

# Towards more sustainable parasiticides

How would you propose to set up an assay investigating environmental persistence of animal parasiticides during lead optimization to guide drug design?

Submit your [scientific proposal](#) for a chance to be selected to conduct your proposed research plan as part of your PostDoc project at the research facilities of Boehringer Ingelheim in Biberach, Germany, one of the leading pharmaceutical companies worldwide. This opportunity is open for submissions through July 2, 2025, 11:59 pm PST.

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# What is the context of the opportunity that we are currently offering?

At Boehringer Ingelheim Animal Health we recognize the importance of sustainability and of the interconnection between human, animal, and environmental health. In line with our ongoing commitment to sustainability<sup>1</sup>, we are actively integrating environmental considerations into the design and development of our medicines. This initiative is aimed at minimizing the environmental footprint across every stage of a medicine's lifecycle.<sup>2</sup> Within our Animal Health division, we have already made significant strides in focusing these efforts on products for parasite control in companion animals and livestock. Our dedication to sustainable practices is not just a goal but a reality we are continuously enhancing.

The search for new antiparasitic drugs follows the same process as the drug discovery for human pharma drugs - from hit finding and optimization, through lead optimization, candidate identification and development.<sup>3</sup> This approach also includes a rigorous assessment of the environmental safety of new parasitocides. Thus, it becomes increasingly important to investigate the API's environmental profile early to inform decision making during the research phase.<sup>4</sup> In this context innovation frameworks such as Safe and Sustainable by Design (SSbD), the Green Chemistry Principles<sup>5</sup> as well as emerging regulatory frameworks emphasize biodegradation as one important factor influencing the environmental fate and safety of active molecules. However, routinely available methods for evaluating the environmental persistence of active ingredients have a long timeline and are tailored for in-depth characterization of individual development candidates. Moreover, their low throughput makes them unsuitable for the lead optimization stage.

Consequently, we invite you to submit your research plan that focuses on the development of an assay that enables investigating transformation kinetics, the environmental half-life and/or persistence of antiparasitic APIs during early research phases. A successful proposal will outline work packages, milestones, and key decision points while answering the questions below:

1. How do you ensure that selected test matrices as well as output parameters translate into real-world data and lead to meaningful recommendations for chemical design?
2. How would you test the assays fit for purpose as quickly as possible and increase throughput later to facilitate the design of APIs with improved environmental half-life?
3. How would you approach translatability to human pharma APIs?

With your solution you will be able to benefit from the ecosystem of a large pharmaceutical company while contributing to the design of more sustainable medicines for the generations to come.

## What potential solutions could be in scope?

- Assay set-ups using or emulating different relevant environmental matrices, e.g. activated sludge, soil, sediment, etc.
- Experimental approaches investigating the structure-property-relationship for environmental persistence and enabling compound ranking based on environmental half-lives
- (Partially) automated, plate-based assays
- Approaches combining substance testing and predictive modelling

## What potential solutions would be out of scope?

- Assays requiring radiolabeled test substances or quantities of the test item > 10 mg
- Non-experimental predictive modelling approaches
- Proposal focusing only on ready biodegradability
- Proposals that require longer than 2 years to complete

## What will be the reward to the winner?

As a winner of this call, you will have the unique opportunity to pursue your own submitted research project as a fully resourced PostDoc project in the Animal Health Research team at Boehringer Ingelheim at the Discovery Research site in Biberach/Riss, Germany. You will obtain a position for up to 3 years\* with Boehringer Ingelheim within a cross-functional, international team of world-class scientists at the interface of drug discovery research across Animal Health and Human Pharma and environmental sustainability. [\*The offered position initially covers a duration of 24 months with an option for extension by another 12 months.]

You want to learn more  
about living in Biberach

Find out more [here](#)

At Boehringer Ingelheim, you will have access to a fully equipped laboratory in a state-of-the-art research facility including access to all relevant tools and technologies. You benefit from mentoring through our internal experts, have the chance to attend international conferences, and to publish your results in high-ranking journals. You will be part of the vibrant PostDoc community at Boehringer Ingelheim in Biberach with manifold opportunities for scientific, cross-functional

exchanges for your personal development.

In addition, you benefit from the rich packages for employee benefit. Our most important asset in achieving our global vision is our people. We prioritize your growth, investing in our people through mentoring, coaching, skill-building, leadership development, and academic support. Our infrastructure promotes wellness with sports groups, health counseling, onsite medical services, and regular check-ups. Achieve work-life balance with flexible work hours, childcare support, counseling, and convenient amenities. We ensure financial health with employer loans, private insurances, access to discounts, and a company pension scheme. Benefit also

from our excellent and healthy on-site catering and the opportunity for take-away meals. We offer relocation support and interim accommodation to make joining us easy.

