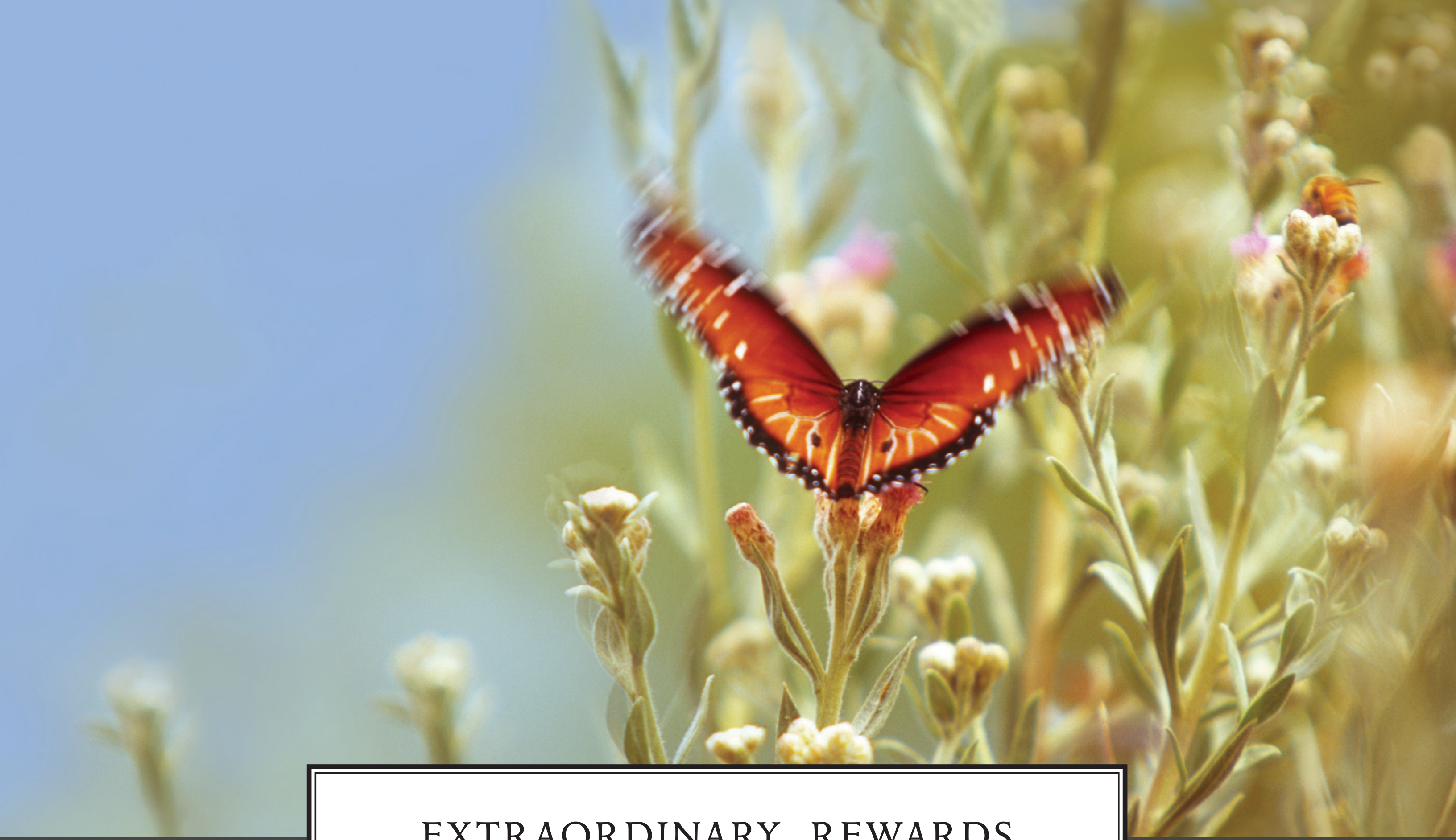

EXTRAORDINARY REWARDS

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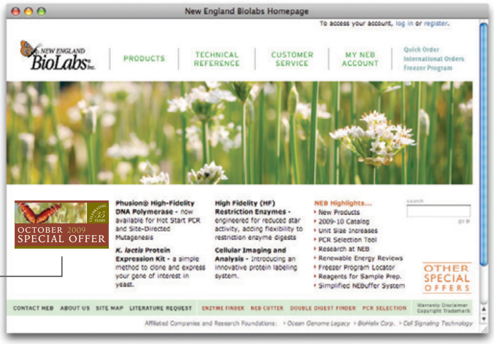

