

Short Bio

Christian Buchholz started his scientific career at the Max-Planck-Institute for Biochemistry where he obtained his PhD in the Department for Virology in 1993. He performed postdoctoral studies at the Institute for Molecular Biology of the University of Zurich and the Centre for Protein Engineering at the MRC in Cambridge, UK. He heads the Section of Molecular Biotechnology and Gene Therapy at the Paul-Ehrlich-Institut since 1999 and has been appointed Associate Professor for Biochemistry at the Goethe-University in Frankfurt in 2007.

His research interests focus on the engineering of the surface of viral vectors to understand the molecular events during viral cell entry and to improve their applicability in modern molecular medicine. He was the first to demonstrate that the surface of retroviruses can be used as scaffold to display libraries of antibody molecules or protease substrates. More recently, his team succeeded in engineering receptor-targeted lentiviral and AAV vectors as well as oncolytic viruses. These vectors are modified in their receptor usage being blind for their natural receptor and instead use a cell surface molecule of interest for cell entry. For applications in immunotherapy, especially lentiviral vectors targeted to markers on T cell subtypes offer great potential.