Effective Cancer Drug Combinations

Current efforts to identify beneficial anti-cancer therapies typically rely on large-scale “trial and error” drug testing in experimental pipelines. The escalating costs of running these pipelines, in addition to the vast number of possible drug combinations to test, makes it impossible to fully exploit novel combinatorial treatments. Favorable therapeutic combinations are therefore likely to be never discovered or tested and cancer patients are offered therapies with no or little effect.

To overcome these bottlenecks and speed up the process of finding effective drug combinations to fight cancer, Centre for Digital Life presents three research projects developing in silico computational methods to support combinatorial drug screening. The methods being developed are focusing on colorectal, breast and haematological cancer and can enable decision support either for screening of drug candidates in the pre-clinical phase or in the clinics for personalized treatment of cancer patients.

PerCaThe
- Focus on breast and blood cancers
- The cross-disciplinary project is financed by the University of Oslo with € 2 M and by the Centre for Research Based Innovation BigInsight with € 1.5 M until 2023
- Mathematical models and statistics to optimise combination therapy
- Collaboration with Oslo University Hospital and U. Minneapolis
- IPR is handled by Inven2

Druglogics
- Focus on colon cancer
- The project is financed from NTNU, RCN and ERACoSysMed
- Total budget € 2.5 M between 2016-2020
- Collaboration with SINTEF High Throughput Screening
- IPR is handled by NTNU Technology Transfer Office

PINpOINT (Pipeline for individually tailoring new treatments in hematological cancers)
- Focus on haematological cancers
- Total budget € 2.7 M between 2019-2022 (€ 2 M from Centre for Digital Life Norway)
- Host: ICR; Oslo University Hospital Partners: OCBE and IFIKK, University of Oslo
- Collaboration with: Abbvie, AstraZeneca, Bristol Myers Squibb, Celgene, Novartis, Roche, Takeda and Oncoimmunity, Univ. of Heidelberg, U. Minnesota, Cambridge, BRIC, FIMM and U Helsinki
- IPR is handled by Inven2

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