SPARK

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BERLIN HEALTH INNOVATIONS

THE JOINT TECHNOLOGY TRANSFER OF THE BERLIN INSTITUTE OF HEALTH AND CHARITÉ – UNIVERSITÄTSMEDIZIN BERLIN

LECTURE SERIES

Spark is an initiative created at Stanford University, to overcome challenges associated with translation of academic discoveries. And now in Berlin!

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NOVEMBER 13TH

NEXT SPARK EDUCATIONAL FORUM

BIOSTATISTICS / HIGH-CONTENT SCREENING

5:00 – 7:00 PM

KAISERIN FRIEDRICH-HAUS

ROBERT-KOCH-PLATZ 7

SEMINARRAUM OG2

GERALDINE RAUCH, „Biostatistics: How to calculate your sample size"

JENS V. KRIES: "Assay design: Essential requirements for high quality data generation in scientific research"

This SPARK Educational Forum is covering two topics that have an important feature in common: Both high-content screening and biostatistics add tremendous value to the results/output and data quality of translational projects. They are similar in the quality by design approach that all translational projects need.

Biostatistics play an important role in determining the credibility and reliability of your project. It does not only play a role in designing experiments powered enough for your basic research, but it also gives reliable answers on how to deal with outliers and what this can mean for your experiments, as well as with drop-outs and experiments that did not work. Also, relevant clinical readouts critically inform the way experiments and clinical trials should be designed and results interpreted. Geraldine Rauch is an expert on biostatistics and has helped many groups in designing experiments and with clinical trials, as well as interpreting data. From her rich experience we have asked her to give us an intro to the art of biostatistics with a special emphasis on sample size calculation.

Drug discovery starts with a high-content or high-throughput screen that usually needs to be very well designed in order to reliably yield relevant results for your project. This is not easy, particularly the step of transferring an assay from the wet lab space, where it might have worked perfectly well, to a screening facility, that needs to run hundreds of tests and counter screens. Assays sometimes need to be completely redesigned, to simply adjust to the machines of screening facilities. Also, the assays need to be robust and the results reproducible. Recent trends in assay design has been to place less emphasis on the number of data points that can be produced, and to rather focus on the quality of the data points acquired. Jens von Kries is running the screening unit at the FMP and has seen hundreds of assay transfers from academic groups that need to perform high-content screens. In the second part of the evening he will engage us with "Assay design: Essential requirements for high quality data generation in scientific research" and share his experience and knowledge of the do's and don'ts on how you reliably and reproducibly can design your assays to fit the purpose. If you really intend to have meaningful results, you will not be surprised to learn, that you cannot start thinking early enough about the assay design for your high content screen.

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