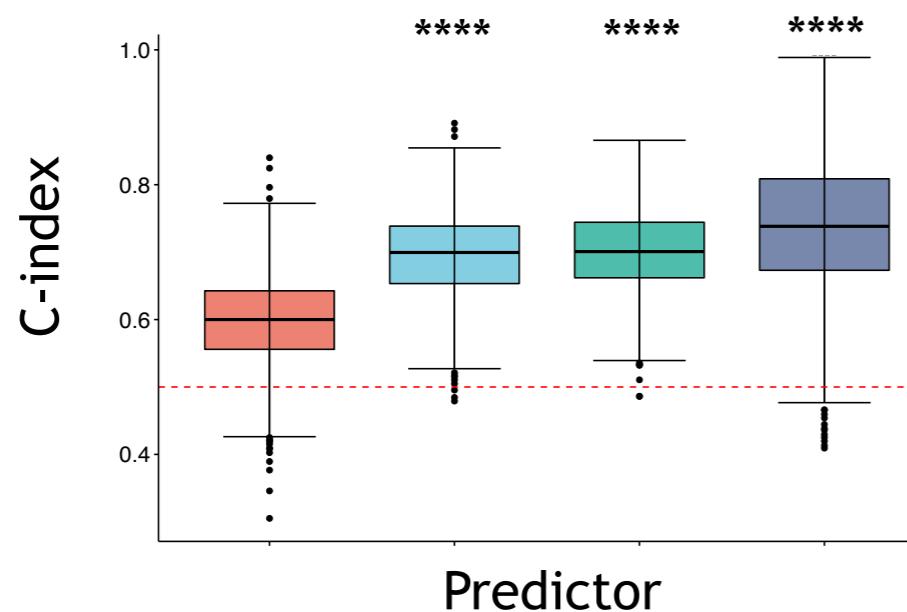
OV, RP13-188A5.1



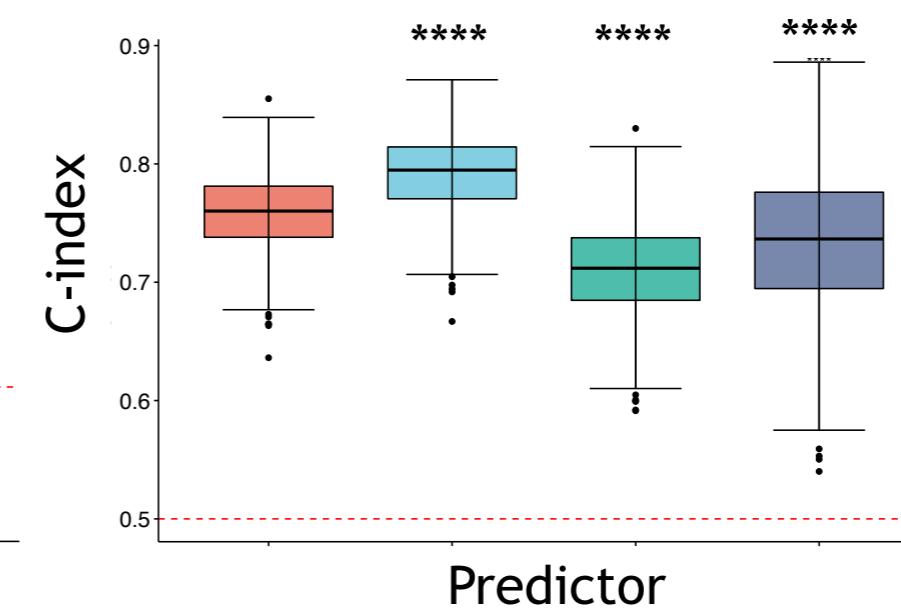
LIHC, RP11-431M3.1



PAAD, CTD-2587H24.10



