

Requirements Longfonds Young investigator – CPBT Grant Criteria for Pre-applications

Should you have any questions about the conditions listed below, please feel free to contact us via <u>email.</u> If you consider your project a good fit for Longfonds however it does not meet one or more of the criteria below, please include a justification in your application.

In 2025 LONGFONDS aims to provide at least two personal Junior Investigator Grants of up to €250,000. One of the grants is allocated explicitly to research that aligns with the objectives of the CPBT (Centrum voor Proefdiervrije Biomedische Translatie) - Asthma & COPD transition project. The CPBT is a national center for valorizing and disseminating animal-free innovations and expertise. It aims to create new business opportunities for animal-free technologies and biomedical translation. For more information on CPBT, please see the <u>CPBT website</u>.

The goal of the Asthma & COPD transition project is to develop true-to-life culture models to have improved predictability and reproducibility, ensuring more reliable and human-relevant results, and contributing to the reduction and replacement of animal use in research. The ultimate goal is to even make this personalized for each patient, enabling a tailor-made treatment - simulated and tested for effectiveness in a culture model.

Opportunities

- Be part of the CPBT: Expertise development within the CPBT will be an in-house advanced program, which will expand knowledge, cultivate expertise, and address challenges in four areas: transition science, regulatory innovation, educational programs, and data tools and methods.
- Joint scientific meetings with leading asthma and COPD researchers in the Netherlands and their teams.
- Build a network of experts in academia and commercial partners.

Longfonds applies the following criteria to determine whether your research proposal is suitable for submission

 The target group for a personal grant from the Longfonds consists of excellent researchers (m/f) who belong to the top 20% of their peers, as assessed by the Scientific Advisory Committee (WAC). This committee includes representatives from various scientific disciplines as well as patients. Grant applicants are expected to convincingly demonstrate the originality and potential of their ideas to others. The researcher must have published (or had accepted for publication) at least three articles as the lead author in leading international peerreviewed scientific journals.

- 2. Candidates that are not part of one of the teams leading the transition project asthma and COPD are equally welcomed to apply.
- 3. Candidates are free to choose the institution where they will conduct their research. It is recommended that at least part of the research be carried out abroad. While this is encouraged, it does not play a decisive role in the evaluation. A proposal will not be unconditionally rejected if an international research stay is not feasible. For researchers who already have proven international experience, this criterion will be weighted less heavily.
- 4. Researchers can apply within five years after obtaining their PhD. Delays due to pregnancy or (medical specialist) training will be taken into account. The Longfonds follows the NWO regulation, allowing an 18-month extension per pregnancy. Applications can be submitted by researchers both with and without a permanent employment contract.
- 5. The maximum duration of a Jr Investigator project is generally three years. Exceptions are possible if well-justified and approved by the Scientific Advisory Board (SAB).
- 6. The medical conditions that the research can focus on are:
 - Asthma
 - COPD (Chronic Obstructive Pulmonary Disease)
- 7. Applicants must be affiliated with an academic institution (a university—including the associated academic medical center—NKI, or KNAW institute) or with hospitals affiliated with the Cooperating Top Clinical Hospitals, STZ.
- 8. There's a preference for projects that bridge laboratory findings to clinical practice.
- 9. Commitment to open-access data sharing (e.g., through public repositories or consortia) in alignment with FAIR principles.
- 10. Proposals should explore the potential for commercialization (i.e. industry partnerships).
- 11. To be eligible for the Jr Investigator grant CPBT in 2025, your research project must align with the objectives themes outlined below.

Objectives CPBT

The main objectives that the Asthma & COPD transition project aims to address are summarized in table 1. The project aims to do so by combining animal-free and translational patient research in the field of biomarkers, discovering new targets, and improving personalized treatment. (see Table 1).

Table 1: Transition project Asthma & COPD – Main objectives

Biomarkers	Which biomarkers characterize the different endotypes and the worsening (exacerbations) of asthma and COPD? With more advanced and patient- specific models, we can gain better insight into the response of lung cells to harmful stimuli and the molecular mechanisms that lead to permanent damage and disease. By relating the results to multi-omics data from the patient cohorts, we can validate new molecules as biomarkers and observe them in cellular models.
Targets	What are (new) targets for drug development and associated read-outs for various pathologies related to asthma and / or COPD? By modulating disease associated molecules, we can identify mechanisms in our advanced and patient-specific in vitro models, as well as new targets for treatment.
Treatment	Which treatment works for which patient based on genetic vulnerability, endotype, exposure to environmental factors (triggers) and disease stage? Genetically validated mechanisms have a twice as high chance of leading to successful drugs than if this is not the case. By establishing a gene expression signature of genetic causes or exposures in vitro, and comparing this with gene expression profiles in the patient, we can predict which patient will or will not respond to a particular treatment. In addition, once a model has been developed, research will be focused at bringing this model at scale for drug testing and biomarker discovery.

5. Patient Participation Requirements

Longfonds sets minimum standards for patient participation to qualify for funding. Patient participation involves engaging people with lung disease in your research—not as subjects but as discussion partners. Before submitting your application, please review the information on patient participation available on <u>our website</u>. The Participation Compass website also offers a kickstart for researchers.

Our conditions are listed below. These requirements are based on the article by De Wit et al. (2016). This article, as well as the websites mentioned above, provides extensive background information on patient participation in research. This information will help you clarify and apply the following requirements.

1. Patient participation occurs in multiple phases of the research, ideally starting as early as possible. Longfonds places high value on research that considers the needs and views of people with lung disease. It is therefore advisable to involve people from your research's target group as early as possible. Patients and/or experts-by-experience can be involved at various stages and can take on different roles depending on the phase of the research.

2. A variety of forms of patient participation are used as much as possible, allowing patient experts to take on various roles.

An expert by experience is a patient who reflects on their own experiences, complements these with the experiences of others, can think beyond their personal illness, and has the skills to communicate this effectively. They may assume different roles in scientific research. Examples of roles include co-thinker, advisor, partner, and director. Forms of patient participation include patient panels, advisory boards, patient councils, steering committees, or focus groups.

3. Patient experts receive information and support at the start of the project as well as throughout the research.

The researcher's approach is crucial for successful collaboration. For instance, it is important for researchers and patient experts to discuss expectations and agree on what is needed to meet these expectations. Researchers should communicate the research progress and details in accessible language.

4. Patient experts are reimbursed for expenses.

At a minimum, patient participation involves reimbursing expenses for participating patient experts. Consider thank-you gestures such as gift cards. Be sure to include these costs in the budget.

5. The researcher must complete a 'patient participation in scientific research' training within the first year after approval or have done so recently.

Insufficient knowledge of effective patient participation can hinder collaboration with patient experts. Training helps address this. INVOLV and the School for Participation offer training for researchers and patients. These courses teach you how to incorporate patient participation in your research and provide a practical action plan. Up to €1,000 can be allocated for this course in the funding request.