Johanna Lönn graduated with a Master of Science at Linköping University. In her candidate project, focusing on the association between periodontal disease and atherosclerosis at the Department of Pharmacology, Linköping University, she evaluated inert gases to measure the heart stroke volume and in her master project at the Department of Cellbiology, she studied inflammatory signaling pathways for interleukin-6. In 2007 she joined a research group focusing on the association between periodontal disease and atherosclerosis at the Department of Pharmacology, Linköping University. This group moved to Örebro University and Department of Health and Medical Sciences. At the same time she started at PEAS Institute in Linköping, involving working with patients with leg ulcers and infections as well as being involved in various research projects. She acquired an interrelated PhD project, resulting in the thesis.

The inflammatory processes consist of a network of cellular and humoral responses that create an array of effects that cause the cardinal signs of inflammation, ultimately leading to resolution and healing. Persistent infections often cause prolonged response and accumulation of immune cells, resulting in imbalances in pro- and anti-inflammatory mediators, tissue destruction, and chronic inflammation. In periodontal disease, bacteria of the dental plaque are the primary etiologic agents. Coronary artery disease (CAD) and chronic renal failure (CRF) are associated with periodontal disease. Porphyromonas gingivalis could activate blood cells to ROS production and aggregation, which are features involved in atherosclerotic and inflammatory processes. Reduced biological activity, altered inflammatory signaling pathways, and impaired healing could result in the chronic inflammatory processes and impaired healing, which might influence the chronic inflammatory processes and impaired healing.