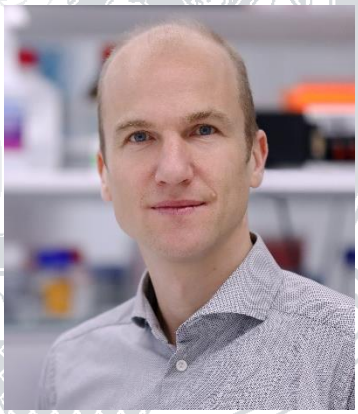
Großes Physikalisches Kolloquium an der Universität zu Köln

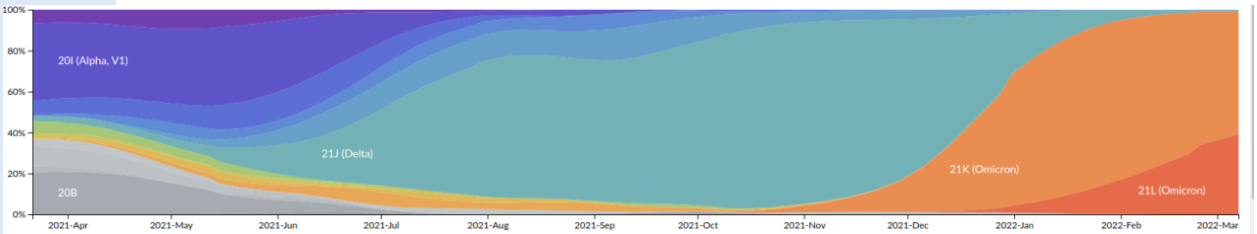
Joint Seminar with

Cologne Evolution Colloquium



Prof. Dr. Richard Neher
Biozentrum, Universität Basel

Reconstructing, tracking, and predicting viral spread and evolution

10.05.2022
16^{30} Uhr
HS III

The SARS-CoV-2 pandemic has resulted in unprecedented genomic and epidemiological surveillance as well as virological characterization in record time. The volume of data and requirement for rapid feedback to decision makers required continuous data analysis and method development to make sense of the data. Multiple variants of SARS-CoV-2 have arisen independently from each other and swept the globe over the course of two years. In contrast, in endemic RNA viruses we often see co-circulation of variants and gradual emergence of one variant from another. This endemic circulation is characterized by an approximate equilibrium between the build-up and decay of immunity. I will discuss models of the transition from pandemic to endemic circulation, the possibility of speciation, and the drivers of antigenic evolution in SARS-CoV-2 and other viruses.