

## **Postdoc/PhD in computational cancer biology: Prediction of response to neoadjuvant chemotherapy**

### **Who we are**

Located in Amsterdam, The Netherlands Cancer Institute (NKI) is the only Dutch Comprehensive Cancer Centre. Excellent basic, translational, and clinical cancer research is performed to give the best possible cancer treatment to patients. This environment attracts bright and ambitious scientists from all over the world. Research in the Computational Cancer Biology (CCB) group roughly centres around three core topics, all rooted in large-scale data analysis: characterization of oncogenic molecular alterations, tumour subtyping, and personalized treatment. The CCB group participates in unique collaborations with molecular biologists and clinicians.

### **Project outline**

Neoadjuvant chemotherapy is widely used in all subtypes of breast cancers. However, only a small subset (~10%) of patients with luminal breast cancer achieve pathological complete response. We previously identified genes of which expression levels are associated to chemotherapy resistance. In this project, we aim to i) better understand the molecular alterations of luminal breast cancers (e.g. role of the genes identified, association with BRCAness); ii) develop practical routine predictive tests to tailor neoadjuvant chemotherapy for luminal breast cancer. To do that, we will leverage in-house (DNA and RNA sequencing data from 500 biopsies) and published data (METABRIC, TCGA) on primary luminal breast cancer together with a large collection of cell lines available via our collaboration with the Wellcome Trust Sanger Institute and the Cancer Systems Biology Centre at NKI. The successful candidate will be in charge of building computational models to achieve the aims as outlined above.

### **Who you are**

We need an ambitious, motivated and skilled computational biologist to run this project.

- Highly motivated postdoc or PhD candidate
- Holding a degree in bioinformatics or computer science
- Experienced in cancer biology and clinical applications
- Proficient in common bioinformatics scripting and programming languages (e.g. R, python)
- Experienced in analysing high-throughput genomic data (e.g. DNA and RNA sequencing)
- Able to communicate effectively with scientists from various backgrounds
- Speaking and writing English fluently

### **Interested?**

Please contact Lodewyk Wessels, tel. +31 20 512 7987 or e-mail: [l.wessels@nki.nl](mailto:l.wessels@nki.nl). When applying, please ensure you include a CV, list of publications and the names and addresses of at least two people that can be approached as references. Also see [ccb.nki.nl](http://ccb.nki.nl) for further information.

### **Closing date**

1 February 2014