The Cancer Genomics Lab at the Vall d'Hebron Institute of Oncology (VHIO) Seeks a "Bioinformatician"

Reference: 32/2019

Application deadline: 16/12/2019

Number of vacancies: 1

Job description:

We are looking for a bioinformatician to join the Cancer Genomics Lab at VHIO. The scope of the work will be mostly linked to the analysis of genomic data in the context of cancer patients. The successful applicant should be able to work independently and in several projects.

Requirements:

Bioinformatician with a PhD in biomedical sciences or similar experience (i.e. 3-4 years of experience).

Knowledge/ experience in Genomics and Cancer.

Familiar with raw sequencing data (FASTQ) as well as other common formats (SAM/BAM, BED, etc.), command-line tools (bwa, samtools, bedtools, etc.) and biological databases (cBioportal, COSMIC…).

Experience using GNU/ Linux systems, preferably Ubuntu.

Fluency in R. Knowledge of Python and other programming languages is also valuable.

Proficiency in English.

Additional information:

Knowledge of statistical modelling or machine learning is a plus.

Salary conditions will be set according to experience and profile.

Application: selecciorrhh@vhio.net

About us:

Under the leadership of Josep Tabernero, the Vall d'Hebron Institute of Oncology (VHIO), has established itself as a comprehensive cancer center of proven excellence internationally. It is also thanks to VHIO's optimal organizational structure based on a purely multidisciplinary and translational model that VHIO talents continue to anticipate and tackle the many unresolved questions in combatting this multifaceted and heterogeneous disease. Located within the Vall d'Hebron Barcelona Hospital Campus, our researchers closely collaborate and interact with Vall d'Hebron physician-scientists. Translational science and clinical research are therefore tightly connected which promotes superb interaction and teamwork which, in turn, accelerates the bench-bedside-bed cycle of knowledge. This privileged environment affords VHIO direct access to patients as well as the entire spectrum of oncology professionals who care for them, and a second-to-none appreciation of how cancer science can translate into more powerful, targeted treatments and better practice for the care of patients. VHIO's pioneering model and programs, coupled with its belief in combining strengths through cross-border collaborations, continue to spur advances in reversing cancer resistance, halting metastatic spread, and more effectively treating even the most undruggable tumor types.

VHIO's Cancer Genomics Group serves as a Core Technology laboratory. In addition, we are dedicated to translational research as well as novel genomic test development. We provide cutting-edge applications in cancer genomics through state-of-the-art technologies and the development of novel, fully validated tests that are used in the clinical research setting (Prescreening Program). Our lab is equipped with an n-Counter (Nanostring) platform, two digital PCR platforms (BEAMing Sysmex and ddPCR, BIO-RAD) and three NextGen Sequencers; MiSeq, NextSeq and HiSeq2500, Illumina. VHIO's Prescreening Program is nucleated around the activity of two VHIO groups - Cancer Genomics and Molecular Oncology (led by Paolo Nuciforo), and centers on performing molecular profiling in over 1500 patients each year as potential candidates for enrollment in our Phase I clinical trials led by VHIO's Research Unit for Molecular Therapy of Cancer (UITM) – "la Caixa", directed by Elena Garralda. Patients' suitability for inclusion in any given clinical trial is assessed based on their respective genomic or pathologic profile. Our Group has developed and routinely implemented several tests for our Prescreening Program, based on NGS and nCounter. Our research activities focus on developing novel multiplexed tests that are optimized to FFPE-derived nucleic acids. Once developed, they are validated and used in clinical and translational research. Our group has been particularly interested in liquid biopsy for the last years, we are currently developing our own custom NGS test with Unique Molecular Identifiers (UMI) chemistry and envision that this will be our first disease tracking test in the clinical setting. We are also involved in a number of translational research projects including the identification of mechanisms of resistance to targeted therapies, as well as predictive biomarkers for immunotherapeutics.

References

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Élez et al., Impact of circulating tumor DNA mutant allele fraction on prognosis in RAS-mutant metastatic colorectal cancer. Mol Oncol. 2019 Sep;13(9):1827-1835.

Cedrés et al., Activity of HSP90 Inhibiton in a Metastatic Lung Cancer Patient With a Germline BRCA1 Mutation. J Natl Cancer Inst. 2018 Aug 1;110(8):914-917.

Martinez-Martí et al., Dual MET and ERBB inhibition overcomes intratumor plasticity in osimertinib-resistant-advanced non-small-cell lung cancer (NSCLC). Ann Oncol. 2017 Oct 1;28(10):2451-2457.

Grasselli et al., Concordance of blood- and tumor-based detection of RAS mutations to guide anti-EGFR therapy in metastatic colorectal cancer. Ann Oncol. 2017 Jun 1;28(6):1294-1301.

VHIO's translation toward precision oncology: http://www.vhio.net