Clinical bioinformatician

The WIV-ISP

The Scientific Institute of Public Health (WIV-ISP) provides support for public health policy through scientific research, expert opinions and divisional tasks. On the basis of scientific research, we formulate recommendations and solutions for a proactive health policy at the Belgian, European and international levels; assess the status of health (indicators) within a certified quality framework; and develop advanced solutions for the diagnosis, prevention and treatment of current and emerging diseases. Recently, we started developing a new NGS & bioinformatics platform that, amongst others, aims to support medical diagnostics by integrating NGS into the public health sector.

The service "Quality of Medical labs" at the WIV-ISP is responsible for the licensing of the use of molecular diagnostics in medical laboratories. By legislation, the service is responsible for monitoring the quality of the Belgian laboratories for clinical biology and anatomic pathology. Therefore, documentary audits as well as on-site audit visits are performed and external quality assessments (EQA) are organized. The Minister of Health has launched a pilot project on the introduction of NGS in routine diagnostics for (hemato)oncology. To continue guaranteeing the highest quality molecular testing analysis to our cancer patients, registered demonstration of the appropriate performance and capacity of the use of this new technology by the medical sector is essential. An EQA program evaluating the routine use of NGS in (hemato)oncology must thus be established at the Belgian level. We are therefore currently looking for a **clinical bioinformatician**.

Your function

You will work in a multidisciplinary environment in the context of the "NGS in the Clinic" project in collaboration with the services "Quality of Medical Laboratories", "Cancer Centre", and "Platform for Biotechnology and Molecular Biology" (hosting the NGS and Bioinformatics platform). More specifically, you will:

- Collaborate with and assist the medical genomics quality coordinator in the design, analysis and interpretation of NGS experiments.
- Provide bioinformatics support to the NGS EQA tests organized by the WIV-ISP in (hemato) oncology
- Start by evaluating and comparing different algorithms and methods for the clinical analysis of human NGS samples (targeted gene panels and WGS, based both on actual and artificial simulated clinical data) to assess their overall performance and quality (sensitivity, specificity, accuracy…) in routine clinical settings.
- Gradually expand towards implementing and developing yourself novel generic bioinformatics workflows based on analysed results in order to construct a (user-friendly) bioinformatic pipeline that can be used for proficiency testing.
- Contribute towards developing standardized practices for the use of NGS & bioinformatics in (hemato)oncology.
- Work under the supervision of senior scientists in bioinformatics, molecular biology, medical quality control, and oncology.

- Search for solutions to manage, process and analyse large volumes of 'big data'.

Your profile

- MSc with a specialization track in bioinformatics or equivalent through experience.
- High proficiency in scripting languages such as Python and Perl.
- Familiarity with working on the Linux command line.
- General understanding of statistics.
- Basic insight of biology and genomics.
- English language proficiency.
- A team player with excellent interpersonal, organizational, and communication skills.
- Solution-oriented with strong strategic and analytical problem-solving skills, being able to tackle tough problems independently.
- A quick learner that feels at home in a fast evolving environment.

Complementary strengths: hands-on experience with analysis of NGS data (quality control, read mapping, variant detection, *de novo* assembly…) and/or a clinical setting (quality management, oncology, histopathology…) is considered a major asset; familiarity with High-Performance-Computing (SGE, PBS, SLURM…) and statistical/mathematical packages (Matlab, R, SAS, SPSS…); knowledge of relational databases (MySQL, PostgreSQL…) and web servers (Apache, nginx…); Dutch and/or French language proficiency; strong mathematical background.

We offer

- A challenging and fascinating project in a fast evolving domain.
- A knowledge-intensive position in a renowned scientific institute that operates on an international level.
- The possibility to impact public health policy regarding NGS & bioinformatics.
- A young enthusiastic team of colleagues.
- Advantages: insurances, flexible hours in a 38-hour working week, reimbursement of public transport…
- A total duration of the project of 1 year (starting date: as soon as possible), with possibility of extension.

Interested?

Send your application via our website (http://wiv-isp.hr-technologies.com/content/jobpage.asp).

For more information about the WIV-ISP and/or the job description, contact:

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