

# ANTIBODIES, BIO THERAPEUTICS & B2B & GENETIC AND PROTEIN ENGINEERING

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## Antibody hit discovery using yeast surface display

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Yeast surface display has proven to be a versatile platform technology for antibody engineering enabling online and real-time analysis as well as characterization of library candidates. During this talk, the process of antibody library generation will be explained as well as selection of target-specific antibodies with prescribed properties since desirable features such as species cross-reactivity can be implemented into the screening procedure using FACS. Additionally, a novel streamlined one-step approach for the generation of yeast surface display Fab libraries will be discussed that allows for simultaneous introduction of heavy chain and light chain variable regions into one single display vector. Finally, a generic approach for the generation of human IgG-like bispecific antibodies will be presented that relies on the combination of immunization of transgenic rats with yeast surface display.

### Biography

Stefan Zielonka has received his PhD from the Technische Universität of Darmstadt, Germany, where he worked in the Group of Harald Kolmar in the field of Protein Engineering of non-canonical antibodies. Now, he works as Senior Scientist at Merck KGaA (EMD Serono), Germany, in the Department Protein Engineering and Antibody Technologies (PEAT). He was Fellow of the Merck'sche Gesellschaft fuer Kunst und Wissenschaft e.V. and was awarded with the Kurt-Ruths-Award (2016) and the Rain-er-Rudolph-Award in Biotechnology and Protein Chemistry (2016).

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