

## Publication

## Bartonella henselae : subversion of vascular endothelial cell functions by translocated bacterial effector proteins

**JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)****ID** 155998**Author(s)** Pulliainen, Arto Tapio; Dehio, Christoph**Author(s) at UniBasel** [Dehio, Christoph](#) ;**Year** 2009**Title** Bartonella henselae : subversion of vascular endothelial cell functions by translocated bacterial effector proteins**Journal** The international journal of biochemistry & cell biology**Volume** 41**Number** 3**Pages / Article-Number** 507-10**Keywords** Bartonella, T4SS, Vasoproliferation, Tumor, Apoptosis

Bartonella henselae (Bh) is a worldwide distributed zoonotic pathogen. Depending on the immune status of the infected individual this bacterium can cause a wide spectrum of clinical manifestations, ranging from cat scratch disease (CSD) to bacillary angiomatosis (BA) and bacillary peliosis (BP). BA and BP are characterized by tumor-like lesions at the skin or in the inner organs, respectively. These structures display pathological sprouting of capillaries with enlarged and hyperproliferated vascular endothelial cells (ECs) that are frequently found in close association with bacteria. Here we review the cellular changes observed upon Bh infection of ECs in vitro and outline the role of the VirB type IV secretion system (T4SS) and its translocated effector proteins in the modulation of EC signalling cascades. The current model how this virulence system could contribute to the vasoproliferative activity of Bh is described.

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