

TARGETED CALL INVITING PROJECT PROPOSALS IN HONOUR OF THE LIFE, WORK AND LEGACY OF PROF CHARIS ENG

1. Summary

Honouring the life, work and legacy of Prof Charis Eng, this call seeks for project proposals aiming to:

- Explore opportunities to identify and/or undertake preliminary validation of biomarkers for PHTS that could predict symptom onset, occurrence, or progression/severity of symptoms at the individual level.
- Elucidate the mechanisms of clinical heterogeneity that may include assessment of how different *PTEN* variants and other genetic, molecular, or cellular mechanisms contribute to and are associated with the clinical spectrum associated with PHTS.

Funding eligibility is open worldwide for principal investigators with an MD or PhD, who are affiliated with recognised academic or clinical research institutions and have an established research programme.

Funding requests of up to £270,000 GBP (or the equivalent in the host institution’s local currency) will be considered, for a project of 2 to 3 years in length.

Key dates:

Application stage	Deadline date
Opening of the call for submission of Project Proposals	2 Sep 2025
Project Proposal submission deadline	25 Nov 2025
Invitations to submit a Full Application	By end of Jan 2026
Full Application submission deadline	3 Apr 2026
Applicants notified of outcome of application	By the end of Oct 2026

2. Background to PHTS heterogeneity and *PTEN* variants

PHTS is a rare syndrome caused by a heterozygous germline mutation in the *PTEN* gene. The syndrome presents a broad and variable clinical spectrum, that includes macrocephaly, neurobehavioural, and neurocognitive deficits (including autism spectrum disorder and cognitive impairment), vascular anomalies, gastrointestinal polyposis, and benign lesions of the skin (hamartomas). PHTS is also associated with an increased lifetime risk of developing cancer, most commonly breast, thyroid, and endometrial cancer. The range of presenting symptoms and their severity varies across affected individuals, reflecting the complex and heterogeneous nature of PHTS. Currently, there are no health authority-approved treatments specific to PHTS, and clinical care is focused on symptom management and cancer surveillance.

PTEN is a broadly expressed tumour suppressor protein that acts as a lipid and protein phosphatase in cells. The most well-established role of PTEN is acting as a negative regulator of PI3K/AKT/mTOR signalling, through which it suppresses cell proliferation, survival, metabolism, and migration. PTEN has also been shown to have non-enzymatic functions, which are less well understood, especially in the context of PHTS.

PHTS-associated pathogenic mutations are spread across the whole *PTEN* gene and can affect the function of the PTEN protein in various ways e.g., by disrupting catalytic activity, reducing stability, or altering subcellular localisation. However, studies to date have not identified a clear correlation between *PTEN* variant and clinical phenotype in PHTS, and the nature of genetic and other modifiers of the penetrance, timing, and severity of manifestations associated with PHTS are not well characterised.

The clinical heterogeneity and absence of clear genotype-phenotype correlations in PHTS present challenges for biomarker discovery and validation. Better understanding these obstacles is crucial to enable earlier diagnosis, more accurate prediction of disease progression, and individualised management. These are key steps toward improving clinical outcomes for affected individuals.

3. PTEN Research Foundation

The PTEN Research Foundation (“PTEN Research”) is a UK-based medical research charity dedicated to funding and enabling research that leads to better treatments and improved outcomes for people with PHTS. To date, PTEN Research has committed £25 million to projects at institutions across three continents, supporting work that ranges from basic science aimed at understanding the molecular mechanisms of PHTS through to clinical studies. Our funding is currently supporting 23 active projects, and our work has been acknowledged in 63 peer-reviewed publications.

The Foundation’s strategy is centred on repurposing existing drugs that target the PI3K/AKT/mTOR signalling pathway, with a particular focus on the non-malignant manifestations of PHTS that are associated with high unmet medical need, namely neurodevelopmental delay, and vascular anomalies. Further information on the Foundation’s research strategy, and currently supported projects, is available [here](#).

4. Scope of call

Honouring the life and legacy of Prof Charis Eng

Prof Eng was a pioneer of PHTS research who dedicated the majority of her career to advancing both clinical and molecular understanding of the syndrome. A central focus of her extensive research included investigating the mechanisms underlying the variability in PHTS presentations, with a view to paving the way for individually tailored clinical management and risk prediction.

