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Born in Berlin he was trained at TU Berlin, was a visiting fellow at Stanford (with D. Herschlag), obtained his MPhil and PhD Degrees at Cambridge (with AJ Kirby) and worked at as a postdoc at Harvard Medical School (with C. T. Walsh). His group was started in 2001 at Cambridge and employs a broad multi-disciplinary approach that combines methods and ideas ranging from physical-organic chemistry to biophysics, molecular biology and directed evolution. High- and low-throughput approaches are combined with classical kinetic and thermodynamic analysis. For directed evolution, the group has developed microfluidic devices to carry out screening of up to 10^8 clones via assays in emulsion droplets at a picolitre scale. Such high throughput experiments are used to gain insight into the process of protein evolution for binders and catalysts, into strategies to identify new enzymes from metagenomic sources and, on a fundamental level, to investigate the origins of enzymatic rate accelerations. The mechanistic principles that emerge from this work will form a basis for development of transferable, general rules to guide future enzyme evolution and protein engineering.

Website: <http://www2.bio.cam.ac.uk/~fhlab/>

