

The Boehringer Ingelheim ChemKit

Presented with a selection of chemical building blocks, how would you validate chemical transformations for the rapid synthesis of complex chemical structures?

Answers to this [question](#) including a proposal for collaboration can only be considered if they arrive no later than December 10, 2025, 11:59 pm PST.

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Summary

The Boehringer Ingelheim ChemKit collection aims to accelerate innovation in synthetic chemistry by providing open access to high-quality, structurally diverse building blocks. This initiative addresses the need for robust and versatile chemical transformations, which are essential for developing therapies for diseases with challenging biological targets.

Researchers from academia, industry, and interdisciplinary fields are invited to explore and develop novel synthetic methodologies using these building blocks. Selected building blocks from Boehringer Ingelheim's extensive chemical library will be shared to expedite the discovery and development of new synthetic methodologies. We invite you to submit your proposals through December 10, 2025.

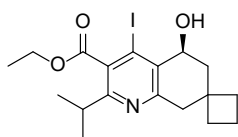
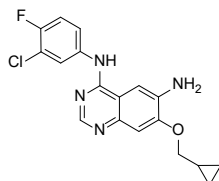
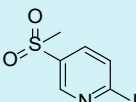
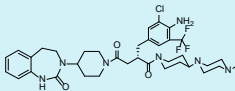
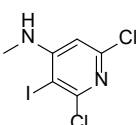
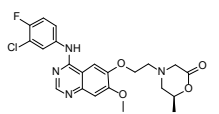
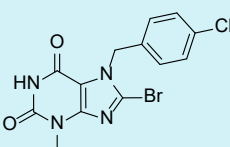
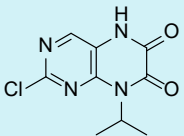
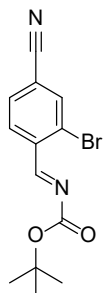
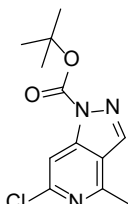
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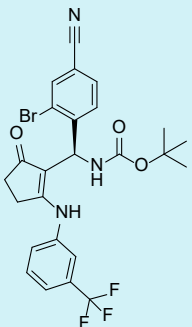
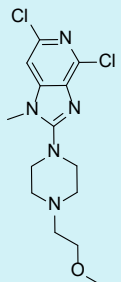
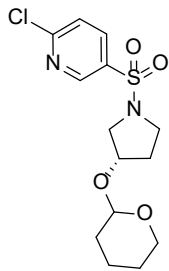
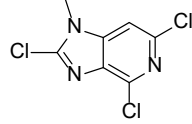
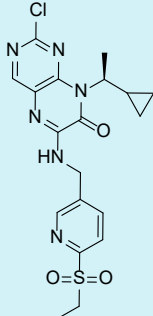
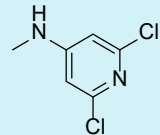
The need for robust and versatile chemical transformations has become increasingly evident as researchers strive to develop therapies for diseases with challenging biological targets. Traditional synthetic methods often fall short by being time-consuming, costly, and inefficient, especially when constructing highly functionalized and structurally diverse molecules. In many cases, these methods fail for molecules with the increased complexity often required in modern drug discovery, resulting in low yields, poor selectivity, or limited scalability. Modern synthetic methods that provide access to highly functionalized molecules, particularly complex arenes and heterocyclic scaffolds, are essential for generating novel drug molecules that address challenging therapeutic targets. However, the limited availability and high cost of complex building blocks limits the possibility of validating new synthetic methodologies in medicinal-chemistry relevant examples. Scientists frequently encounter a cycle in which the absence of relevant building blocks limits the development and testing of methodologies, while unvalidated methodologies restrict their potential applications in drug discovery programs.

To break this cycle, Boehringer Ingelheim is launching a new initiative aimed at accelerating innovation in synthetic chemistry. The “Boehringer Ingelheim ChemKit” offers the possibility of challenging the scope of novel synthetic transformations with building blocks containing functional groups and complexity relevant to drug discovery and development. Our goal is to stimulate research on chemical transformations by providing open access to high-quality, structurally diverse and drug-relevant building blocks. This initiative reflects our commitment to advancing pharmaceutical innovation and enabling scientists to access high-quality resources that can accelerate their research efforts.

We invite researchers from academia, industry, and interdisciplinary fields to explore and develop novel synthetic methodologies using these building blocks. Whether your focus is on reaction development, mechanistic studies, or application in complex molecule synthesis, we welcome your contributions. As an incentive, we are sharing selected building blocks from our extensive chemical library to expedite the discovery and development of novel synthetic

methodologies. These compounds have been carefully curated to represent a broad range of chemical space and reactivity profiles. By providing access to these specialized building blocks, we aim to accelerate the development of cutting-edge synthetic methodologies that can overcome these limitations. We will review submitted proposals based on scientific merit, feasibility, and potential impact. Our aim is to foster a vibrant community of researchers working together to push the boundaries of chemical synthesis. The recipient of the collection will get access to 500 mg of each building block in the Kit.

