opnMe

Goethe-Universität Frankfurt am Main
Johannes Gutenberg-Universität Mainz
Technische Universität Darmstadt
Eine strategische Allianz

Rhein-Main Universitäten

Open Science Day @RMU - November 30, 2022

opnMe.com

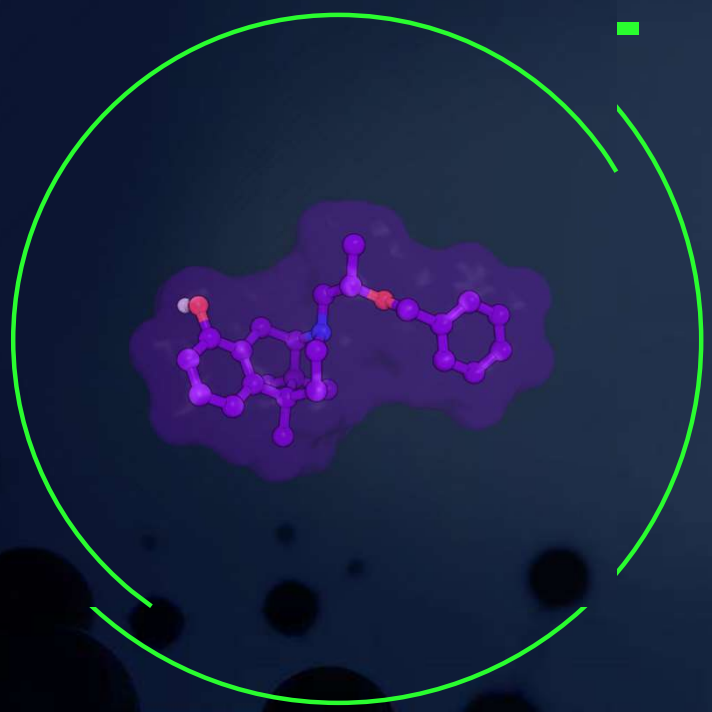
Boehringer Ingelheim's open innovation portal

Markus Koester

opnMe.com of Boehringer Ingelheim: An innovative #openscience approach in the digital era to foster research for potential new therapeutic concepts of the future

Boehringer Ingelheim

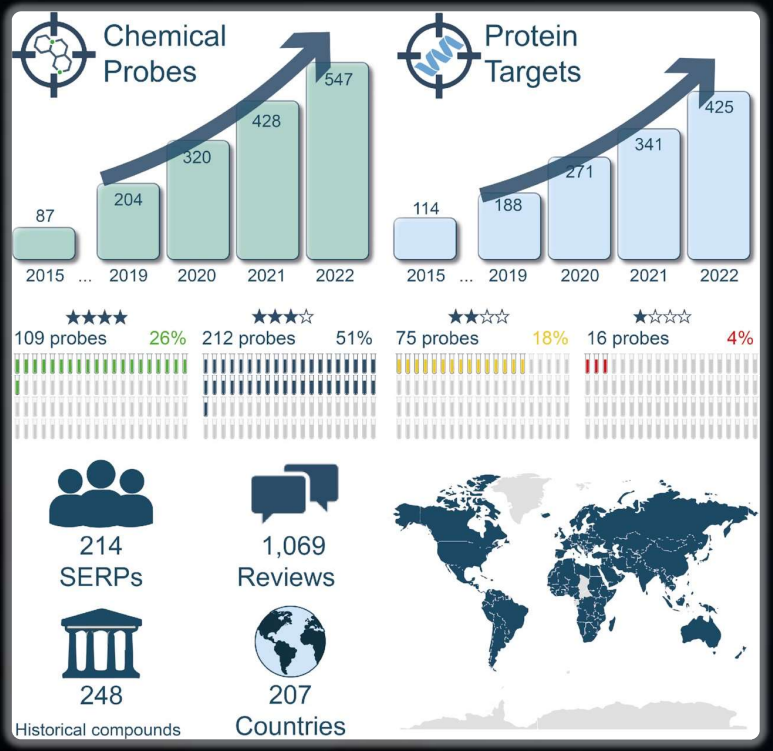
Goals of the workshop today



- **Advocacy for Open Science and its potential** for academic research aimed to provide better treatment options for patients (humans or animals)
- **Increase awareness about open innovation portals** and what potential they have for your daily research practice
- **Deep-dive** into opnMe.com including some success examples
- **Attract** new users and **create** word of mouth
- **Learn about you** and your current "situation"

