

*Bordetella pertussis* is a Gram-negative, aerobic, non-spore-forming coccobacillus. Although it's strictly human pathogen, it's possible to infect other mammals at laboratory conditions. Transmission among hosts is mediated via respiratory tract droplets. Infection could be direct, host to host, alternatively by contaminated environment. *Bordetella* colonizes upper respiratory tract, wherefrom descends into lungs and causes disease known as whooping cough or pertussis leading to 195 000 deaths of 16 mil. incidences per year (according to WHO report from 2010). More than twenty years before, respectively to found pertussis toxin, that time intensively under examination, pertussis was marked as toxin-mediated disease. In the course of time, more other virulence factors were revealed, that could be divided into groups of adhesins, toxins and others. Adhesins are filamentous haemagglutinin, pertactin and fimbriae. Toxins include pertussis toxin, adenylate cyclase, tracheal cytotoxin, dermonecrotic toxin and lipopolysaccharide. Most of virulence factors are regulated by two component system Bvg. However, it is needed lots of other factors for successful infection as for example autotransporters or so called siderophores serving as iron acquisition from environment. Secretion of virulence factors is mediated by its own transport pathways (autotransporters) or by specialised bacterial secretion systems. For example, type 1 secretion system secretes adenylate cyclase, type 4 secretes pertussis toxin and type 3 secretes effectors as BopC. At this work, there are particularly characterized virulence factors mentioned above, regulated by BvgAS, factors independent of BvgAS (lipopolysaccharide, tracheal cytotoxin, type 3 secretion system) and of course, expression regulation by Bvg system, that plays an important role in *Bordetella pertussis* virulence.