

Research Project Proposal
Academic year 2015-2016

Project Nº 55
Title: Development of new approaches for multiplex amplification of gene targets
Department/ Laboratory R&D Genomics Progenika Biopharma
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<p>Summary</p> <p>Next Generation Sequencing techniques open the door to the analysis of multiple genes at the same time for a patient. This approach is really good for those complex diseases where multiple genes can have an impact on the phenotype as for example cardiovascular disease, cancer or other polygenic diseases. In order to generate the content to be sequenced, new approaches have to be developed for the multiplex amplification of those areas in the genome.</p> <p>The goal of the project would be to develop a new approach for Progenika future products:</p> <ul style="list-style-type: none"> -Develop buffers that enhance multiple amplifications. -Develop new primer strategies that avoid dimers. -Selection of the right enzyme for amplification.



-Develop of new amplification strategies for multiplex primer amplification.

Other companies are competing in this field as it can be seen in the reference.

References

<https://www.qiagen.com/es/products/catalog/assay-technologies/end-point-pcr-and-rt-pcr-reagents/qiagen-multiplex-pcr-kit/>

<http://www.illumina.com/products/trusight-panels.html>

<http://www.lifetechnologies.com/es/en/home/life-science/sequencing/next-generation-sequencing/ion-torrent-next-generation-sequencing-workflow/ion-torrent-next-generation-sequencing-select-targets/ampliseq-target-selection/ready-to-use-panels.html>

POSSIBILITY OF PhD

YES*

* (PhD grant required)