Public-private initiatives

Chemicalprobes.org



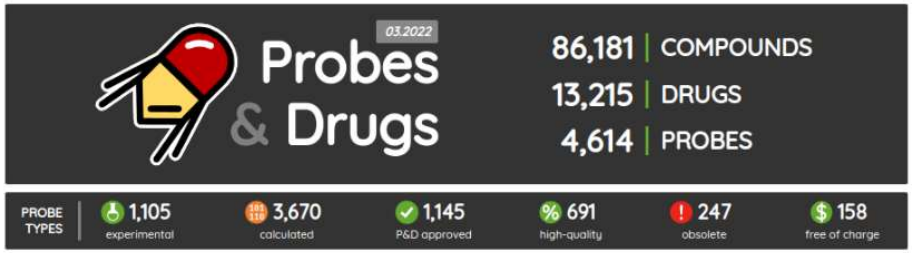
Nucleic Acids Res, gkac909, https://doi.org/10.1093/nar/gkac909

Probes & Drugs

Oct. 13, 2022

P&D 03.2022 released with extended downloads, intersection matrix and free chemical probes

This year's third version of the Probes & Drugs portal (ver. 03.2022) was released with up-to-date compound sets, an extended downloads section, a new intersection matrix visualisation and a set of chemical probes you can get for free.