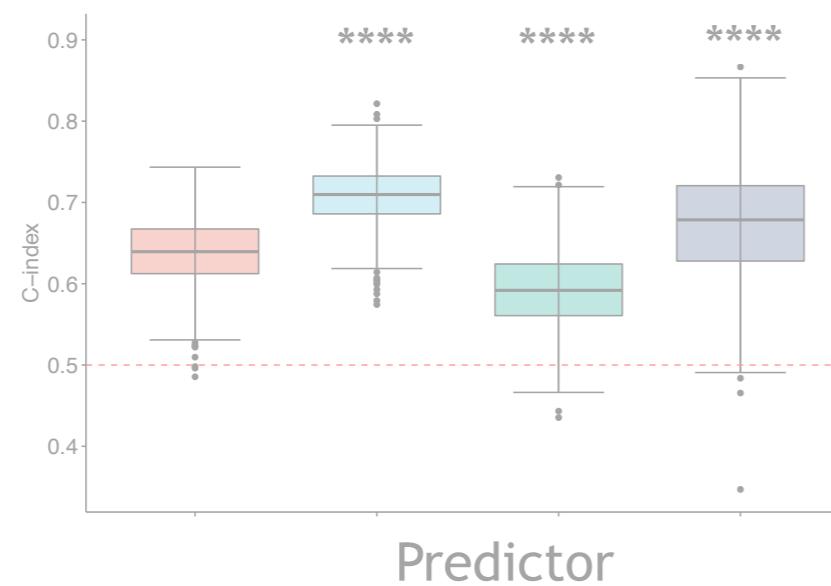
KIRC, CTA-384D8.34



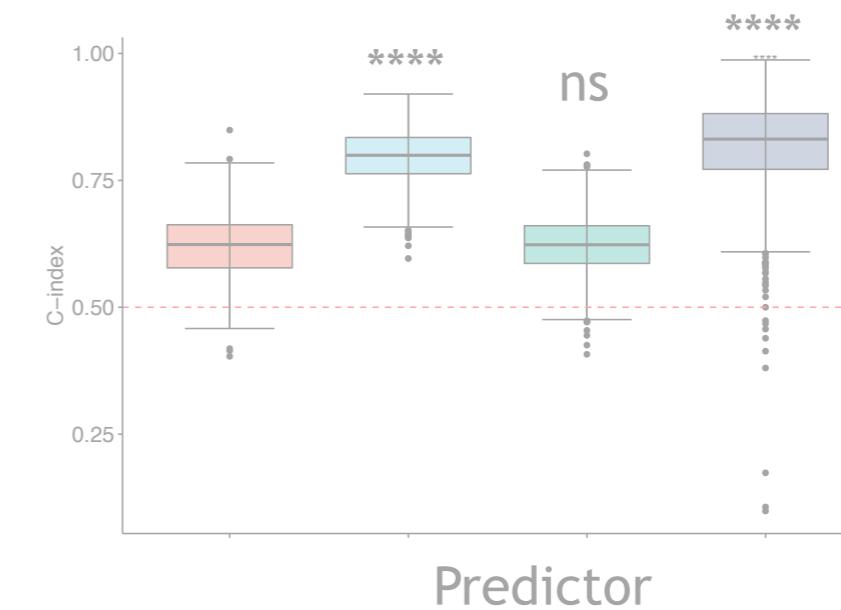
Predictor Clinical Combined CandidateLncRNAs TopLncRNA