## What are the requirements to participate in this call?

- PhD with strong background in Environmental Sciences, Analytical Sciences, Biology, Biochemistry, or related fields.
- Displayed examples of creativity that led to out-of-the-box scientific ideas and results.
- Strong understanding of biotransformation processes occurring in different environmental matrices e.g., soil, sediment, activated sludge.
- Advanced skills and experience in experimentation with biological samples.
- Hands-on experience working on biodegradability of active ingredients is a plus.
- Track record of independent research as exemplified through publications or patents.
- Passion for sustainability and commitment to making a positive impact on our environment.
- Very good oral communication and presentation skills as well as the ability to work in multidisciplinary teams in a matrix environment.
- Fluent language skills in English are mandatory, German language skills are a plus.

## What information should be included in your answer submission?

Please use our PostDoc grant application template to provide a 4–5-page non-confidential proposal (available for download on the following [site](#)). Please complement with your CV, publication list, and recommendation letters.

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.

## What are the individual steps and timelines of the overall program?

Step 1	Please complete your application including a project proposal by July 2, 2025, 11:59 pm PST at the very latest. A full application package consists of your CV including references and a publication list. In addition, please submit the scientific project proposal based on our template (available for download from the following <a href="#">site</a> ). Please note that we will be unable to accept applications without a research proposal addressing our scientific question.
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Step 2	We plan to finalize the review of all applications within five weeks by August 8, 2025.
Step 3	All final candidates will be invited for an opn2TALENTS interview week that will take place from Sep 8 to Sep 12, 2025. Even as we plan to give enough time for the finalists to prepare for their travel plans, we suggest that you block this time frame in your calendars already now. Please expect that you will be invited for only one day during this time frame. Depending on your location, please reserve more than one day for travel. All final candidates have the chance to present and discuss their research proposal at an internal meeting. Please prepare a PowerPoint version of your project proposal and be prepared for an in-depth scientific discussion of your ideas and approaches. Please also be prepared for additional interviews with members of the scientific team and our human resources department. Please address any questions you may have during this week as well.
Step 4	Beginning of October 2025, we plan to announce the final winner of the opn2TALENTS PostDoc grant.
Step 5	Nov 1, 2025, represents the earliest start date to work on your project at our Research and Development site in Biberach, Germany.

## How to apply?

- Check the outline of the “[opn2TALENTS grant opportunity](#)” on opnMe.
- Alternatively, you may click the “Get Application Template” banner.
- Follow the instructions to upload your submission document (requires login or registration).
- The upload allows you to attach additional application files such as your CV, publication list, and references. Please note that the maximum file size is 15MB per file.
- 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 opn2TALENTS program.

## What else is important to Boehringer Ingelheim?

- Our purpose is to transform lives for generations. Therefore, we developed three key principles for our PostDoc program which are determining our plans and actions: Drive cutting-edge science, new concepts and technologies; enrich Boehringer Ingelheim’s innovation ecosystem with highly motivated, young fellows, who will help to build on science to develop new medicines; and train the next generation of leading scientists.
- Our campus community culture is great for sharing ideas and makes it easy to access technologies, meet experts, and approach leaders of all levels. There’s a great spirit of freedom, fluidity, and fierce collaboration.

- Interactions are sound and informal. It's not particularly hierarchical, more team-based with a start-up attitude. We are always keen to help and speak up, open to positive change and new ideas that support our mission to improve lives.
- Our Speak-Up policy is an important part of our Code of Conduct. Only in this way we can continuously develop and improve as a company.
- Diversity, Equity, and Inclusion (DEI) is an integral part of Boehringer Ingelheim's identity; a key element of our culture and contributes to our 'Sustainable Development – For Generations'.
- Our core values of empathy, respect, passion, and trust nurture a diverse, collaborative, open and inclusive environment which is key to innovation, value creation and sustainable growth. With the inclusion of various experiences, backgrounds, and characteristics, Boehringer Ingelheim creates an openness to different approaches, solutions, and perspectives, all contributing to create "Value through Innovation".

## References

1. [Imagine – sustainability story hub | Boehringer Ingelheim](#)
2. [Making our medicines greener through eco-design | Imagine | Boehringer Ingelheim](#)
3. Selzer P. M., Epe C. Antiparasitics in Animal Health: Quo Vadis? *Trends Parasitol.* **2021**, 37(1):77-89. [DOI: 10.1016/j.pt.2020.09.004](#), [PubMed](#).
4. Moermond C. T. A., Puhlmann N., Brown A. R., Owen S. F., Ryan J., Snape J., Venhuis B. J., Kümmerer K. GREENER Pharmaceuticals for More Sustainable Healthcare *Environ Sci Technol Lett.* **2022**, 9(9):699-705. [DOI: 10.1021/acs.estlett.2c00446](#), [PubMed](#).
5. Martinengo B., Diamanti E., Uliassi E., Bolognesi M. L. Harnessing the 12 Green Chemistry Principles for Sustainable Antiparasitic Drugs: Toward the One Health Approach *ACS Infect Dis.* **2024**, 10(6):1856-1870. [DOI: 10.1021/acsinfecdis.4c00172](#), [PubMed](#).