Press release PExA AB
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Karolinska Institute researchers launch pilot study using PExA technology to analyze antibody responses in the lower airways

A research team at Danderyd Hospital, led by Associate Professor Charlotte Thålin of Karolinska Institute, has initiated a pilot study using PExA's non-invasive sampling technology.

The aim is to analyze antibody responses in the lower airways – something that has previously not been possible without invasive procedures.

- *Today's vaccines generate a strong antibody response in the bloodstream, primarily IgG, which protects against severe disease. But to prevent respiratory infections and viral transmission, IgA antibodies are also needed in the upper airways – something that intramuscular vaccines do not effectively induce. While IgG antibodies can reach the lower airways via the blood and help protect against pneumonia, we have so far lacked the ability to study antibodies in the lower airways without invasive methods. If the PExA method proves capable of enabling such analysis, it would be groundbreaking – both for our immunological understanding and for future vaccine development,* says Charlotte Thålin.

The research team is currently collecting paired blood, nasal, and PEx samples from participants who have recently had a respiratory infection, and in whom high IgA levels have already been detected in the upper airways. The samples are being analyzed in collaboration with Mikael Åberg at SciLifeLab Affinity Proteomics, Uppsala University. The goal is to map the immune response in both the upper and lower airways and thereby deepen the understanding of protection against respiratory infections.
Under the terms of a time-limited collaboration agreement, PExA AB has provided a PExA 2.1 instrument along with sampling materials. The agreement also includes data sharing, reference use, and technical support from PExA.

- *It's exciting that PExA now has potential for use in yet another field – vaccine development. This is a large and growing global market, where pharmaceutical companies continuously refine and update their vaccines, for example against seasonal influenza. We see strong potential for PExA to contribute valuable insights in that process,* says Tomas Gustafsson, CEO of PExA AB.

Initial results from the study are expected in autumn 2025.

For further information, please contact:
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About PExA AB:

PExA AB PExA AB (556956-9246) has developed the PExA 2.1, a patented research instrument that helps researchers intelligently collect biological samples from the smallest airways through a simple exhalation maneuver. PExA's technology is

currently used by prominent research groups in several different countries and research with the instrument has resulted in approximately 50 scientific publications, which serve as reference material for PExA's method. The company's long-term goal is to market and sell diagnostic instruments for popular diseases (e.g. lung cancer and COPD) to be used globally for diagnosis or general screening at facilities where care is offered. The company intends at the time it is relevant to sell to clinics to have developed more patient-friendly, flexible and commercial products, which means that PExA addresses a significantly wider market, which today includes several million patients globally.

PExA's B share is listed on the Spotlight Stock Market.