Preliminary results - top lncRNA candidates across cancers

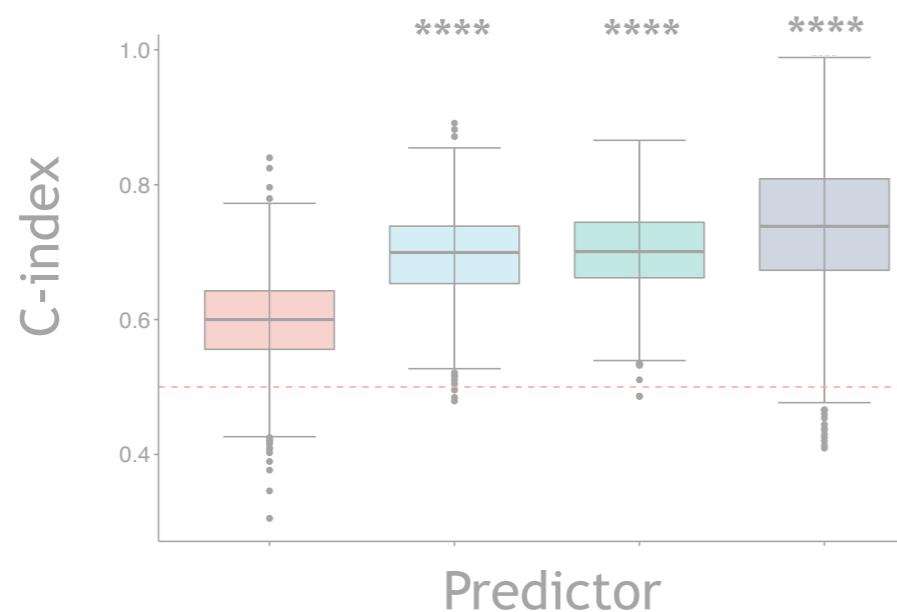
OV, RP13-188A5.1



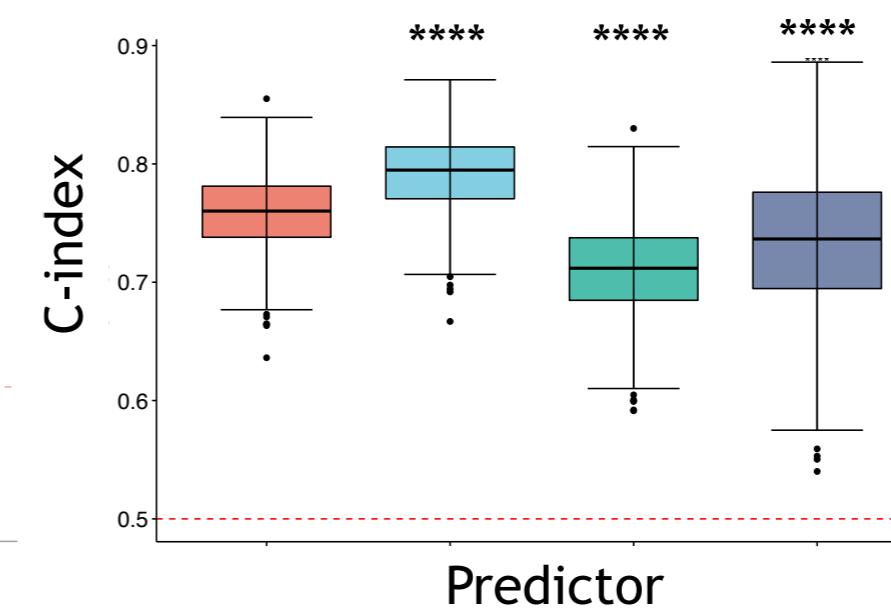
LIHC, RP11-431M3.1



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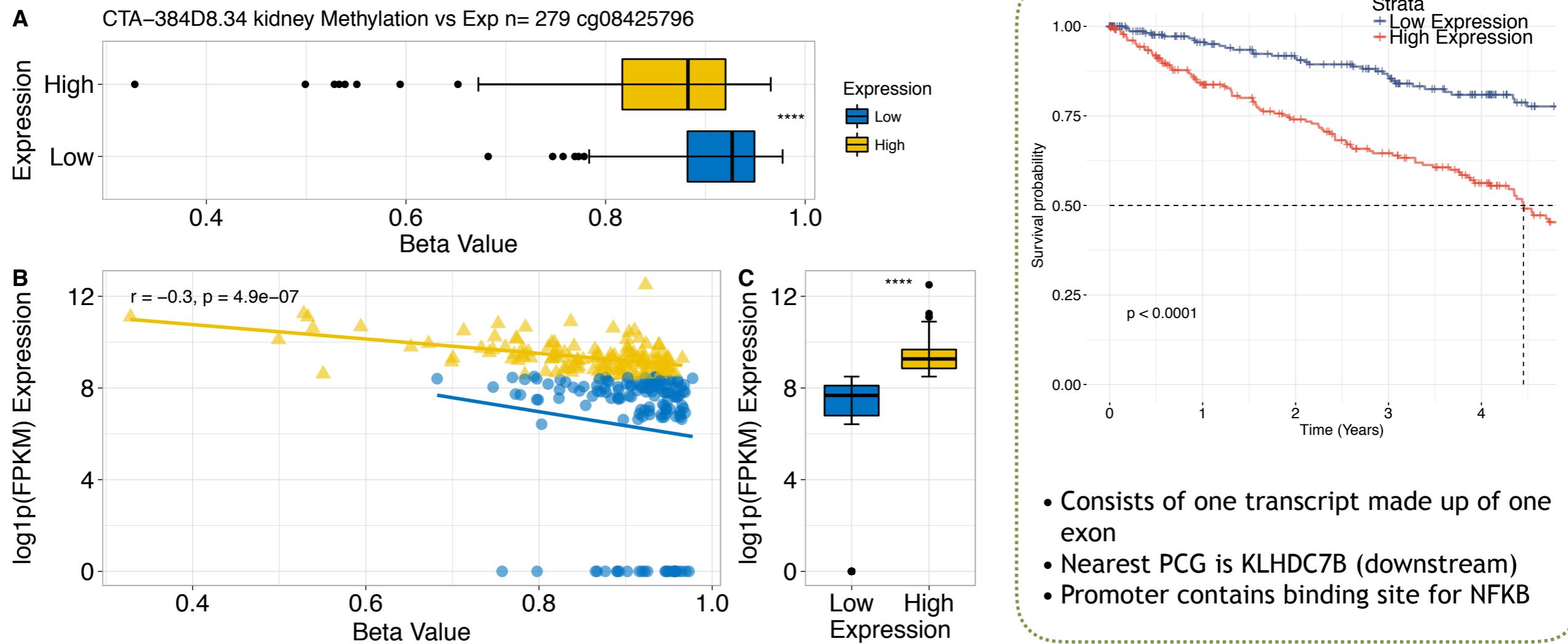
KIRC, CTA-384D8.34