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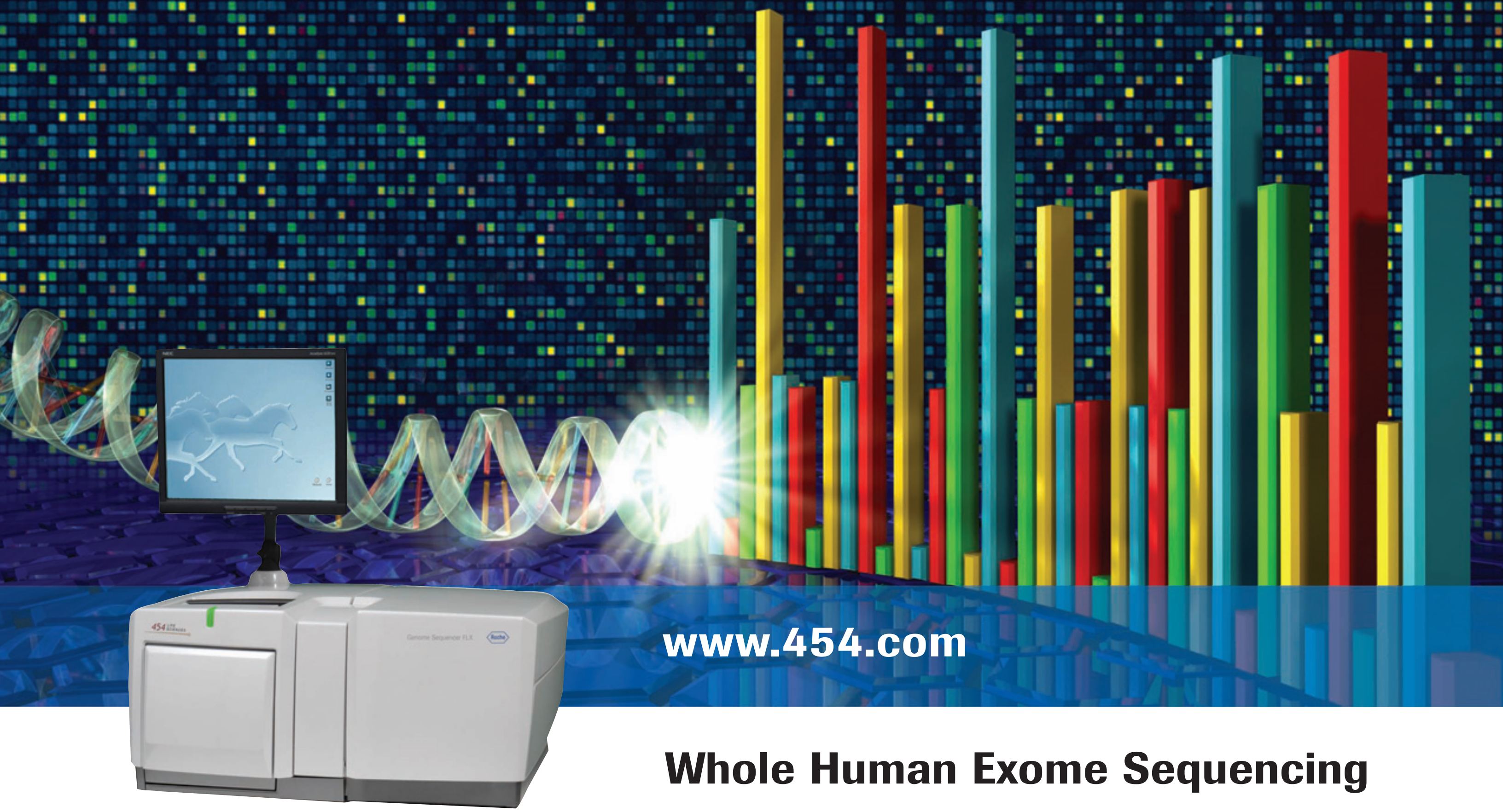