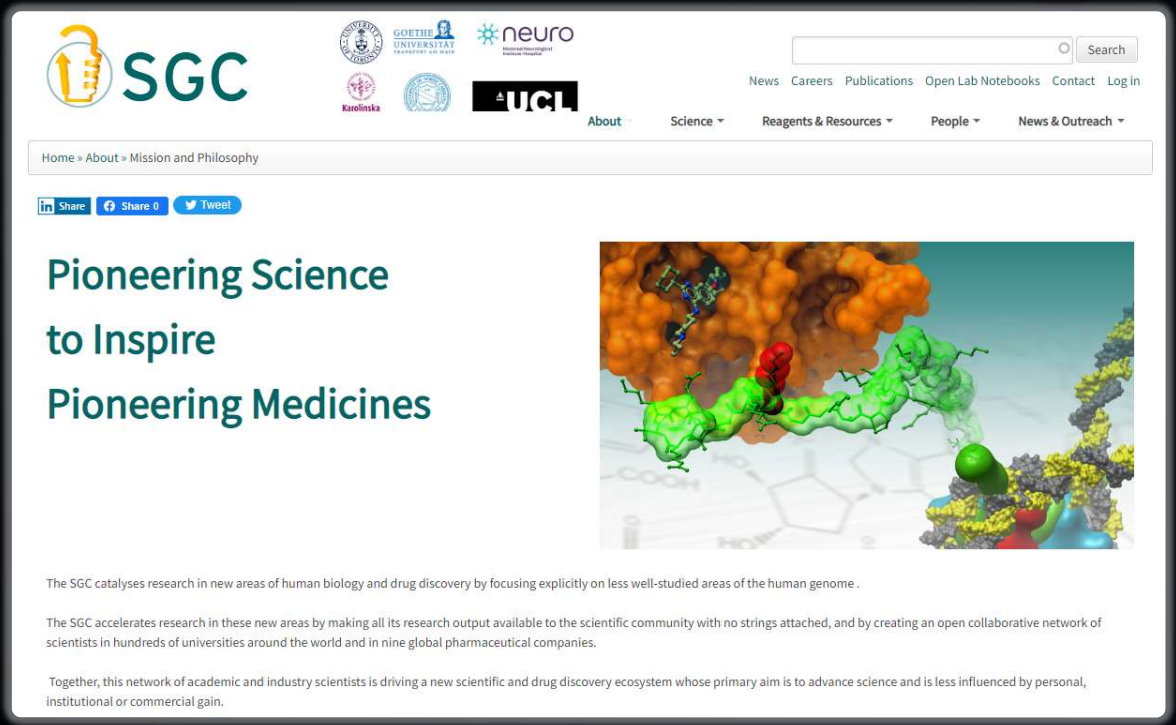


All of the major chemical probes compound sets (Chemical Probes Portal, SGC Donated Probes, opnMe portal) were updated to their latest versions as well as all the major data sources (ChEMBL, BindingDB, GtoPDB, DrugCentral, DrugBank, etc.). Along with these, also our **High-quality chemical probes compound set** was updated with several new probes, counting 691 compounds in its current version. A significant part of the HQCP set is composed of chemical probes that can be acquired (in a limited volume/concentration) for free from SGC Frankfurt (SGC Donated Probes) or Boehringer Ingelheim (opnMe portal). **From ver. 03.2022,** all free chemical probes can be easily filtered by **the free-of-charge tag filter**. Currently, there are 158 such probes.

From this version on, we significantly extended our downloads section where, apart from the whole database dump, you can also find several csv/sdf/xlsx files containing data about compound structures, their mapping to other databases, bioactivities, and extensive data set focused only on compounds labelled as chemical probes. In 2021, we used data in the exact same format as the basis for our comparative study Will the chemical probes please stand up? in the RSC Medicinal Chemistry special issue on chemical probes.

Source: https://www.probes-drugs.org/news#46

Structural Genomics Consortium



Source: https://www.thesgc.org/about/what_is_the_sgc

SGC and its partners (6 univ, 8 companies, 2 charities)

SGC

Universities

- University of Toronto
- Karolinska Institutet
- Goethe Universität Frankfurt am Main
- UCL
- neuro – Montreal Neurological Institute-Hospital, Tanenbaum Open Science Institute
- University of North Carolina Chapel Hill

Companies

- Boehringer Ingelheim
- Pfizer
- Bristol Myers Squibb
- Bayer
- Merck
- Janssen
- Genentech – A Member of the Roche Group
- Takeda

Charities

- Genome Canada
- Wellcome

Company initiatives

AstraZeneca openinnovation

Takeda COCKPI-T Co-Create Knowledge for Pharma Innovation with Takeda

novo nordisk®

opnMe | Boehringer Ingelheim

Offering overview

	AstraZeneca	NovoNordisk	Takeda	opnMe.com
Preclinical tool compound sharing	✓	✓		✓
Clinical compounds	✓			
Tools for collaboration				✓
Target identification (library access)	✓			
Pharmacological questions	Co-Solve (end of 2022?)	Currently not open	Currently not open (Therapy and Technology Questions)	opn2EXPERTS (currently 3 questions open)
Research funding	✓ (For Co-Solve)	(✓)	✓ (only questions)	✓ (For M4C and opn2EXPERTS)
Sustainability	✓ (Via Co-Solve)			✓
IP conditions addressed	✓	✓ (For molecules)	✓	✓
Webinars				✓

Molecules *for free*. Collaborations for Science

Add the spark to ignite innovation

Visit ***https://opnme.com***

opnMe.com gives scientists access to selected, well-characterized best-in-class molecules

