RNA-Seq Module 5: Alternative Splicing Analysis

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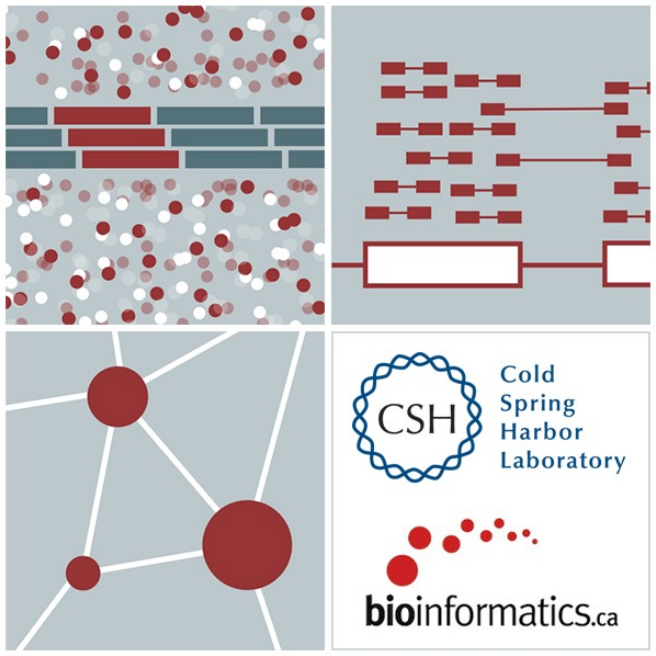
