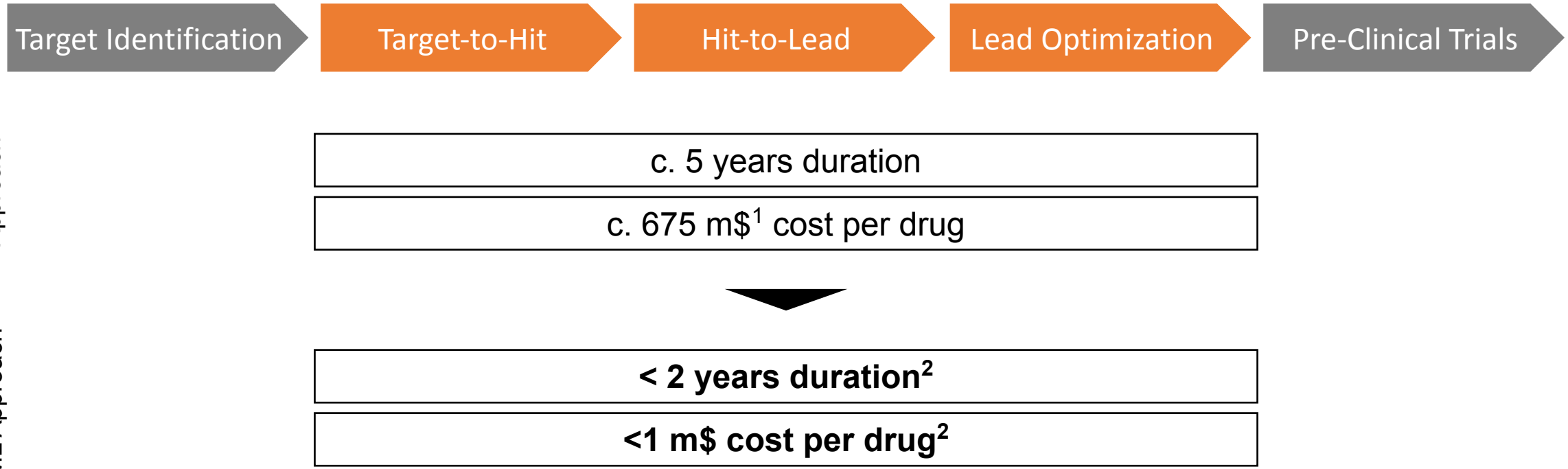
deepIS

GeneSys:
„Generative Molecular Synthesis for Drug Discovery”

GeneSys helps cutting the Drug Discovery process by 75%

The Drug Discovery Process



1 Paul SM et al Nat. Rev. Drug Disc. 9:203-214. 2010.

2 Capgemini 2021; Deep Pharma Intelligence 2022.

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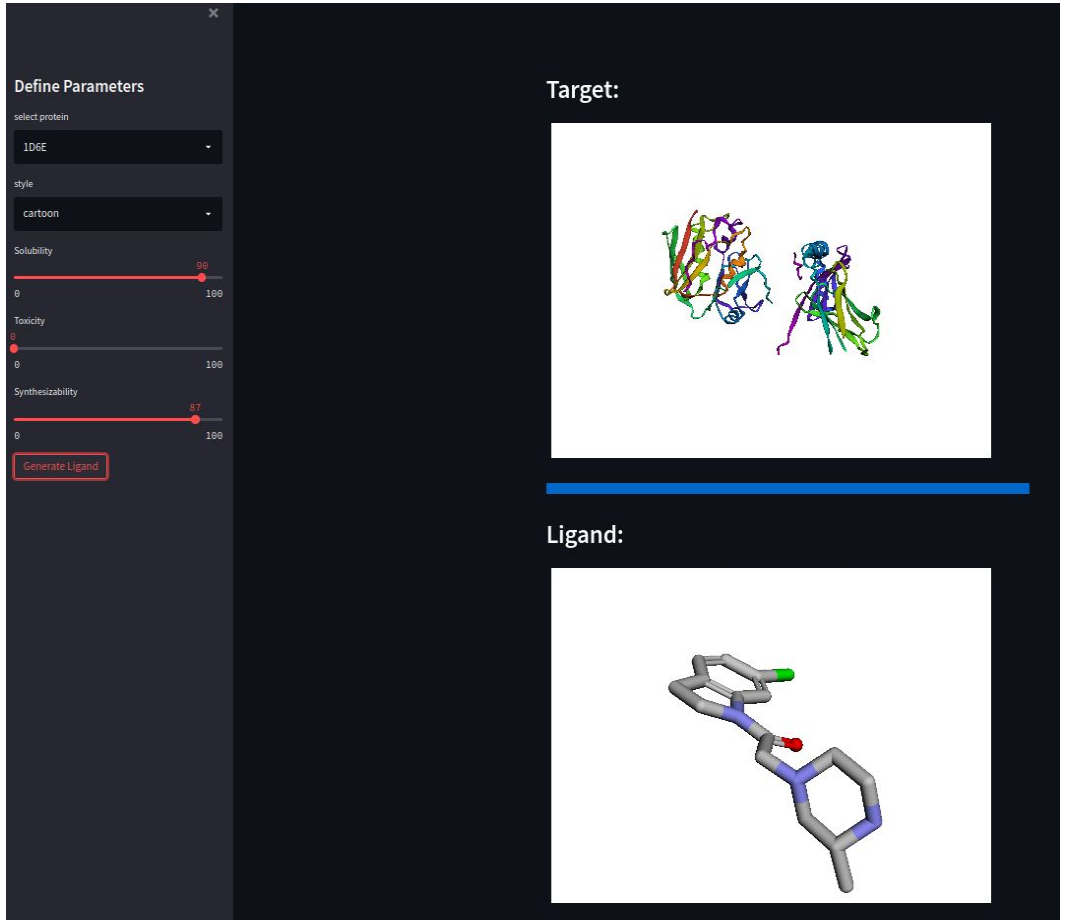
GeneSys is as software which designs optimized hit compounds (i.e. ligands) to a predefined target molecule

GeneSys Prototype



Workflow and Technical Description

1. Customer provides a 3D model of the target (e.g. PDBx/mmCIF format)
2. The Customer Indicates Feature/ Criteria that the Ligand shall fulfil (e.g. toxicity)
3. GeneSys uses a Graph Neural Network to build a Representation of this Target
4. From the Representation and the Criteria a Transformer Neural Network Architecture determines the optimum ligand in SELFIE format
5. Another Neural Network transforms the SELFIE into a 3D model of the ligand

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The Deep LS team brings all relevant expertise and experience

Leadership Team

Daniel Sorić

- Managing Director (Commercial)
- Industrial Engineer
- 14+ years various Business Development Roles

accenture · BLC Berg Lund & Company · SMA · SARTORIUS

Felix Kamieth

- Managing Director (Technology)
- Electrical Engineer
- 14+ years AI and Data Science experience and teaching

Fraunhofer IGD · Continental The Future in Motion · FOM Hochschule

Mentors

Prof. Dr. Igor Štagljar

- Mentorship via BIRD Incubation
- University of Toronto, Department of Biochemistry
- Member of European Molecular Biology Organization, Fellow of the Royal Society of Canada

Biochemistry University of Toronto · bird incubator · DualsystemsBiotech LRC-TriCEPS - We identify targets on living cells · PERTURBA

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