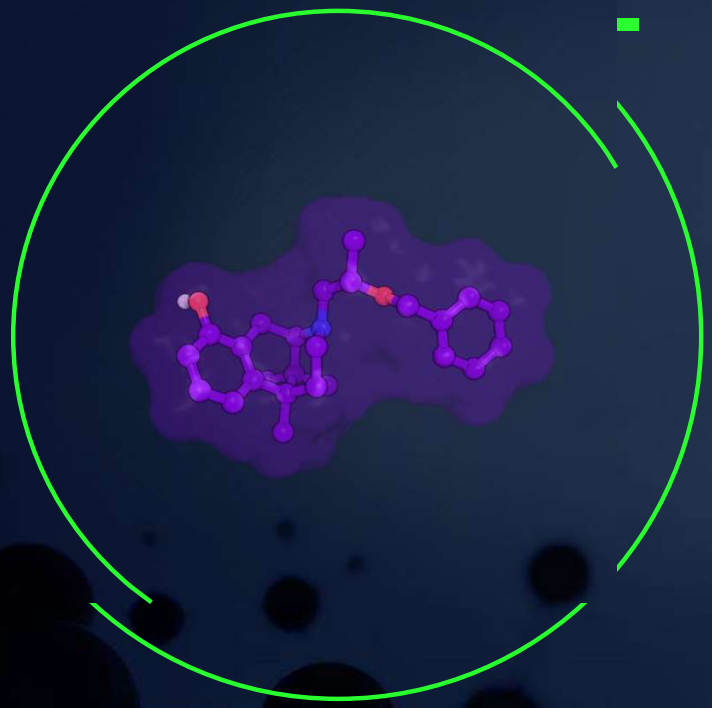
Molecules to Order – M2O are provided free- of-charge without the need to enter into intellectual property discussions

Molecules for Collaboration – M4C invites scientists to submit research proposals to use our unique molecular probes

By sharing precisely-formulated scientific technology questions, opn2EXPERTS provides the collaboration platform to deliver innovative solutions

Boehringer Ingelheim

Boehringer Ingelheim's Open Innovation portal



M2O

Molecules to Order are provided free-of-charge without the need to enter into intellectual property discussions.

Status Oct 1, 2022:
74 M2O molecules
>1,643 placed orders from over 50 countries

74 Molecules to Order – 100% free of charge

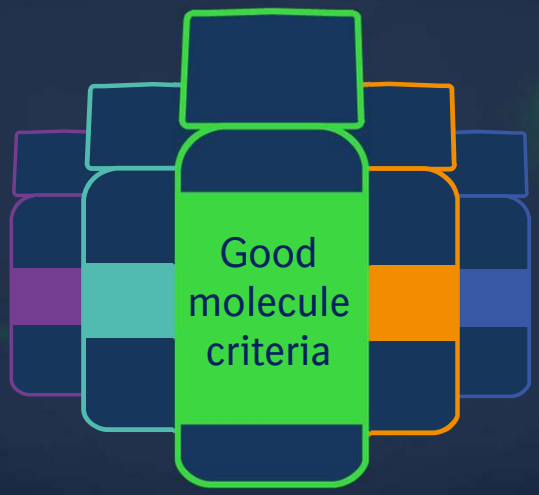
4,500 molecules shipped to users from **50** countries

Status Oct 1

Chemical Probes must fulfill stringent criteria to qualify as research tools

Target Related Criteria

- **Biochemical Potency** < 100 nM
- **Cellular Potency** < 1 µM
- **Selectivity** >30 fold within family
- Bio-physical proof of **Target Engagement**



Chemical Matter Criteria

- **Tractable** Chemical Matter
- Availability of an **Inactive control**
- Aqueous & Organic **Solubility**
- Chemical & Plasma **Stability**