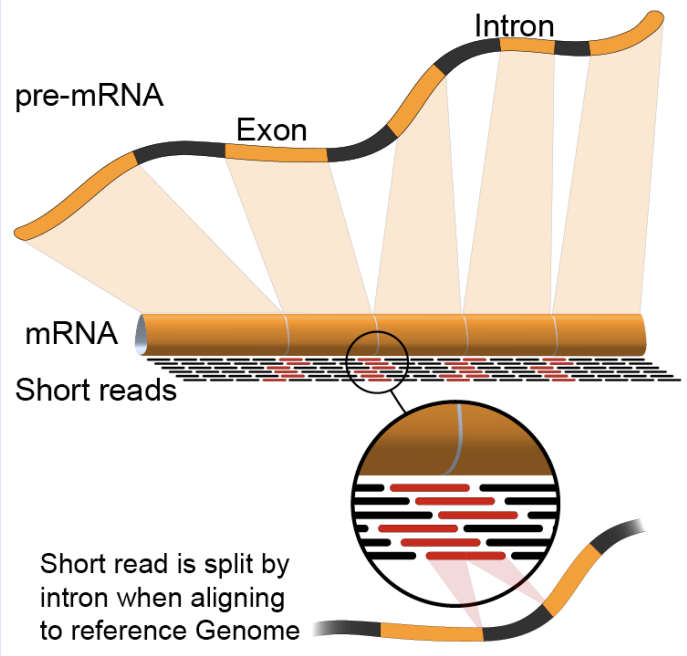
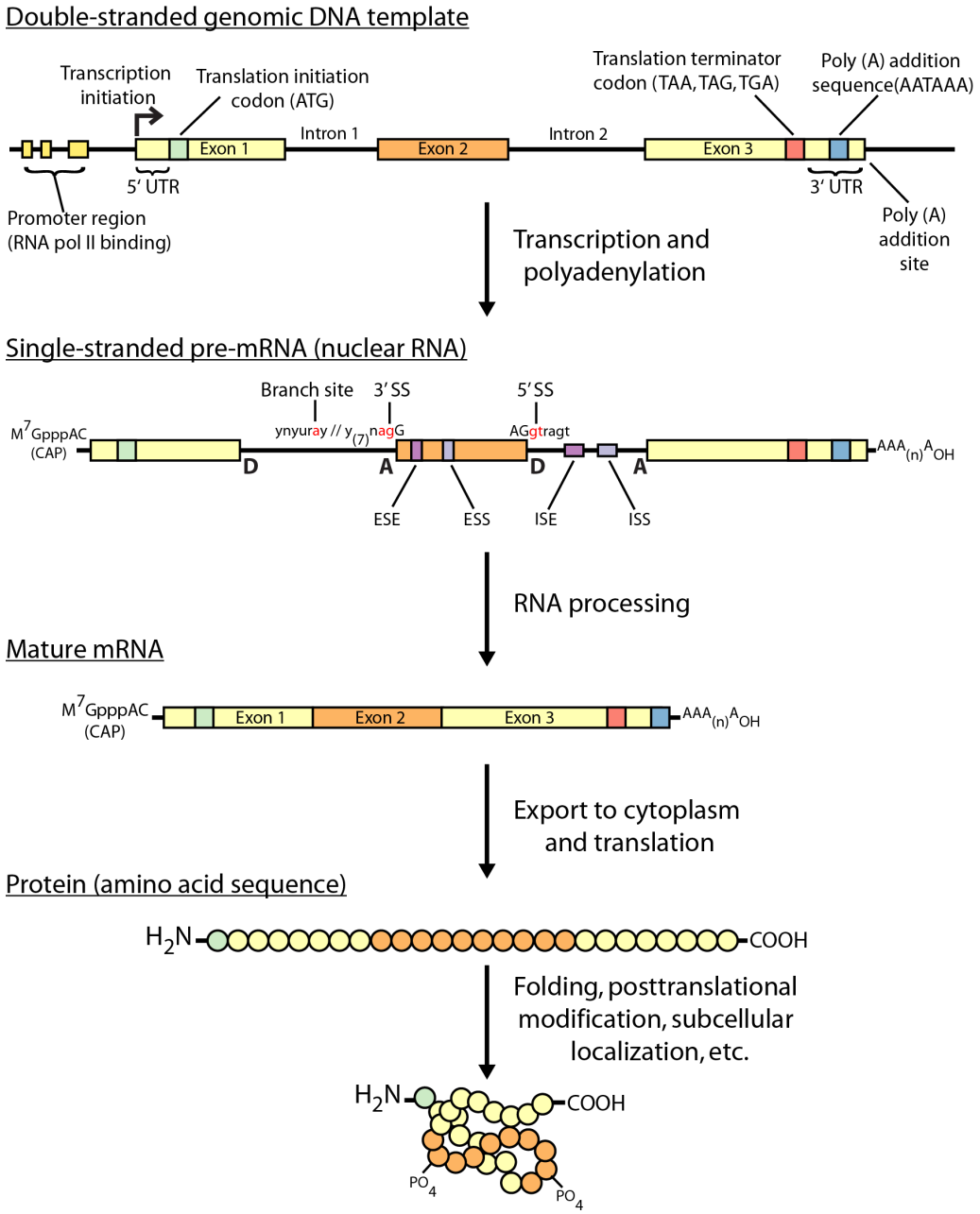
Advanced Sequencing Technologies & Bioinformatics Analysis November 5-19, 2023