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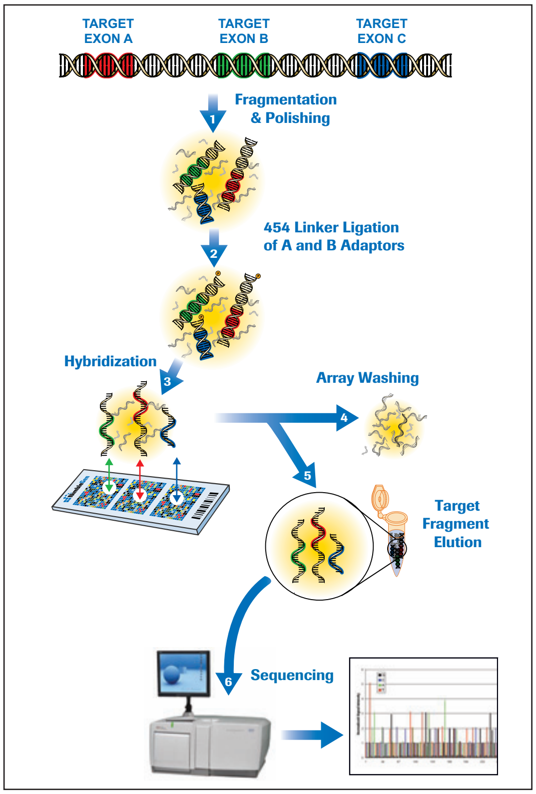

◀ **Figure 1: The GS FLX Titanium Sequence Capture Protocol.**
1. The genomic DNA sample is fragmented and polished. **2.** Linkers are ligated to the fragments. **3.** The sample is hybridized to a NimbleGen Sequence Capture 2.1M Human Exome array. **4.** Unbound fragments are washed away. **5.** Target fragments are eluted using the NimbleGen Elution System. **6.** The enriched sample is ready for high-throughput sequencing with the Genome Sequencer FLX Instrument.

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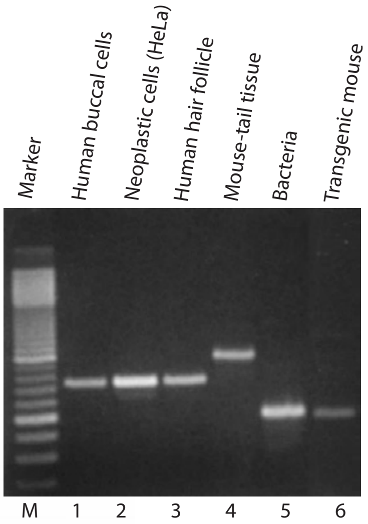
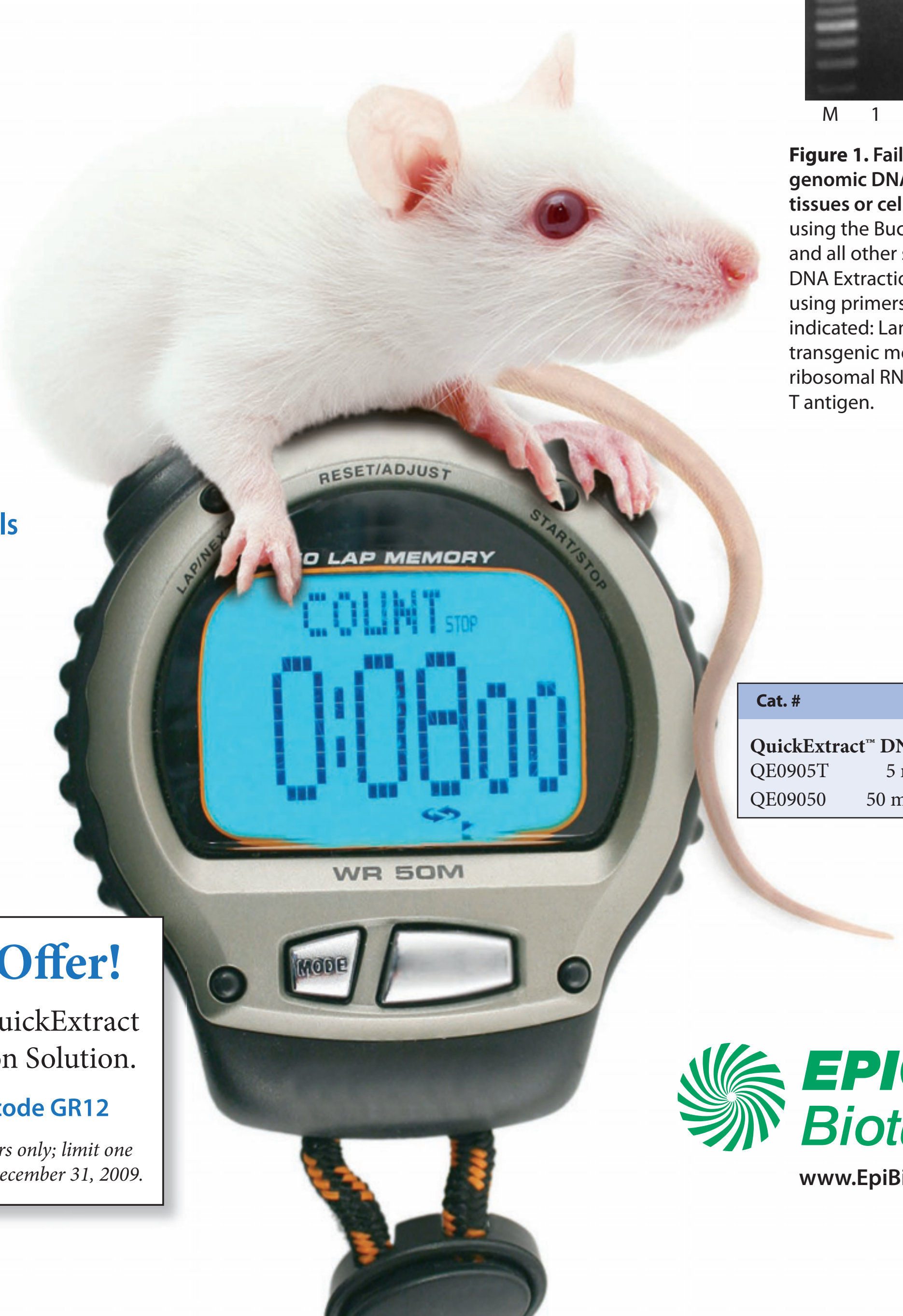


