Jena School for Microbial Communication
Graduate School of Excellence

Postdoc project title

SynThera: Synthetic therapeutic microbes for tailored antimicrobial therapies

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Abstract:

In the SynThera project (Synthetic Therapeutic Microbes for Individualized Antimicrobial Therapies), I am developing genetically modified microorganisms that can be used specifically against multi-resistant bacterial and fungal pathogens. In the future, these therapeutic microbes will not only detect and combat acute infections, but also have a prophylactic effect – for example, in immunocompromised patients. The basis for this is a modular system consisting of four components: detection of pathogens, formation of specific antimicrobial agents, targeted release at the site of infection, and subsequent safe removal of the microbes from the body.