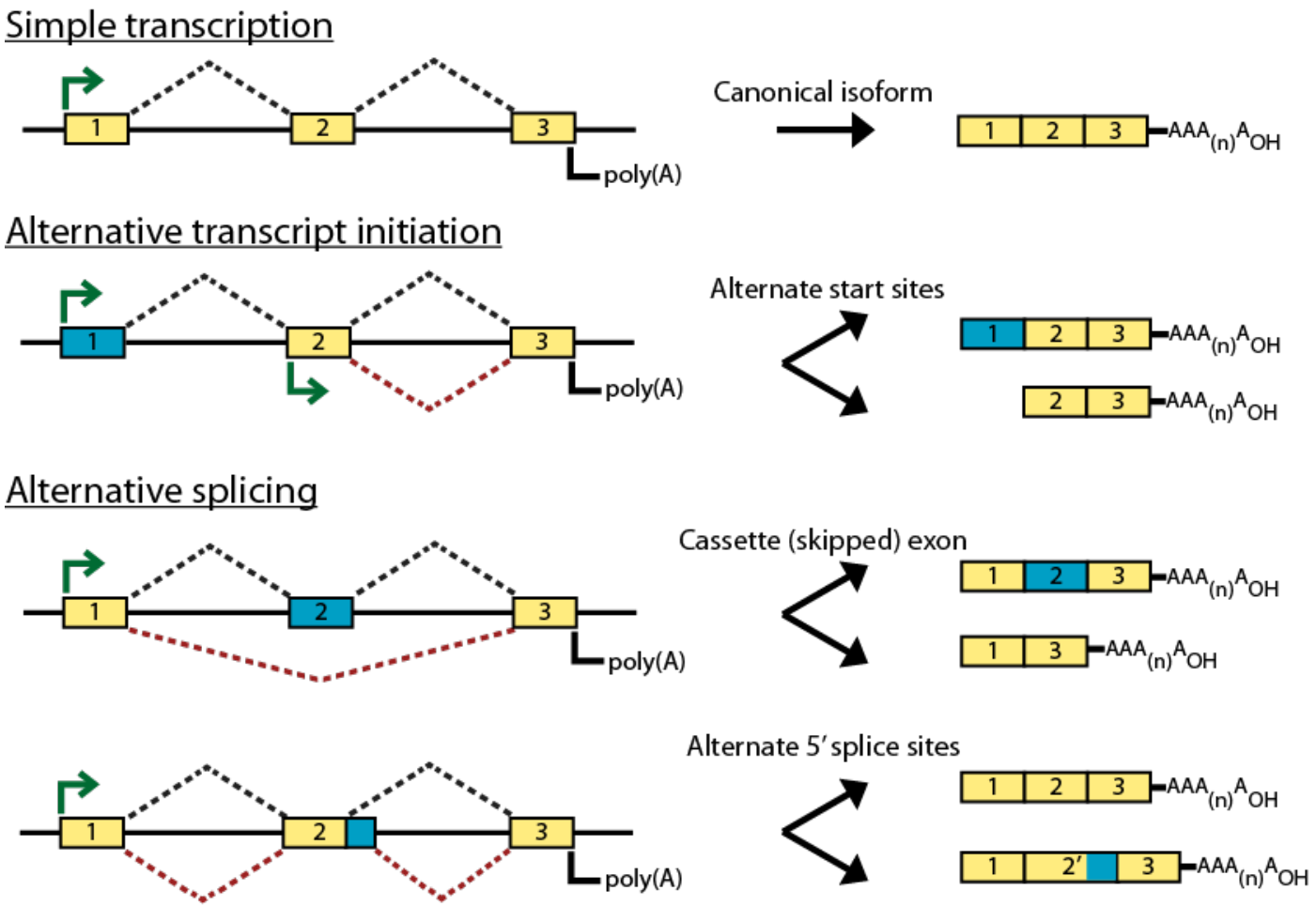


Washington University in St. Louis
School of Medicine

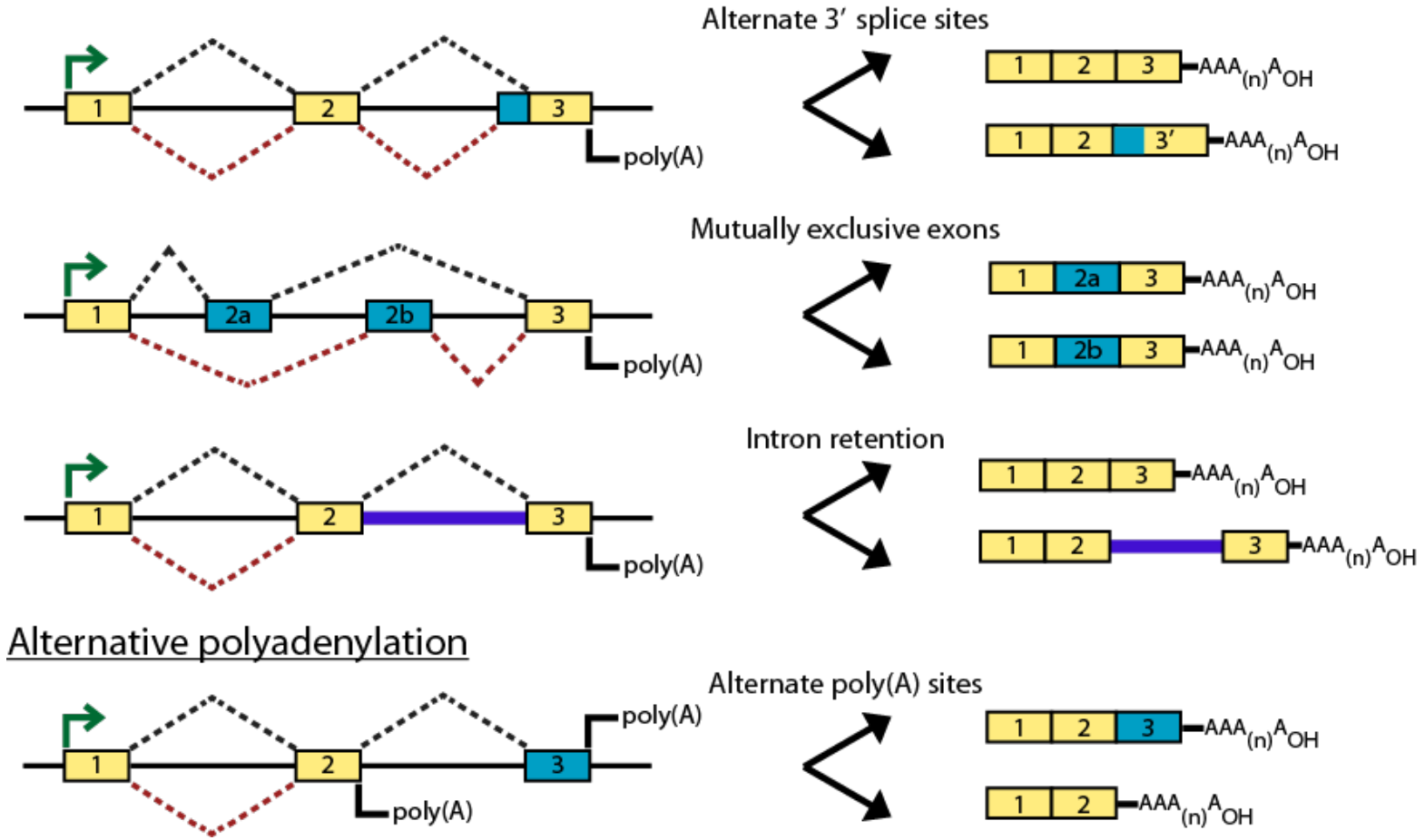