Figure 1. FailSafe™ PCR amplifications of genomic DNA extracted from a variety of tissues or cells. Buccal cells were extracted using the BuccalAmp™ DNA Extraction Kit, and all other samples with QuickExtract™ DNA Extraction Solution. PCR was performed using primers to amplify the regions indicated: Lanes 1-3, human β-globin; lane 4, transgenic mouse GAPDH; lane 5, *E. coli* 16S ribosomal RNA gene; lane 6, transgenic SV40 T antigen.



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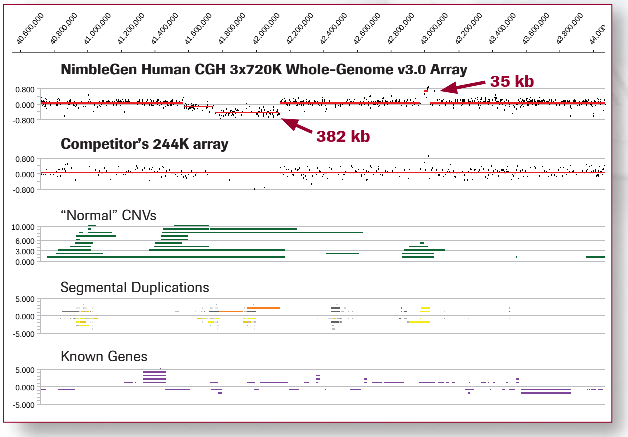

Analysis of a Complex CNV Region in Chromosome 17 in a Burkitt Lymphoma Research Sample Referenced against Normal Genomic DNA. An ~382 kb deletion region and an ~35 kb amplification region are easily detected using the NimbleGen Human CGH 3x720K Whole-Genome Tiling v3.0 array and the NimbleGen MS 200 Microarray Scanner at 2 µm resolution. The combination of high-density NimbleGen microarrays and the high-resolution scanning of the MS 200 provides sensitivity to comprehensively detect genome-wide CNVs.

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Postdoctoral Fellowship, Max Planck Campus, Tübingen, Germany

Group Description

The Max Planck research group "Machine Learning in Biology" led by Dr. Gunnar Rätsch has a postdoctoral fellowship available. The group is part of an excellent research campus including the Max Planck Institutes for Developmental Biology and Biological Cybernetics and the University of Tübingen. Our ongoing projects are related to computational transcriptome analysis, including RNA-seq and tiling array data analysis; understanding transcriptional and post-transcriptional regulation; computational gene finding using novel techniques; and the development of large-scale and interpretable machine learning methods for genomic sequence analysis (cf. http://www.fml.mpg.de/raetsch/research).