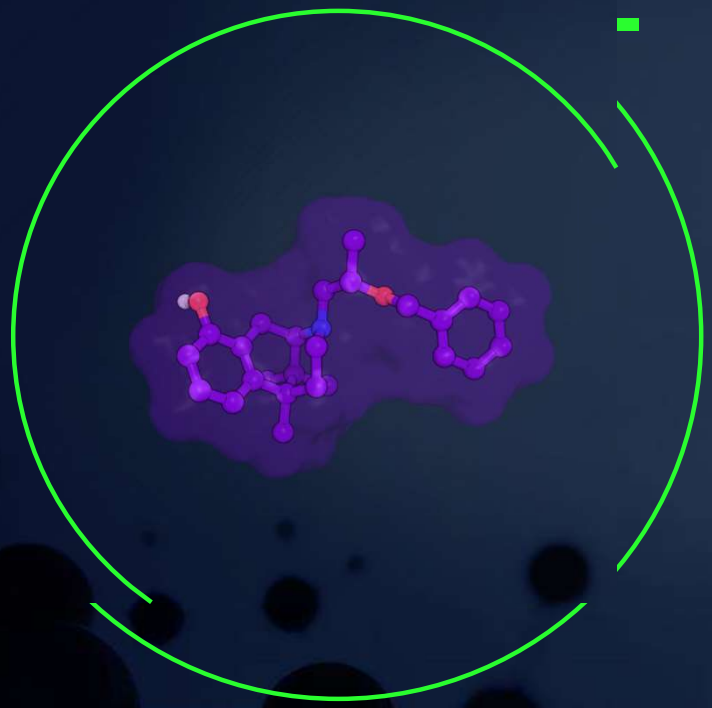
Arrowsmith et al. (2015) The promise and peril of chemical probes. *Nature Chemical Biology*, 11, 536-541

Publication impact based on our molecules

Since opnMe´s launch, shared molecules have generated more than 80 independent publications*.

*Recent publication examples

Boehringer Ingelheim's Open Innovation portal

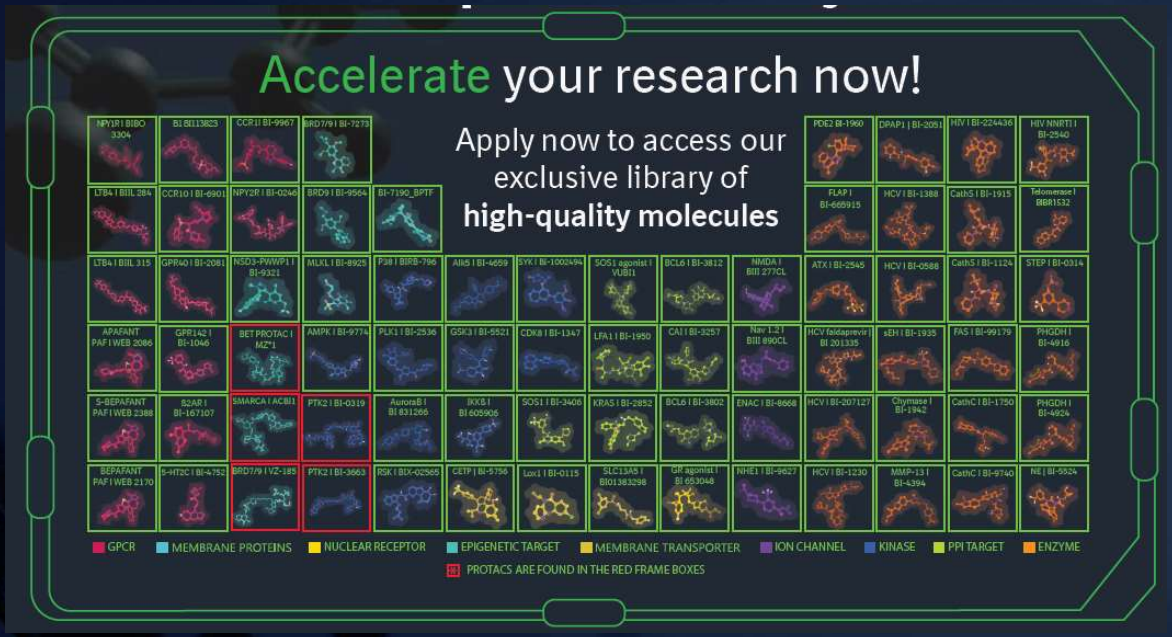


M4C

Molecules 4 Collaboration
invites scientists to submit research proposals to use our unique molecular probes

Status Nov 30, 2022:
>800 proposals led to >50 partnerships

Molecules for collaboration: opn2SCREEN molecule library



We offer our entire collection of 74 well-characterized and high-quality molecules with 55 negative controls for a limited period only.