Review of gene expression



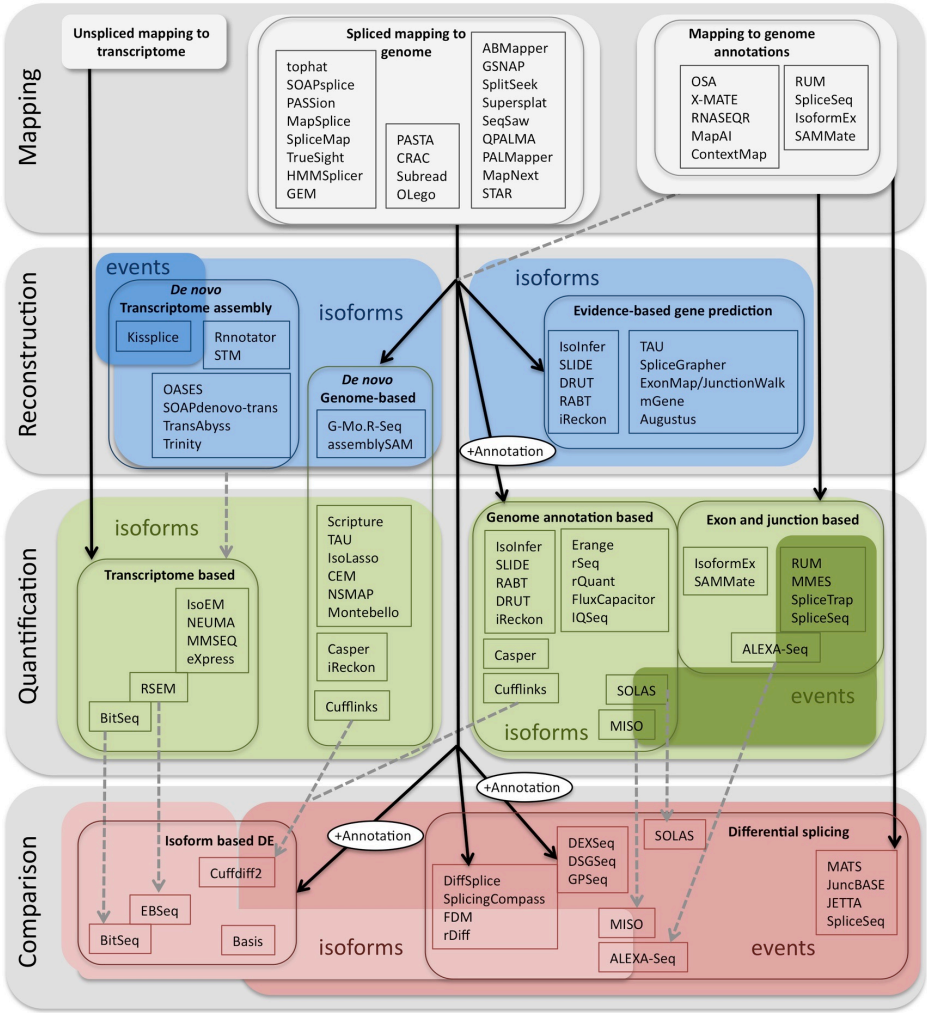
Types of alternative expression - part 1



