

## Research profile for applicants

|   |   |
|---|---|
| Name of DKFZ research division/group:   | <b><i>Signaling and Functional Genomics (B110)</i></b>                            |
| Contact person:   | <b><i>Michael Boutros</i></b><br><b><i>(m.boutros@dkfz.de, 06221 42 1951)</i></b> |
| Group homepage:<br><i>Visit this website for further information on current research and recent publications.</i> | <a href="http://www.dkfz.de/en/signaling"><u>www.dkfz.de/en/signaling</u></a>     |

### RESEARCH PROFILE AND PROJECT TOPICS

Our group is interested in systematically analyzing developmental-oncogenic signaling pathways using a combination of experimental and computational approaches. Within the ERC Synergy Project DECODE, we aim to create perturbation-based genetic maps at the level of individual cells by using single-cell sequencing technologies. The position DECODE project is a close collaboration between DKFZ, EMBL and Heidelberg University.

As part of our team, we are seeking a highly motivated postdoctoral fellow to lead the development and application of novel single-cell profiling in combination with genome-editing approaches. The ERC DECODE project develops and applies leading-edge system genetics methods to decode context-dependent genetic networks in vivo. To achieve this, the ERC Synergy Project brings together experimental and theoretical groups with complementary expertise in model organism genetics and cellular phenotyping, single-cell genomics, statistics and computational biology. Building on our combined expertise, we will create functional genetic maps using conditional CRISPR/Cas9-based single and higher order knockout perturbations combined with single-cell expression profiling and imaging. We expect that this project will advance new genome-editing and single-cell approaches and will provide fundamental insights into the cellular circuitries that govern processes in a metazoan organism. The particular focus of the postdoctoral position will be on the development, automation and application of single cell methodologies for genome-editing analyses.



CONNECTING THE DOTS.  
TO ADVANCE RESEARCH CAREERS

International Postdoc Program  
[www.dkfz.de/postdoc](http://www.dkfz.de/postdoc)