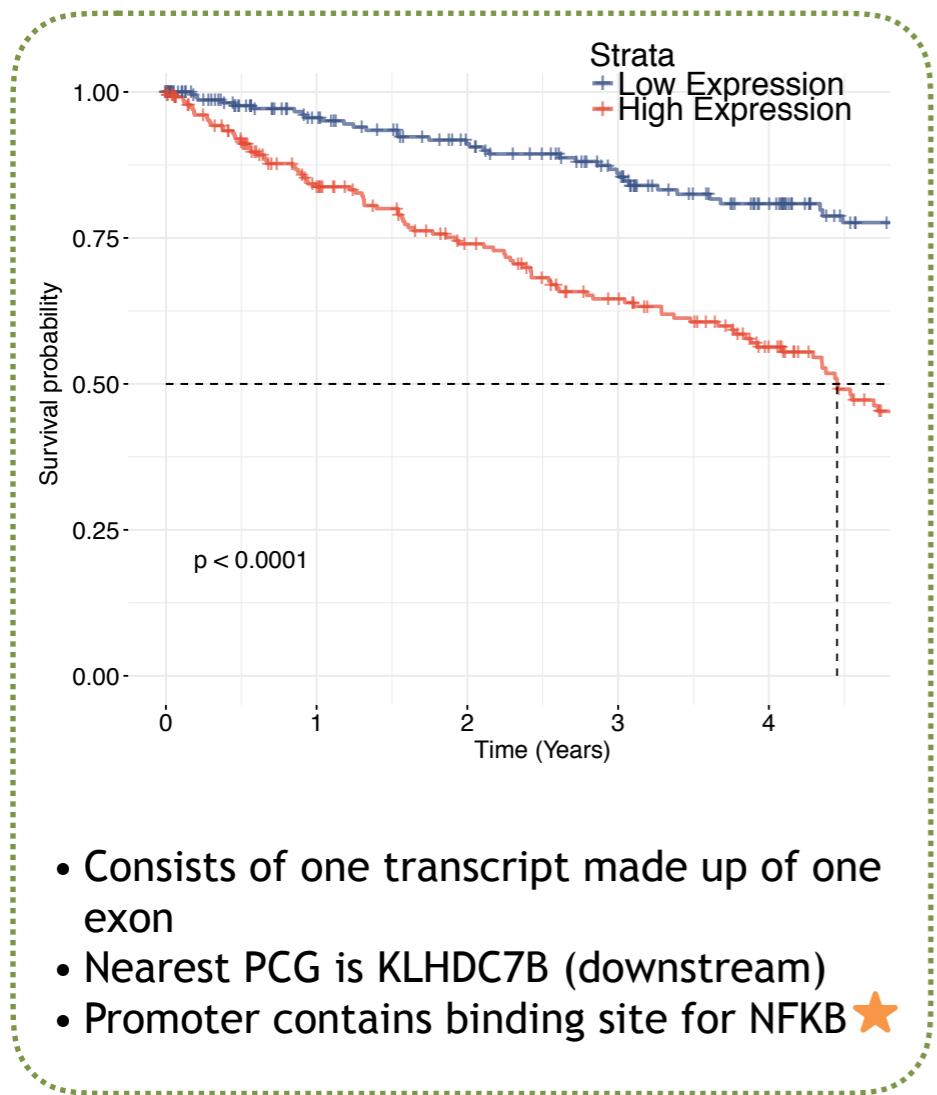
Predictor Clinical Combined CandidateLncRNAs TopLncRNA

