

Reinhard Würzner
M.D., Ph.D., Assoc. Prof.
Profile & scientific interest

Dr. Würzner is an immunologist and medical microbiologist and in particular interested in the molecular determination of mechanisms fungi and bacteria execute to evade the immune system. On the fungal site he and his group have identified molecules which bind complement regulators on the fungal cell surface. This binding leads to a down regulation of complement attack and thus survival of the invader (1). On the bacterial side, also because he was head of the Austrian Reference Laboratory for 7 years he and his group investigated the role of complement in *E. coli*-induced HUS (eHUS). He followed the 2011 outbreak of O104:H4 in Germany with particular interest for two major reasons: First, he and his group discovered that complement also plays a role in eHUS (2) which was one critical reason for Lapeyraque and colleagues to apply eculizumab to three children, which in turn, as it was successful, led to an extended use (400x) of eculizumab during the outbreak (3). Second, he was the first to describe an anti-human C5 antibody, the forerunner of eculizumab (3). Recently they have found a binding of Shiga toxin to members of the complement factor H family (4) and a down-regulation of CD59 (5), a cell protective molecule on human cells. Dr. Würzner's group could also show that plasma therapy in the acute phase is associated with a poorer outcome (6). Würzner was Head of Scientific Committee of the 2012 VTEC/EHEC world conference in Amsterdam and together with Flemming Scheutz delivered the "Karmali congress summary" of the 2015 VTEC/EHEC world conference in Boston.

References (Würzner major author in all; all in last 6 years)

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