Innovative Breath-Based Diagnostics for Infectious Respiratory Diseases

🫁 ***BreathForDx | Newsletter 06/11/2025***
https://www.breathfordx.org

🩻 From the Coordination Team

As we move through the second half of the BreathForDx project, we continue advancing towards our aims in establishing exhaled breath aerosol (XBA) as an evidence-based, non-invasive sample for simple detection of respiratory infections. Our teams across Europe and South Africa are advancing recruitment, testing new technologies, and strengthening collaboration within the consortium. In this issue, we share updates from the field, spotlight the progress of our partners, and look ahead to upcoming communication activities.

All participants depicted in this photo have provided their consent for its use in BreathForDx communication and dissemination materials.

🔬 About the Project

BreathForDx is a Horizon Europe project (2024–2026) focused on advancing rapid, non-invasive diagnosis of respiratory infections through exhaled breath aerosol (XBA) sampling. Our goal is to evaluate novel breath collection technologies across multiple settings and use cases, intending to improve tuberculosis and respiratory infection diagnostics.

Funded by the European Union

📝 Project Update: Focus on AveloMask Kit

After careful evaluation of facemask-based and blowtube-based collection devices in initial studies, the Consortium has decided to focus exclusively on the AveloMask Kit. This decision reflects the demonstrated promising efficiency and sensitivity of this facemask-based device for capturing pathogens from exhaled bioaerosols.

Early user feedback from the first pilot sites confirms that the AveloMask simplifies sample collection, is liked by users, supports smoother workflows, and ensures more consistent data quality — a crucial step towards clinical validation.

📰 Latest News:

📣 Clinical Site Progress

The past months have seen important milestones across several study locations:

• Heidelberg (Germany) & Milan (Italy): Recruitment of participants in a study evaluating breath-based sampling for screening for respiratory infection in migrants is ongoing, with the first batches of AveloMask samples successfully collected.

• Cape Town (South Africa): The Desmond Tutu Health Foundation team has completed enrolment of 75 patients with confirmed tuberculosis (TB), with breath testing using three different methods (respiratory aerosol sampling chamber (RASC), AveloMask and AveloCollect). Samples are currently being tested, and results will be available in early 2026.

• Bucharest (Romania): The Marius Nasta Institute is recruiting symptomatic adults with presumed TB and comparing breath and sputum sampling. Recruitment is at 20% of the targets for patients with suspected TB.

This growing multi-country setup will enable a robust evaluation of breath-based diagnostics across diverse epidemiological settings.

🎙️ Communication & Dissemination Highlights

Our website is continuously updated with project news and resources. You can now follow us both on **LinkedIn, X** and **Bluesky** for regular updates and behind-the-scenes insights. BreathForDx continues to strengthen its outreach and engagement:

• Our LinkedIn, X and Bluesky pages are live and steadily growing, reaching international audiences with regular updates and behind-the-scenes insights.

(Follow us: LinkedIn | X | Bluesky)

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• The second project video, focused on the device setup phase in South Africa, is currently in production and will be released in January 2026.

• A third video, highlighting patient recruitment in Heidelberg and Milan, is planned for Spring/Summer 2026.

👥 Spotlight on the Consortium: Avelo AG (www.avelolife.com)

Our Swiss partner Avelo AG continues to play a central role in the development and optimisation of its breath collection technology. Their expertise in aerosol capture design, data quality assurance, and on-site training has been instrumental in ensuring harmonized implementation across all partner sites.

✅ Study Within A Trial (SWaT) Recruitment Completion

We are pleased to announce the completion of participant recruitment for the Study Within A Trial (SWaT) phase, coordinated by Ospedale San Raffaele (Italy) and the University of Heidelberg (Germany). This study assessed the feasibility of breath-based screening for respiratory infections among the migrant population, as well as exploring the optimal implementation of the study in the different sites.

This phase enabled the study teams to take into consideration the inputs of the participants and the staff at the migrant centres of how to best communicate, recruit and implement the study.

🚦 What's Next

In the coming months, BreathForDx will transition from setup to scaling — expanding participant recruitment, advancing breath sample analyses, and reinforcing collaboration between partner sites. Stay tuned as we continue to help evaluate non-invasive diagnostics for respiratory infections.

📩 Contact & Links

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