CTA-384D8.34 in Kidney Clear Cell Renal Carcinoma

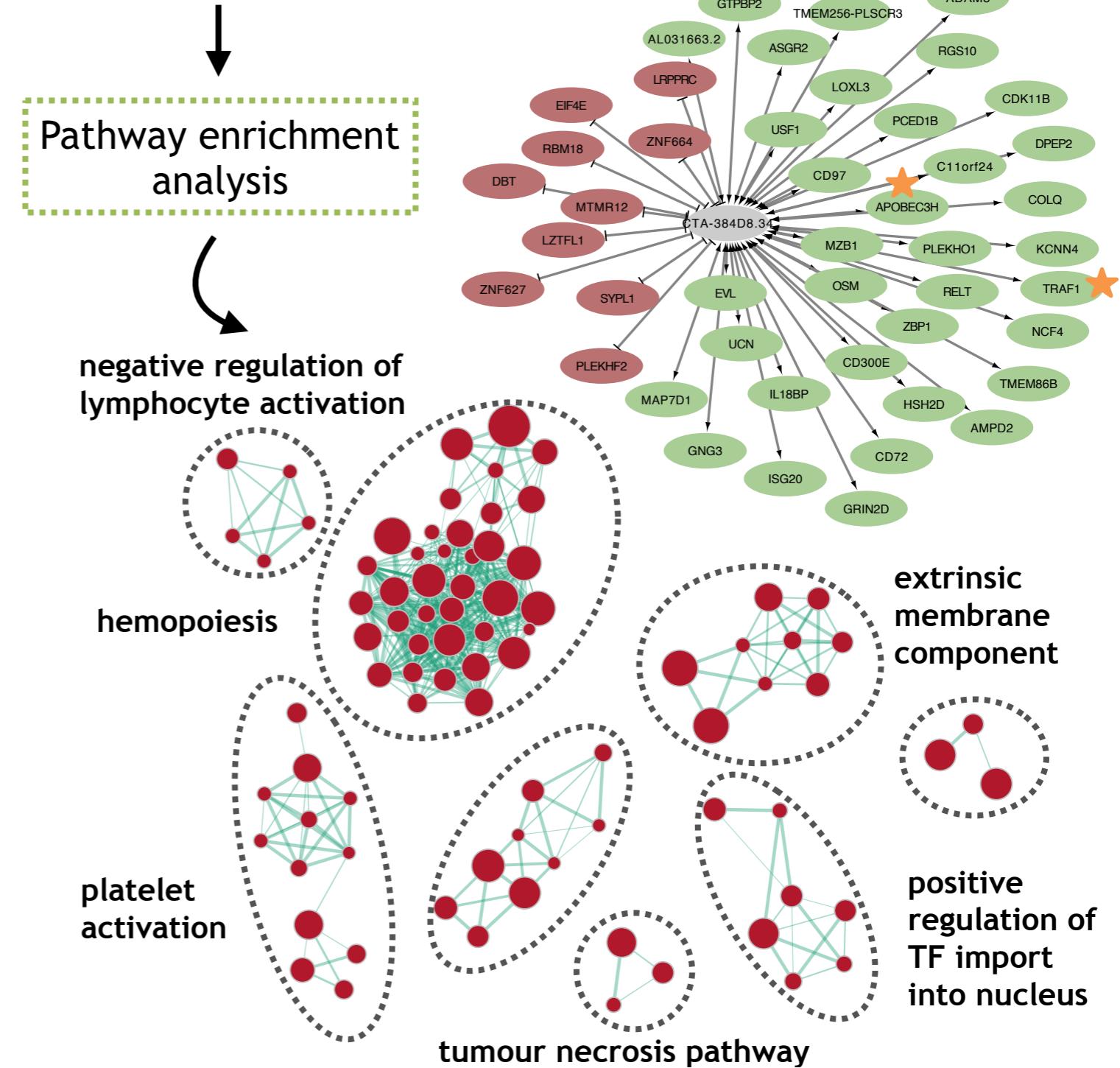
CTA-384D8.34 promoter methylation is inversely correlated with gene expression and is clinically favourable in KIRC



CTA-384D8.34 in Kidney Clear Cell Renal Carcinoma



Network of co-expressed PCGs that are predictive of lncRNA expression centred at lncRNA



Further questions to investigate

1. Where is the lncRNA localized?
2. What RNAs or Proteins is it interacting with?
3. Is it binding DNA directly?
4. Expression at different time points
5. Level of conservation
6. **What happens if we knock down candidate lncRNA? knock out?**

Thank you!

Reimand Lab

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