

## Bioinformatics Homework 2b

### Type 1: Literature Project

### Sequence analysis and alignment

#### Assignment instructions

**Report due: Nov 25, 2014 (midnight)**

Choose **one** of the paper options posted on the course website. These papers extend or provide additional background on the course notes covering "sequence analysis and alignment"

- **Option 1:** *Cirulli, Elizabeth T., and David B. Goldstein. "Uncovering the roles of rare variants in common disease through whole-genome sequencing." Nature Reviews Genetics 11.6 (2010): 415-425.*
- **Option 2:** *Do, Ron, Sekar Kathiresan, and Gonçalo R. Abecasis. "Exome sequencing and complex disease: practical aspects of rare variant association studies." Human molecular genetics 21.R1 (2012): R1-R9*
- **Option 3:** *Shendure, Jay, and Hanlee Ji. "Next-generation DNA sequencing." Nature biotechnology 26.10 (2008): 1135-1145*
- **Option 4:** *Martin, Jeffrey A., and Zhong Wang. "Next-generation transcriptome assembly." Nature Reviews Genetics 12.10 (2011): 671-682*
- **Option 5:** *Ding, Li, et al. "Expanding the computational toolbox for mining cancer genomes." Nature Reviews Genetics 15.8 (2014): 556-570*

Read the paper and summarize it. Clearly specify its objectives, summarize methods used or explained, and discuss its content, by looking into additional resources on the web.

**Do not copy the paper**, but show you have understood the main ideas of the paper and "discuss" the paper. Such a discussion could include thoughts on what was the key idea, strengths or weaknesses of the methods/experiments, comments on the writing, ways to extend the work, flaws in the argument/data/experiments, etc. Anything is fine, as long as it demonstrates some real thought. Structure your final report by using abstract, introduction, results and discussion and conclusion sections. Also do not forget to include references. You can choose any referencing style. Please submit the report before or on the November 4<sup>th</sup>.

All literature projects will be presented and discussed **in the class of 9th December 2014**. Hence, **make sure you prepare a 10-15 minutes presentation!**