Position Requirements

We are looking for an enthusiastic candidate who is interested in applying and/or developing machine learning or related data analysis techniques for transciptome and genome analysis. Possible topics to work on include regulation of RNA processing, epigenetics of post-transcriptional regulation, genome-wide association studies, and novel learning techniques. We encourage collaboration with experimental biologists and machine learning experts (on the MPI campus and elsewhere). There will also be lots of freedom to pursue own ideas.

The candidate should have a Ph.D. (in statistics, biostatistics, computational biology, or a related field) with a strong publication record and strong professional references. The ideal candidate should have demonstrated interests and experience in the analysis of genomic data; strong knowledge of molecular biology; extensive programming experience pertinent to the analysis of large and diverse datasets; multi-disciplinary team working capabilities. Excellent communication skills are required for effective interaction with group members and collaborators.

Application Procedure

Interested applicants should submit a CV, a cover letter stating qualifications, research interests as well as an outline of potential research projects to be done in the lab, and letters of reference via the online submission system available at http://jobs.tuebingen.mpg.de/ag-raetsch. Application deadline is November 1, 2009. Please feel free to also contact Gunnar Rätsch (Gunnar dot Raetsch at tuebingen dot mpg dot de) informally by email.

Friedrich Miescher Laboratory of the Max Planck Society
http://www.fml.mpg.de

Faculty Positions in Basic and Translational Cancer Science, Swiss Institute for Experimental Cancer Research (ISREC) at EPFL

We seek several outstanding individuals to join the faculty of the Swiss Institute for Experimental Cancer Research (ISREC), one of the four institutes of the School of Life Sciences in the Swiss Federal Institute of Technology Lausanne (EPFL). ISREC intends to expand from its strong foundation in cancer-related research by appointing faculty focused on frontiers in the biology and therapy of cancer. ISREC is based in a new building on the shore of Lake Geneva amidst the EPFL campus and its interactive faculty in life sciences, chemistry and physics, computer science, and engineering. Additionally, ISREC is establishing a division proximal to the new Department of Oncology at the University of Lausanne's medical campus to nucleate translational oncology research. Both divisions of ISREC will pursue innovative approaches to reveal mechanisms of human cancers. An ancillary agenda will involve applying such knowledge to function-based therapeutic targeting of critical pathways and capabilities, in preclinical trials involving mouse models of selected human cancers, linked in due course to proof-of-concept clinical trials in those cancers. Topics of interest for new faculty include: functions and regulation of the tumor microenvironment; mechanisms of angiogenesis, invasion and metastasis; the roles of inflammation in cancer; metabolomics and energetics of tumors, and applications of chemical biology and bioengineering to basic and applied cancer research. Appointments into both divisions of ISREC are anticipated.

ISREC faculty members receive core generous support (salary and research funds) with the expectation that their research programs will be complemented by extramural grant support. Participation in undergraduate and graduate teaching is anticipated. ISREC and the School of Life Sciences have an excellent infrastructure, including a number of technology core facilities.

We anticipate appointing a number of tenure track assistant professors of exceptional promise over the next few years into both divisions of ISREC, and are prepared to consider accomplished, ascendant mid-career cancer researchers for appointment as senior faculty.

Candidates are requested to submit via the website below, in separate PDF files, a curriculum vitae with a list of mentors who can provide letters of recommendation, a list of publications (annotated to indicate the candidate's contributions), a brief statement of teaching interests, and a 2-3 page research synopsis that both summarizes current/past research accomplishments and presents a strategic vision for development of the candidate's research program over the next 5 -10 years.

While the ISREC faculty search will be ongoing, we will initially consider applications received by November 1, 2009, with the aim to invite a few top candidates for interviews in early 2010.

Applications should be uploaded at http://isrecfac.epfl.ch

Inquiries and questions may be addressed to:

Professor Douglas Hanahan
Director, ISREC
School of Life Sciences
EPFL, Room SV2.816
CH-1015 Lausanne, Switzerland
EM: dh@epfl.ch

EPFL is committed to expanding the ranks of women on its faculty, and qualified women are enthusiastically encouraged to apply.

For additional information on ISREC, the School of Life Sciences, and EPFL, please consult http://isrec.epfl.ch/, http://sv.epfl.ch, and http://www.epfl.ch, respectively.

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