Building block structures	Cas number	Molecular weight [g/mol]	Building block structures	Cas number	Molecular weight [g/mol]
	1332486-44-8	429,30		290304-07-3	358,80
	1412906-52-5	283,08		688018-11-3	718,26
	2769718-27-4	302,92		808793-52-4	420,87
	305862-65-7	371,62		181774-90-5	240,65
	2089391-38-6	309,16		2769716-32-5	267,71

	2089391-32-0	550,38		2769717-55-5	344,24
	2417318-58-0	346,83		2769718-26-3	236,48
	1817775-65-7	448,93		1754661-33-3	177,03

What potential proposals could be in scope?

- In scope are new transformations incorporating these building blocks. We are open to new catalyst classes and ligands. Photochemistry and electrochemistry in combination with a feasible flow approach are also of high interest.
- Application of technologies like catalysis, photochemistry, flow, biocatalysis, mechanochemistry or electrochemistry.
- Safety and scalability propositions are of utmost importance for us and would be favored if the stock is limited.

What potential proposals would be out of scope?

- Use of the provided substances for any type of *in vitro* or *in vivo* biological experiments
- Any “dual use” activities
- Any commercial activities including contract research or manufacturing organizations

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

- Access a selected building block library for your research. Each collection will be provided in one shipment, and each building block will be provided as a 500 mg powder containing vial.
- Validate your technology with a set of complex building blocks containing functional groups relevant to drug discovery and development.
- Receive ready-to-use compounds for your screening experiments.
- All free of charge ([proforma custom fees may apply for some countries](#)).
- Publish your results independently and accelerate your research.

Key Criteria for the selection of proposals

- A brief non-confidential description of your research objectives, proposed experiments, anticipated timelines, and planned start of the project within the next 12 months.
- Proposals should challenge and validate innovative synthesis methodologies to expand their applicability and critically assess any limitations, particularly using building blocks relevant to pharmaceutical contexts.
- Access to a laboratory for carrying out the planned experiments.
- Accept and sign the “rights and obligations” attached at the end of the submission template.

References

1. Gollner A., Koester M., Nicklin P., Trieselmann T., Klein E., Vlach J., Heine C., Grundl M., Ramharter J., Wyatt D., Chaturvedi M., Ciulli A., Carter K. C., Müller S., Bischoff D., Ettmayer P., Haaksma E., Mack J., McConnell D., Stenkamp D., Weinstabl H., Zentgraf M., Wood C. R., Montel F. *opnMe.com: a digital initiative for sharing tools with the biomedical research community* *Nat. Rev. Drug Discov.* **2022** 21(7):475-476. DOI: [10.1038/d41573-022-00071-9](https://doi.org/10.1038/d41573-022-00071-9), [PubMed](#).

Anticipated Timelines

Phase 1	Review of Proposals will start after the submission phase and we aim to finalize our review through mid-February 2026.
Phase 2	Shipments starting Q2/2026.

Submitting a proposal

- Check the Boehringer Ingelheim ChemKit profile on opnMe.com or alternatively,
- Click the “[Download your submission template](#)” banner to access the collaboration submission template (requires login or registration).
- Follow the instructions to download the template or upload your submission document.
- The upload allows you to attach additional application files if you want to.
- 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 the call.

Terms and conditions

In response to your application to the call on opnMe to get access to our above-mentioned Boehringer Ingelheim ChemKit ("MATERIAL"), Boehringer Ingelheim International GmbH ("BOEHRINGER") will supply the MATERIAL under the following terms and conditions:

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2. The MATERIAL may be used for legitimate non-commercial research purposes only. You represent and warrant that you (i) are affiliated with a research institution or a legal entity performing research activities in the life-science industry sector, (ii) have access to a suitable research laboratory and equipment, and (iii) are not ineligible to receive the Material under applicable laws, ordinances and regulations. To enable BOEHRINGER to ensure your compliance with (i) to (iii) a verification might be necessary. By accepting these terms and conditions you therefore agree that members of the opnMe team can contact you to complete this obligatory verification step.
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8. In any scientific public communications (e.g. oral presentations, posters, scientific articles) where you would disclose the use of the MATERIAL, BOEHRINGER asks you to mention that the MATERIAL has been provided by Boehringer Ingelheim's open innovation platform, opnMe and to name the MATERIAL in the main text, acknowledgement, or supplementary material as the "Boehringer Ingelheim ChemKit".