

A protein resource for drug discovery

One of the programs within the Vinnova funded CellNova is focusing on generation of the world's largest protein resource. A resource that is used for drug discovery.

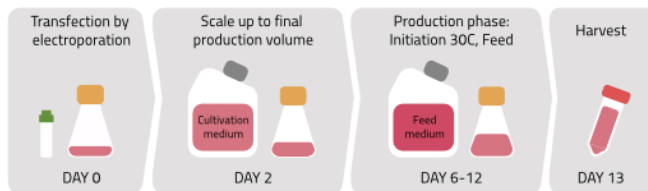
The produced proteins are used for assay development, validation of targets, selection of binders and in depth-analysis of the protein production and the resulting product.



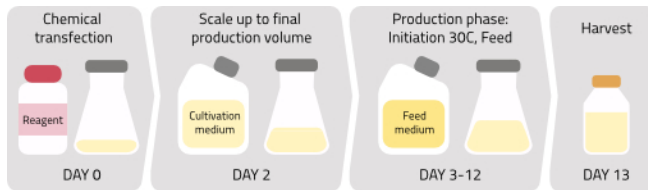
Protein production in mammalian cells

Three different scales:

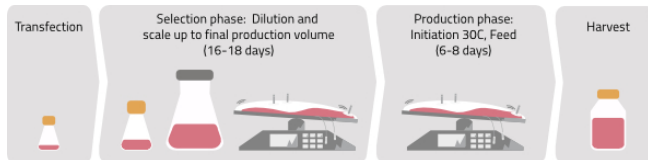
Small



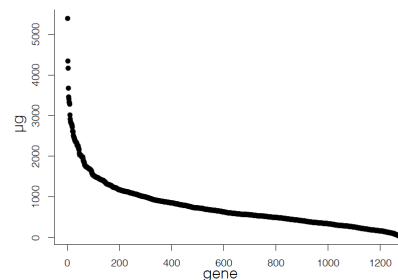
Mid



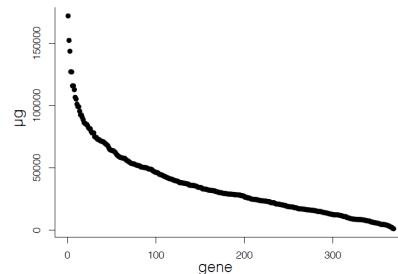
Large



Protein amounts

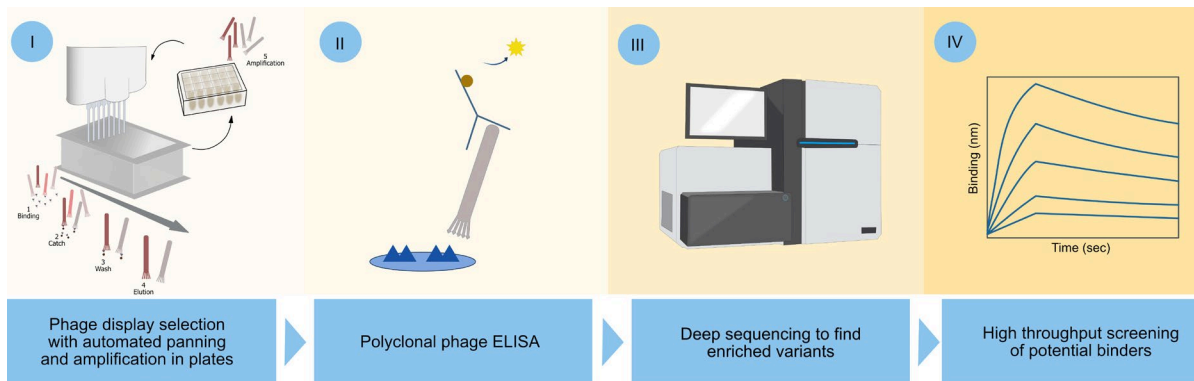


Small
 $\bar{x} = 755 \mu\text{g}$



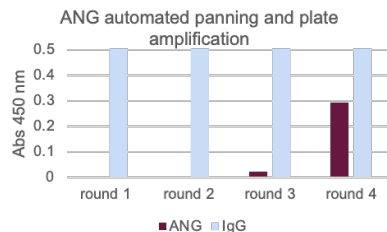
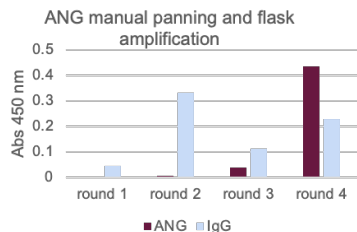
Mid
 $\bar{x} = 35 \text{ mg}$

Development of a high-throughput selection system for recombinant binders

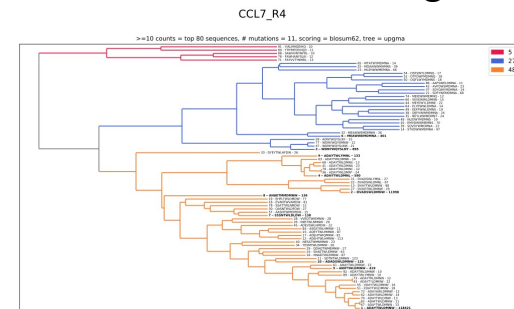
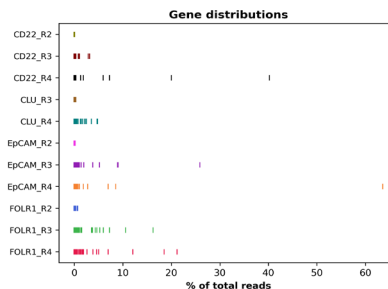


