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Secreted Phospholipases of the Lung Pathogen *Legionella pneumophila*

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Highlights:

- State of the art on secreted phospholipases of *L. pneumophila*
- Phospholipases secreted via type II, type IVB and unknown secretion systems
- Localization and growth-phase dependent abundance of phospholipases
- Classification, activities and activation of *L. pneumophila* phospholipases
- Role of *L. pneumophila* phospholipases in infection

Abstract

Legionella pneumophila is an intracellular pathogen and the main causative agent of Legionnaires' disease, a potentially fatal pneumonia. The bacteria infect both mammalian cells and environmental hosts, such as amoeba. Inside host cells, the bacteria withstand the multifaceted defenses of the phagocyte and replicate within a unique membrane-bound compartment, the *Legionella*-containing vacuole (LCV). For establishment and maintenance of the infection, *L. pneumophila* secretes many proteins including effector proteins by means of different secretion systems and outer membrane vesicles. Among these are a large variety of lipolytic enzymes which possess phospholipase/lysophospholipase and/or

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