Objectives of this call for applications

Through this call, PTEN Research wishes to honour and build on the work of Prof Eng and invites academic research proposals that aim to progress the understanding of the mechanisms that contribute to the variable clinical presentation of PHTS.

Specifically, we seek research proposals that focus on one of the following aims:

- Explore opportunities to identify and/or undertake preliminary validation of biomarkers for PHTS that could predict symptom onset, occurrence, or progression/severity of symptoms at the individual level.
- Elucidate the mechanisms of clinical heterogeneity that may include assessment of how different *PTEN* variants and other genetic, molecular, or cellular mechanisms contribute to and are associated with the clinical spectrum associated with PHTS.

The call is open to preclinical and clinical research proposals. Applications must clearly articulate how the proposed research outcomes can be translated to provide future clinical solutions that will provide benefit to people with PHTS, enabling early intervention and improved outcomes.

Eligibility

Eligibility to apply for funding is not restricted to any specific geography.

In general, applications will only be considered from principal investigators who hold a MD or PhD and have an established research programme or faculty position in a recognised academic or clinical research institution.

We welcome collaborative and multicentre proposals, however, where co-investigators are located at different host institutions, a lead host institution, to whom the grant will be made and funds provided, should be identified. For those applicants who do not have previous expertise in PHTS or PTEN, the inclusion of collaborators or advisors with complementary expertise in these areas is strongly encouraged.

Funding period and budget

Applications for funding requests will be considered in all currencies up to the equivalent of 270,000 GBP, with the length of the project expected to range between 2-3 years. A comprehensive project plan should be included in the application justifying the requested funding amount and project duration.

Awarded funding will support essential direct costs relating to the project and will not cover institutional overheads, except in exceptional circumstances. The Foundation's policies and guidance on acceptable costs can be found [here](#). For successful applications, funding will generally be released in quarterly payments and, where relevant, may be linked to key project milestones.

5. Application process

All submissions should be made in English by email to research@ptenresearch.org with the subject line "PTEN Research Targeted Call 2025 – Project submission". PTEN Research will acknowledge submissions within a week of receipt.

Please refer to submission dates in Section 1 above.

Applications submitted in response to this call will be evaluated in a two-step review process consisting of a Project Proposal stage, and a Full Application stage.

Project Proposal stage

Initially, all interested applicants are asked to submit a Project Proposal, serving as a concise summary of their proposed research project, including the hypothesis, objectives, methodology, timelines, and budget.

Forms: Project Proposals should be made using the appropriate Targeted Call [Project Proposal Form](#) and [Budget Form](#). Instructions for completing the application forms are provided within each document.

All submitted Project Proposals will be assessed by the Foundation's scientific research team against the eligibility criteria and scope of the call, and for their alignment with the Foundation's strategy. A selection of applicants will be invited to advance to the next stage and submit a Full Application. The applicants will be notified on the outcome of their Project Proposal application by email.

Full Application stage

Invited applicants will be requested to complete a Full Application form to further develop the background, aims and methodology of the proposed research project, as well as a more detailed budget.

Forms: The application forms will be provided by PTEN Research.

The Full Applications will undergo scientific, budgetary, and programmatic assessment by the Foundation's scientific research team followed by external peer review by a minimum of three independent experts. Each application will be evaluated based on the following criteria:

- Alignment with the scope of the call
- Translational potential/potential future clinical impact
- Likelihood of success of the overall project
Scientific quality, methodology and resources
- Clarity of the research plan
- Novelty of the proposed project
- Budget suitability

Applicants invited to submit a Full Application will be provided with feedback on their application and will have an opportunity to respond to questions raised by the reviewers. Applications are further assessed by the Foundation's scientific advisory board, and the final funding decision made by the Foundation's trustees.

Applicants will be notified of the outcome of their Full Application by email, and funding will be available to successful applicants as soon as possible thereafter, subject to the execution of the Grant contract.

Terms and conditions of applications

All applications submitted to PTEN Research, either in the form of Project Proposals or Full Applications are subject to PTEN Research's [Terms and Conditions of Grant Applications](#).

Confidentiality statement

If you wish to include at any stage of your application any results, data, or background intellectual property that might thereby constitute a public disclosure, please contact PTEN Research and we will provide a Confidentiality Agreement, as appropriate.

6. Contact

For any queries on any of the above, please email research@ptenresearch.org with the subject line "PTEN Research Targeted Call 2025 - enquiry".