Representative results for selections against CellNova targets

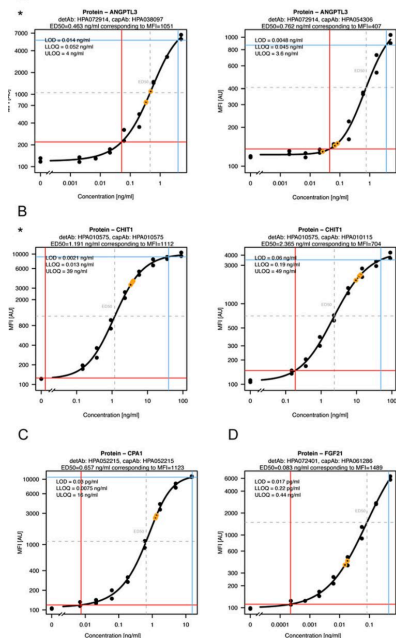
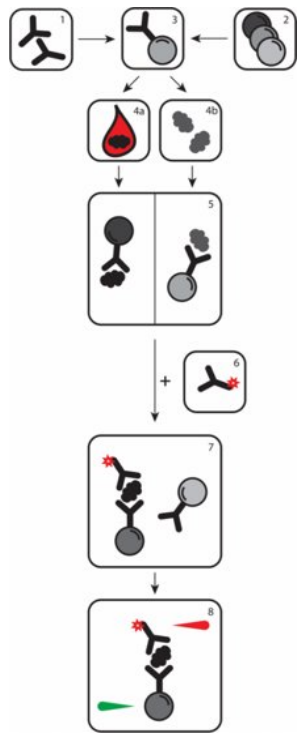
II Phage ELISA of selection outputs



III Data showing selection success for different targets

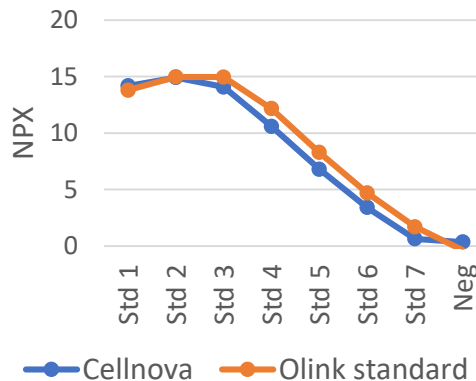


Immunoassay development to determine endogenous protein concentrations in human plasma

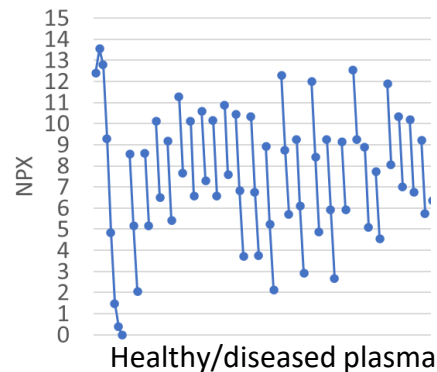


Using CellNova proteins in proximity extension assays (PEA)

Standards



Immunogens

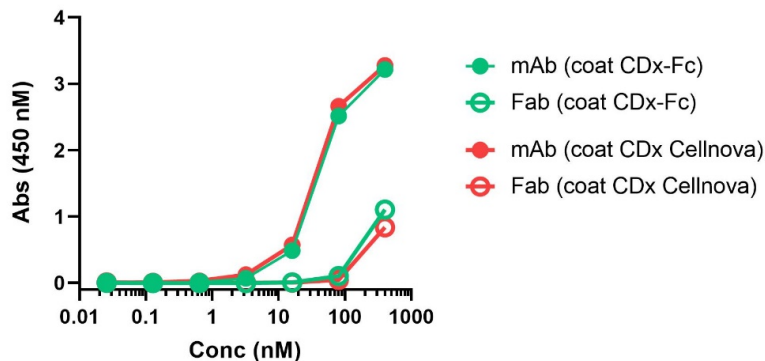


Standard protein	Approved standard curve
CellNova (n=92)	86%
Olink	85%

Immunogen	Approved PEA
CellNova (n=65)	75%

High success-rate for CellNova proteins as standards in PEA and immunogens for PEA antibodies.

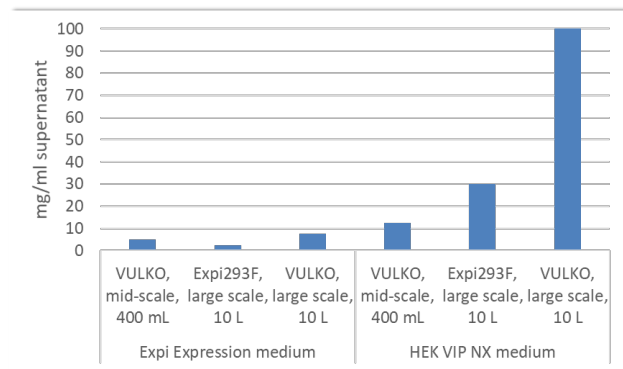
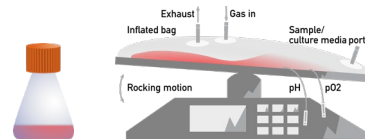
Binding to target molecule (ELISA)



The CellNova proteins enables assay development with relevant target proteins

Screening of four commercial media for transient protein prod.

- HEK TF
- BalanCD
- HEK VIP NB
- HEK VIP NX



Original Best performer