

Exercises 12

**Genome-scale technologies 2/  
Algorithmic and statistical aspects  
of DNA sequencing**

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**Exercise 1**

*Nucleosome positioning in and out of DNase I hypersensitive sites.*

Compare the nucleosome positions as identified by DANPOS (file  
[http://mimuw.edu.pl/~szczurek/TSG2/12\\_lab/DANPOS-output.txt](http://mimuw.edu.pl/~szczurek/TSG2/12_lab/DANPOS-output.txt))

with hypersensitive sites found using DNase I -seq  
[http://mimuw.edu.pl/~szczurek/TSG2/12\\_lab/DNASE-output.txt.csv](http://mimuw.edu.pl/~szczurek/TSG2/12_lab/DNASE-output.txt.csv)

Concentrate on chromosome 2L and embryo stage 9.

Compute the density of nucleosomes found in  
DNase I hypersensitive sites  
Outside the hypersensitive sites.