

# FAIR: Functional Analysis at Isoform Resolution



Lorena de la Fuente

Directora: Ana Conesa

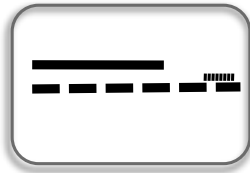
Doctorado en Biotecnología



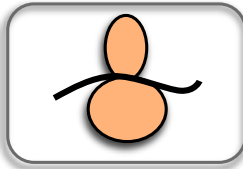
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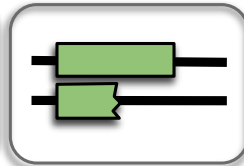
# Functional Implications of DS



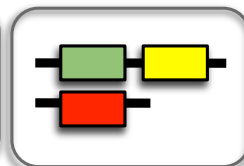
RNA stability



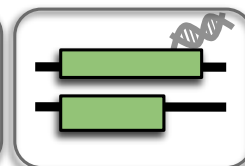
Translation rate



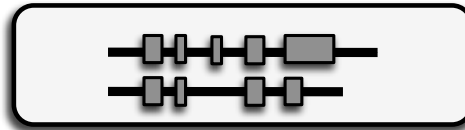
Loss of function



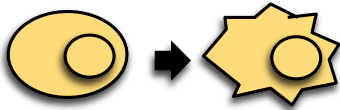
Change of function



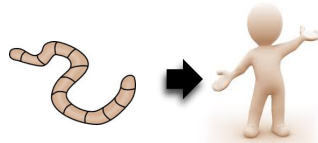
Modulation activity



ALTERNATIVE SPLICING



Cellular differentiation

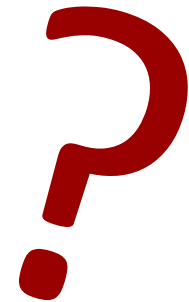


Organismal Complexity



Disease

FUNCTIONAL CONSEQUENCES  
OF DIFFERENTIAL SPLICING ACROSS  
CONDITIONS





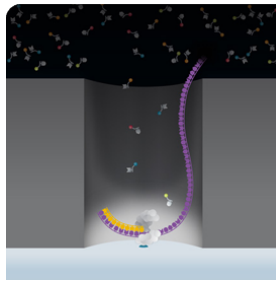
## FAIR

### *Functional Analysis at Isoform Resolution*

1



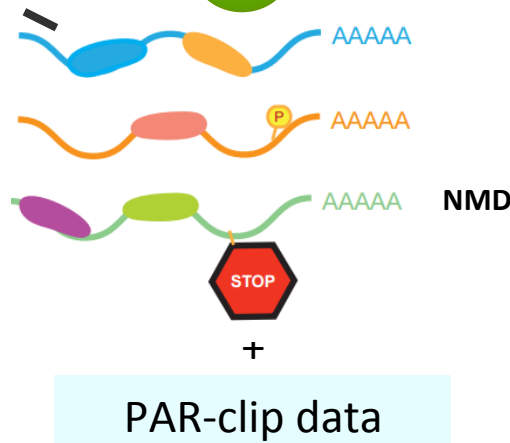
Full-length transcripts



Tissue specific transcriptome

Third Generation Sequencing

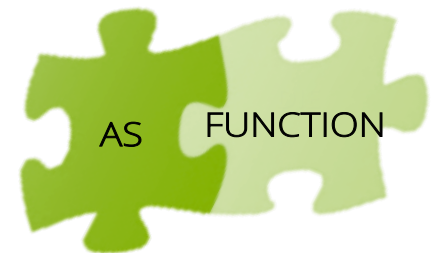
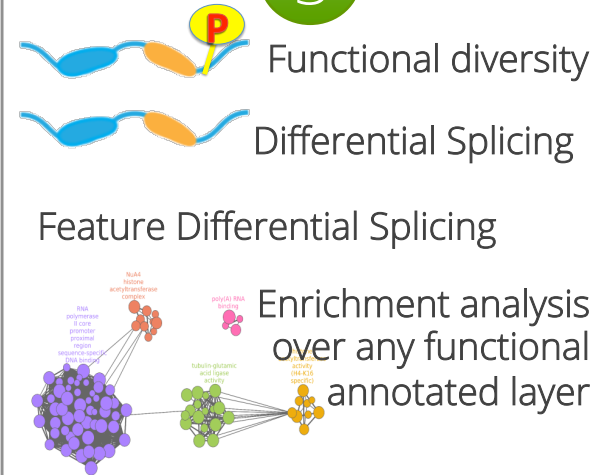
2



Rich transcript and protein annotation at isoform resolution

Prediction and coordinate transference algorithms

3



Functional Profiling Methods at Isoform Resolution





# Implementation



## Project Managing

## Visualization

## Summaries and charts for input and results data

## Statistical analysis at isoform level



**Transcript2GO**

## Flexibility of analysis by creating subgroups of transcripts

## Functional profiling

# Acknowledgements



UF  
William Farmerie  
Eric Triplett  
Lauren McIntyre

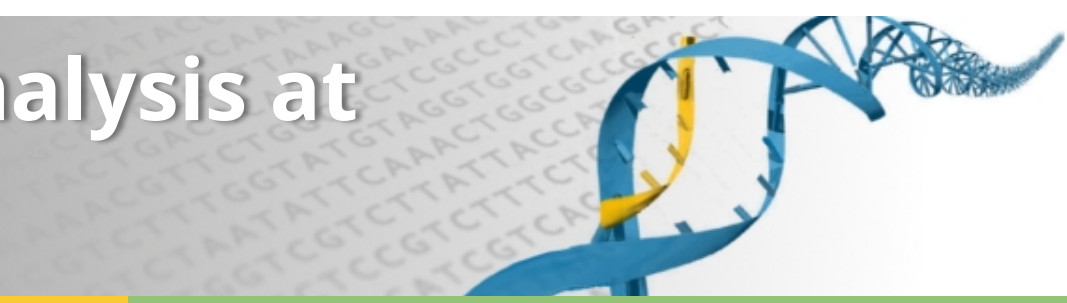
UCI  
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