SIMON ATHLIN was born in Karlstad, Sweden, in 1971. He grew up in Umeå 1973-1991. After military training and studies in business administration at Linköping University, he studied Medicine at Umeå University and obtained his Medical Degree in 2002. His general medical training was performed at Karlskoga County Hospital. Since 2003 he is employed at the Department of Infectious Diseases at Örebro University Hospital, where he accomplished the Specialist Degree in Infectious Diseases in 2010. With a special interest in the characteristics of *Streptococcus pneumoniae* and the mysteries of the host-pathogen interplay, he started his research work in 2008 supervised by Associate Professor Kristoffer Strålin.

The pneumococcus is our friend and enemy. From early childhood we are colonized in the upper airways with pneumococci. The colonization rate decreases with age and in a healthy Swedish adult population the rate is low. At any time, the pneumococcus may cause clinical symptoms ranging from otitis media to bacteremic pneumonia and meningitis. Rapid and reliable detection of the pneumococcus as the causative pathogen of disease is crucial for efficient therapy. Studies of the interplay between pathogen and host immunity may provide knowledge for improved treatment and vaccines.

In this thesis, I studied the usefulness of two rapid tests for diagnosing pneumococcal etiology in adult pneumonia patients by detection of pneumococcal polysaccharide antigen. I also studied the antibody response during pneumococcal disease. The main findings were that the rapid tests performed well and may be helpful in the diagnosis of pneumococcal pneumonia, and that antibodies may be protective against pneumococcal disease but differ between serotypes.