Exclusive collection will be shipped in customized 384 well tube racks with tubes containing 40 µl of a 10 mM DMSO stock solution.

Apply with your research objectives, requirements today

Oct 10 - Dec 12, 2022

Ongoing

Boehringer Ingelheim

Pre-view: our next Molecule for collaboration project will launch on January 9, 2023

Boehringer Ingelheim's Open Innovation portal

O2E

By sharing precisely-formulated scientific technology questions, opn2EXPERTS provides the collaboration platform to deliver innovative solutions.

Launched 2020, Status Nov 30, 2022

26 questions | 629 proposals | 61 countries

opn2EXPERTS: First call on higher sustainability in pharma processes launched today

Nov 30 - Feb 15, 2023

Ongoing

The downstream processing of biologics is very resource intensive.

With our first joint More Green Grant / opnMe project, we hope to find new solutions to minimize the environmental footprint of future medicines through sustainable science and technology.

If you proposal was selected, you would be able to work closely with our Sustainability team and access funding of up to USD 80,000.

opn2EXPERTS: Harness liver's regenerative capacity for late-stage NASH

Oct 17 - Dec 15, 2022

Ongoing

The liver has shown remarkable regenerative capabilities after acute injury or resection. However, liver failure in late-stage NASH is characterized by loss of function due to a loss of hepatocyte mass.

Share your proposals describing innovative *in vitro* assay systems, or *in vivo* models that allow the identification and validation of targets to prevent liver failure in late-stage NASH.

Funding up to 200,000 euros

opnMe

New on opnMe: Have you considered joining a high performing research team focusing on NASH? Find out how to join Anthony' Azzara's group.

11 November 2022

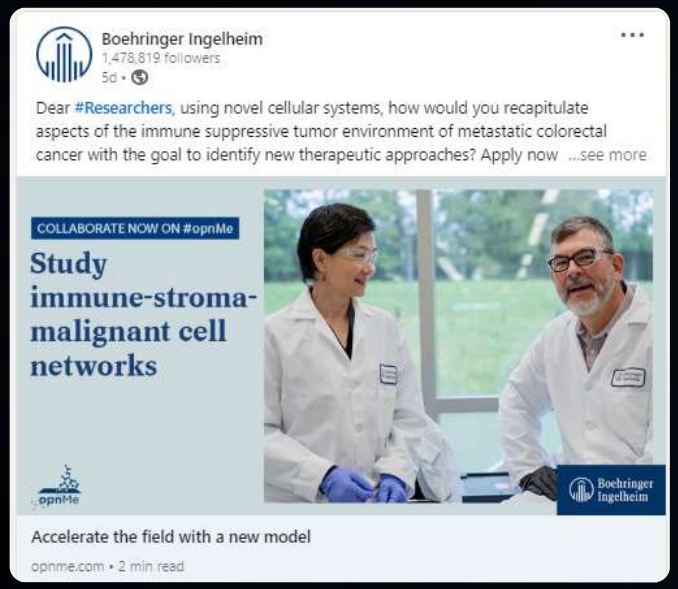
Currently, Anthony has a few open positions. Apply directly through the following links:

- SR Principal/Principal Scientist, Cardiometabolic-223358
- SR Principal/Principal Scientist, Cardiometabolic-224237
- Scientist II, Cardiometabolic-223364

As part of your application, please use the code "opnMe". Many thanks.

Boehringer Ingelheim

How to learn about news from opnMe?



https://www.linkedin.com/company/boehringer-ingelheim/

linkedin.com/in/markus-koester-5614106

@koester_markus

opnMe

Molecules *for free*. Collaborations for Science

Add the spark to ignite innovation

Visit ***https://opnme.com***

Any questions?
Contact us : connect@opnme.com

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