Avergen Pharmaceuticals GmbH

Founded in 2015 in Martinsried, Bavaria

Challenge establishing a drug discovery platform

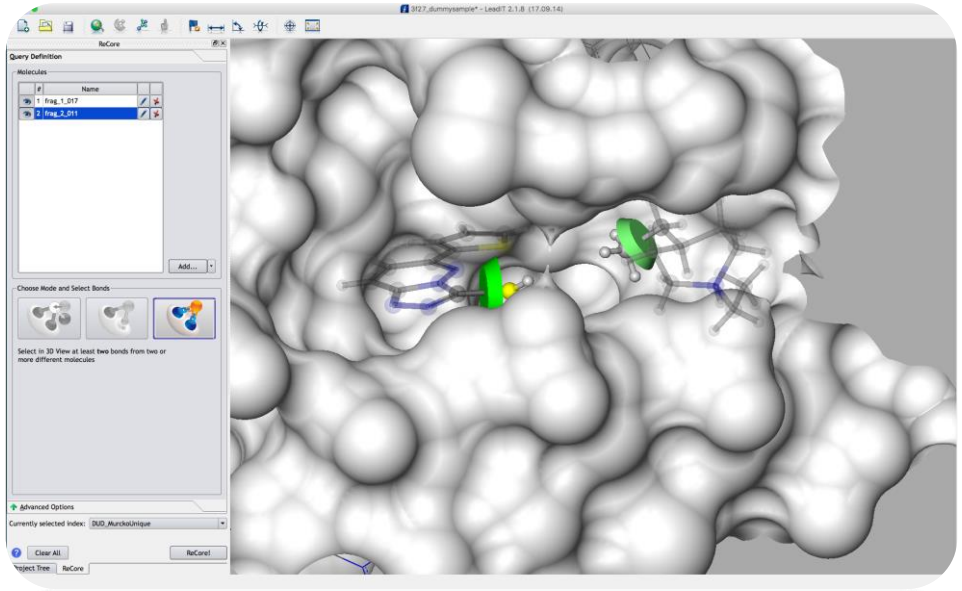
- We are establishing a new small molecule drug discovery platform for identifying inhibitors of protein-protein interaction (PPI)
- PPI are hard to drug targets. But PPI play pivotal roles in various diseases. There are dozens of validated targets for which no effective inhibitors exist.
- Our focus is in oncology.
- We are collaborating globally with research institutes and CROs.

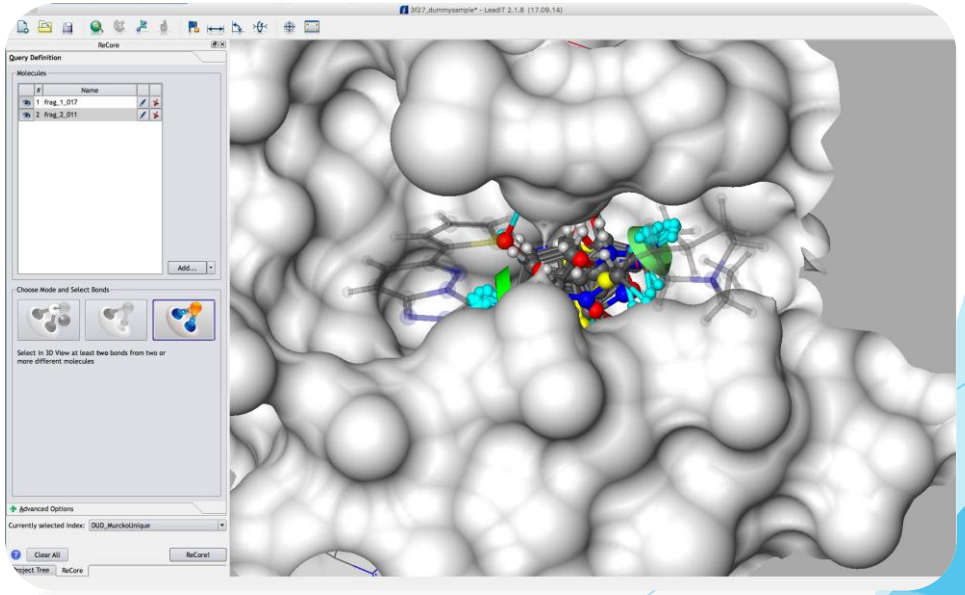
Challenge establishing a drug discovery platform

- Develop in a fast and economic way drug candidates for PPI drug targets which were until now thought undruggable.
- With the right software we could more efficiently select linkers for our fragments.
- This could reduce the number of linkers we have to synthesize and test in our screening assays.
- Lowering cost and speed up discovery time of new effective compounds.

Automated linker selection with ReCore

- We link with ReCore fragments which bind the drug target.
- ReCore needs only two vectors to identify appropriate linkers.





IT solution offered by BioSolveIT

- We created a new screening fragment data base according to specifications of our new platform technology.
- We started to create with BioSolveIT a new linker database:
  - We defined new shredding rules to generate linkers for ReCore.
  - The new linker database is optimized for our drug discovery platform. Thus the new linkers avoid solutions which do not fit into our platform specifications.
  - We filtered out unwanted chemistry moieties.

Project progress and next steps

- We are redocking the new molecules in an iterative process and stepwise improve the shredding rules and fragment selection criteria. And thus improve our new linker and fragment data bases.
- The solutions are finally tested in our in vitro screening assays for their actual ability to bind the target structure and inhibit PPI.
- Finally, we want to use the new tools as part of our drug discovery platform to discover new PPI inhibitors for target structures which were until now regarded as “undruggable”.