opnMe by Boehringer Ingelheim

Targeting obesity pathogenesis

How would you propose connecting the dots from pathology to therapeutic mechanisms for disease-modification in obesity to achieve sustainable weight loss beyond treatment?

Answers to this question including a proposal for collaboration can only be considered if they arrive no later than August 6, 2025, 11:59 pm PST.

Boehringer Ingelheim

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What is the context of the problem that we would like to solve?

Obesity is a serious medical condition resulting in life-threatening comorbidities. Lifestyle interventions are not sufficient and effective anti-obesity medications, such as semaglutide or tirzepatide are limited due to unfavorable gastrointestinal side-effects[1]. In addition, current anti-obesity medications demand continued treatment to prevent rapid weight re-gain, a major obstacle for long-term therapeutic success[2]. The metabolic response is presumably regulated through a complex interaction of peripheral and central mechanisms to defend the body weight set point, which may provide an attractive paradigm for therapeutic intervention[3].

Elucidating the intrinsic pathophysiological mechanisms that cause obesity, including genetic, hormonal, and neural aspects, will be essential to discover therapeutic targets and develop effective and persistent treatment strategies to maximize patient benefits.

In summary, the goal of this campaign is to explore pathogenic mechanisms to restore healthy energy metabolism for tolerable and long-term weight loss, including prevention of weight re-gain after treatment discontinuation.

What potential solutions could be in scope?

1. Peripheral and central pathogenic mechanisms of obesity, that reveal new therapeutic targets to reduce body weight with a clear goal to obtain sustainable weight loss.
2. Approaches ranging from biological matrices such as primary cells, cell lines, organoids, fluids, tissues, as well as animal studies (including rodents, or other mammalian species) with rationale on translatability to humans.
3. Computational analysis supporting pathogenic mechanisms and patient relevance.

What potential solutions would be out of scope?

1. Proposals chasing transient effects of high fat or high caloric diet not linked to pathology of obesity.
2. Proposals focusing on models from preclinical species that are not linked to obesity pathology/pathogenesis.
3. Proposals concerning repurposing of marketed and clinical stage compounds or related mode of actions.
4. Proposals that focus on dietary supplementation or behavioral therapy.
5. Proposals that are purely based on technologies that require upfront substantial establishment and validation (no previous hands-on experience).

What benefits do we offer to you in exchange for having submitted a solution?

If your project is selected, you will have the opportunity to directly collaborate with the CardioRenalMetabolic Diseases Research Team of Boehringer Ingelheim. You can expect appropriate funding for the prospective collaboration period. Your exact funding request should be outlined in your proposal. As a framework, we suggest that your initial funding request is structured in milestone and does not exceed 250,000 euros per submitted project in total.

Our collaboration agreement will provide full transparency about each partner's rights & obligations (including intellectual property rights). As part of the agreement, you will be encouraged to publish following the collaboration agreement (to be negotiated in good faith).

What are the key success criteria on which we base our selection for the best answer?

The proposal needs to be highly feasible, should be based on established and existing methods, assays and involve tools / reagents that are either available or which can be easily produced. We expect that the project will be executed in your laboratory and takes advantage of existing technologies and assays.

In addition, we are seeking research collaboration proposals that contain:

- A well-structured proposal outlining a new and compelling scientific approach.
- Outlining of the technical feasibility, and potentially existing data or previous publications that support feasibility / experience with outlined technology, based on existing techniques and established assays.
- Your exact funding request should be outlined in your proposal based on a well-thought-through project. The project should be structured in milestones and planned with key decision points (clear Go/No-Go criteria). The funding request for the initial milestones resulting in a Go/No-Go decision should not exceed 250,000 euros per submitted project in total.
- Proven track record in the required field of expertise.
- Ability to implement the outlined solution as part of a scientific collaboration project with Boehringer Ingelheim including access to a wet laboratory.
- Proposals with an anticipated execution time of 2 years will be prioritized.

What information should be included in your answer submission?

Please use our answer submission template to provide a 2–3 page non-confidential proposal (available for download on the following site).

If confidential data exists that would strengthen the proposal, please indicate that information is available to share under a Confidential Disclosure Agreement (CDA). If we find the non-confidential concept proposal sufficiently interesting, we will execute a CDA for confidential discussions.

Anticipated Project Phases or Project Plan

Phase 1	Please complete your submission by **August 6, 2025, 11:59 pm PST at** the very latest.
Phase 2	Our review of all proposals will be completed by mid-October 2025 and scientists will be informed after that.
Phase 3	Start of discussions for the collaboration agreement in Q4/2025.

Submitting a collaboration proposal

- Check the outline of the opn2EXPERTS "Targeting obesity pathogenesis" on opnMe.
- Alternatively, you may click the "Get Submission Template" banner to access the material transfer template.
- Follow the instructions to upload your submission document (requires login or registration).
- The upload allows you to attach additional application files if desired.
- You will be able to access your final submitted collaboration proposal in your personal dashboard and follow its review status.
- Please also visit the FAQ section on opnMe.com to learn more about our opn2EXPERTS program.

References

1. Wilding J. P. H., Batterham R. L., Calanna S., Davies M., Van Gaal L. F., Lingvay I., McGowan B. M., Rosenstock J., Tran M. T. D., Wadden T. A., Wharton S., Yokote K., Zeuthen N., Kushner R. F. Once-Weekly Semaglutide in Adults with Overweight or Obesity *N Engl J Med*. **2021**, 384(11):989-1002. DOI: 10.1056/NEJMoa2032183, PubMed.
2. Wilding J. P. H., Batterham R. L., Davies M., Van Gaal L. F., Kandler K., Konakli K., Lingvay I., McGowan B. M., Kalayci Oral T., Rosenstock J., Wadden T. A., Wharton S., Yokote K., Kushner R. F. STEP 1 Study Group. Weight regain and cardiometabolic effects after withdrawal of semaglutide: The STEP 1 trial extension *Diabetes Obes Metab*. **2022**, 24(8):1553-1564. DOI: 10.1111/dom.14725, PubMed.
3. Speakman J. R., Levitsky D. A., Allison D. B., Bray M. S., de Castro J. M., Clegg D. J., Clapham J. C., Dulloo A. G., Gruer L., Haw S., Hebebrand J., Hetherington M. M., Higgs S., Jebb S. A., Loos R. J. F., Luckman S., Luke A., Mohammed-Ali V., O'Rahilly S., Pereira M., Perusse L., Robinson T. N., Rolls B., Symonds M. E., Westerterp-Plantenga M. S. Set points, settling points and some alternative models: theoretical options to understand how genes and environments combine to regulate body adiposity *Dis Model Mech*. **2011**, 4(6):733-45. DOI: 10.1242/dmm.008698, PubMed.