Types of alternative expression – part 2

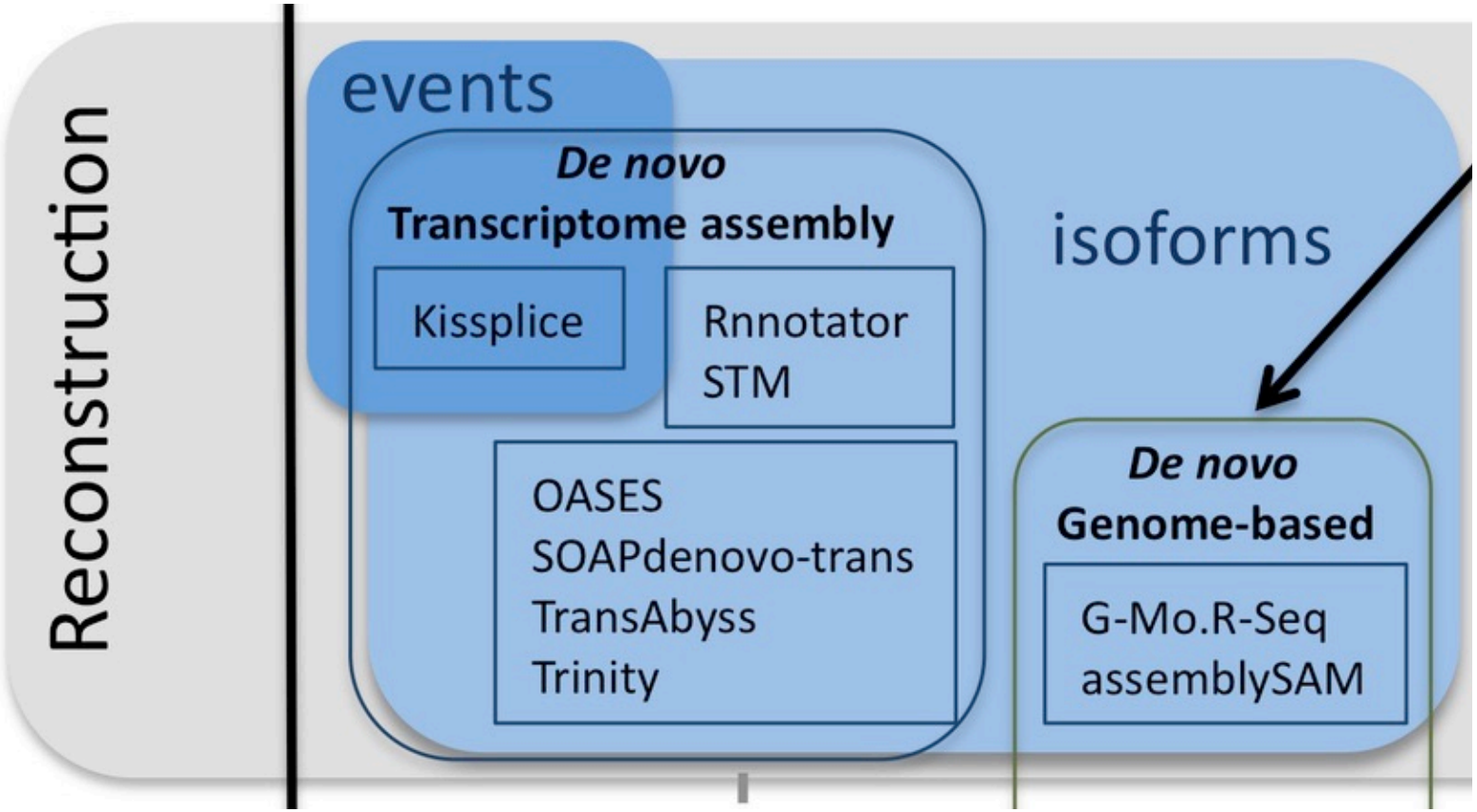


Methods to study splicing by RNA-seq



http://www.rna-seqblog.com/data-analysis/splicing-junction/methods-to-study-splicing-from-rna-seq/
http://arxiv.org/ftp/arxiv/papers/1304/1304.5952.pdf

Methods to study splicing by RNA-seq



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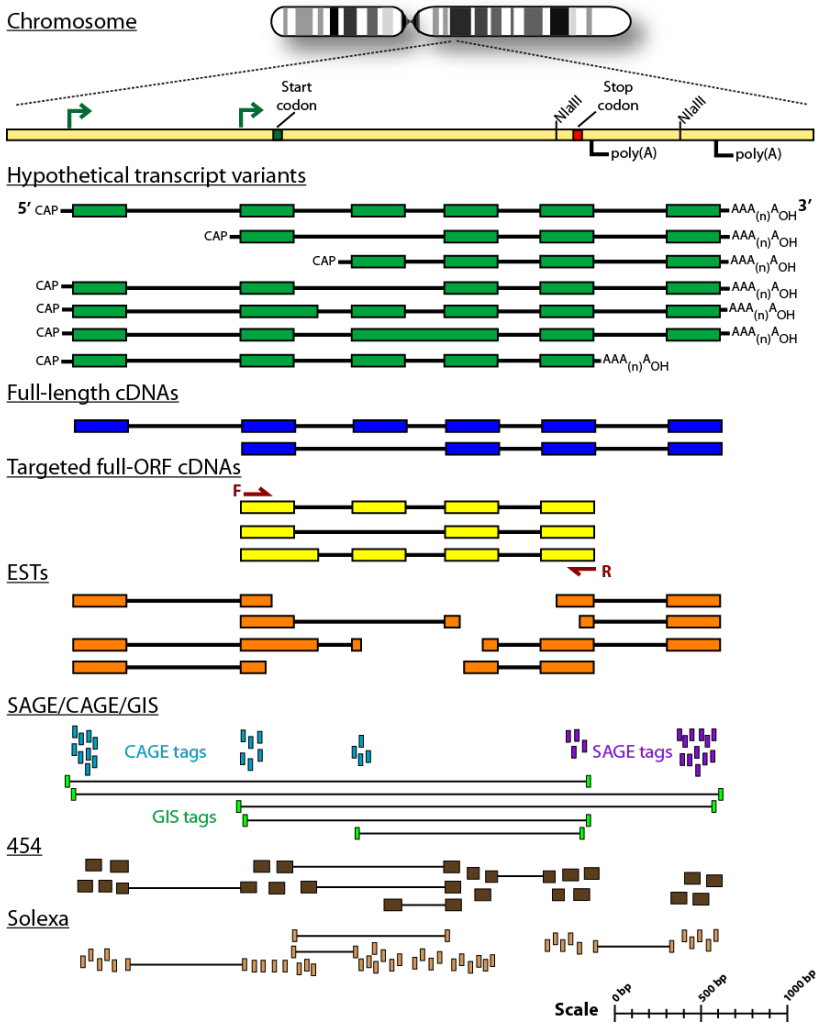
http://arxiv.org/ftp/arxiv/papers/1304/1304.5952.pdf

Useful resources and discussion

- Best approach to predict novel and alternative splicing events from RNA-seq data
  - http://www.biostars.org/p/68966/
  - http://www.biostars.org/p/62728/
- Alternative splicing detection
  - http://www.biostars.org/p/65617/
  - http://www.biostars.org/p/11695/
- Identifying genes that express different isoforms in cancer vs normal RNA-seq data
  - http://www.biostars.org/p/50365/
- Cufflinks / Cuffdiff Output - How are tests different?
  - http://www.biostars.org/p/13525/
- Visualization of alternative splicing events using RNA-seq data
  - http://www.biostars.org/p/8979/

Sequencing methods for studying alternative isoforms



We are on a Coffee Break & Networking Session