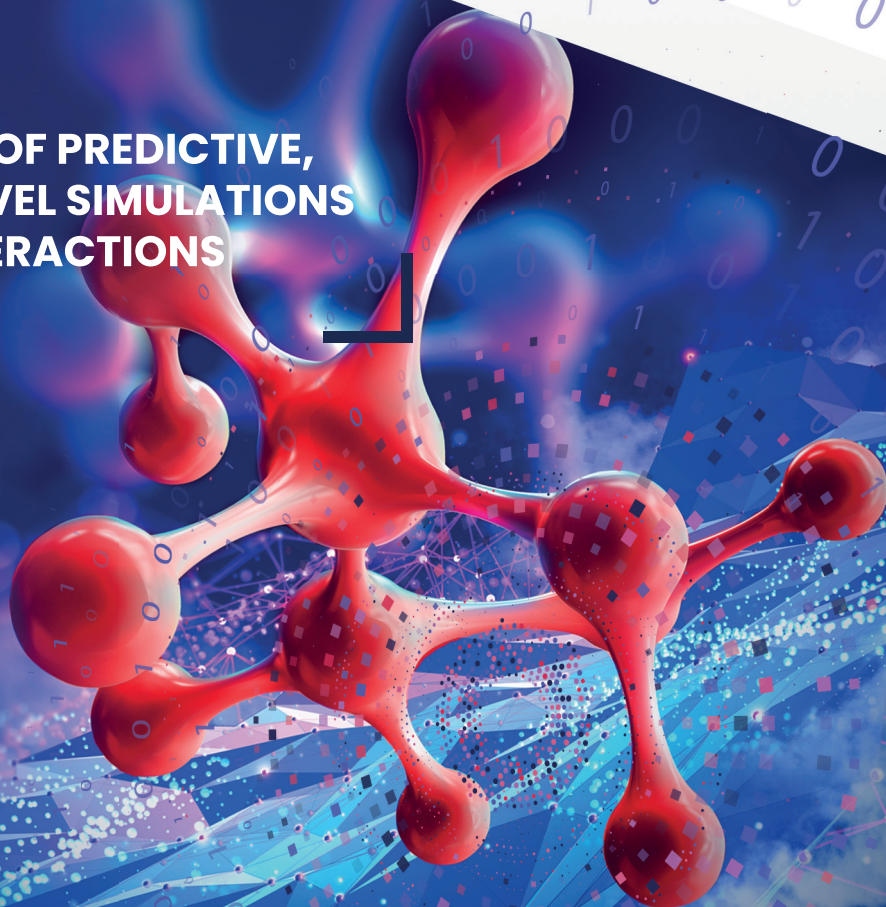




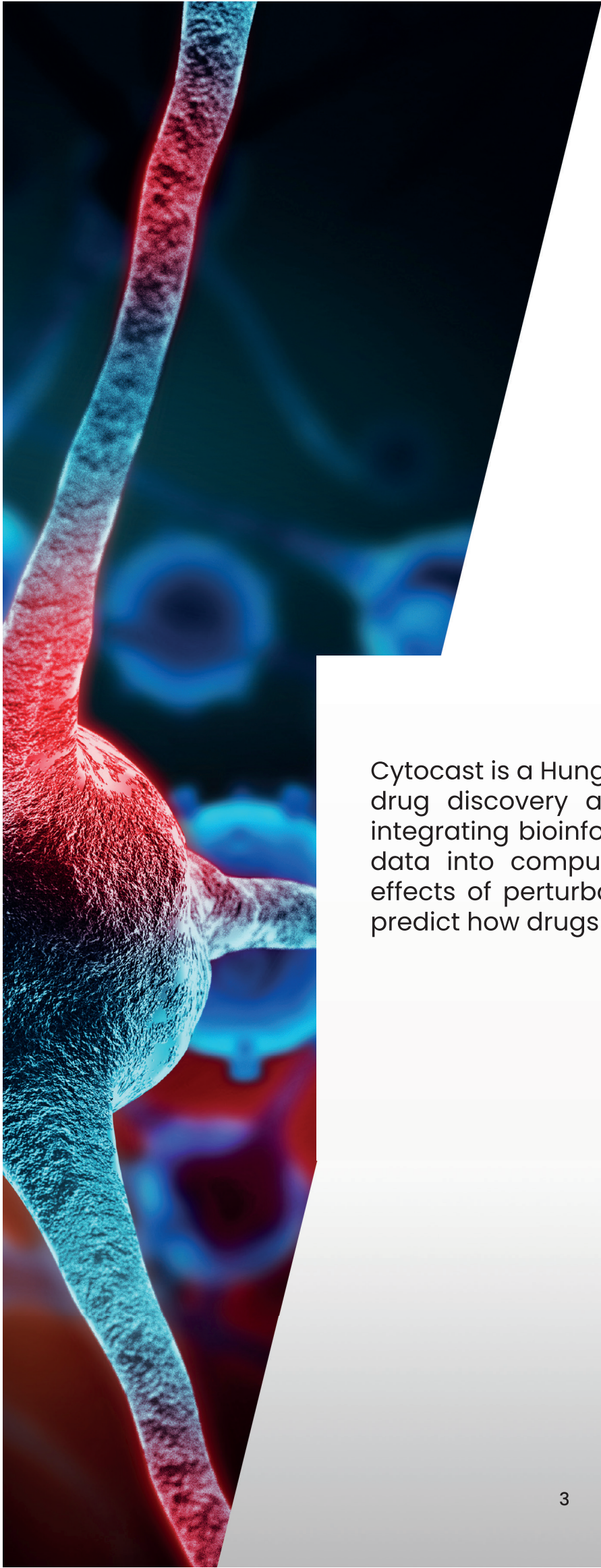
**SOLE PROVIDER OF PREDICTIVE,
WHOLE-CELL LEVEL SIMULATIONS
OF PROTEIN INTERACTIONS**





SHAPING THE FUTURE OF MEDICINE

www.cytocast.com



Cytocast is a Hungarian startup that revolutionizes drug discovery and personalized treatment by integrating bioinformatics databases with patient data into computer models to understand the effects of perturbations caused by diseases and predict how drugs can modify cellular health.

THE CYTOCAST SIMULATED CELL™

As a computational biology-driven pharma-technology company we are dedicated to revolutionizing drug discovery and development by digitalizing pharmacovigilance studies.

Based on a wide range of available information on how complex cellular processes work, we created the Cytocast Simulated Cell™, the most detailed human simulated cell, available for 17 tissue types. The Cytocast Simulated Cell™ holds the potential to accelerate drug discovery while decreasing costs and increasing clinical trial success rates.

TECHNOLOGY

We integrate and process a broad spectrum of genomics, transcriptomics, proteomics, and single-cell data coming from our highly curated in-house database and individual patients to understand how perturbations, such as diseases or drugs, affect cellular health. Our simulations result in tissue-specific cellular health predictions. A machine learning algorithm turns these into a report showing how the changes in protein complexes are linked to phenotypes and side effects.

Looking at cellular behavior at a large scale, we can identify global variations between healthy and those affected by a disease. These changes are typically impossible to observe by looking at a single component of a cell. We can identify variations in macromolecular complexes caused by diseases offering the bases for the repair of the observed malfunctioning state, usually by selecting the best drug candidates.

Once a possible drug or molecular target is identified, we can simulate the behavior of the biological system with various doses of a drug or their combination to test the efficacy and possible side effects of the suggested treatment.

CASE STUDY:

WE SUCCESSFULLY PREDICTED THAT METFORMIN, A DIABETES DRUG, CAN AFFECT THE WAY DNA IS PACKED, WHICH HAS A PROFOUND EFFECT ON MANY OTHER BIOLOGICAL FUNCTIONS, TOO.

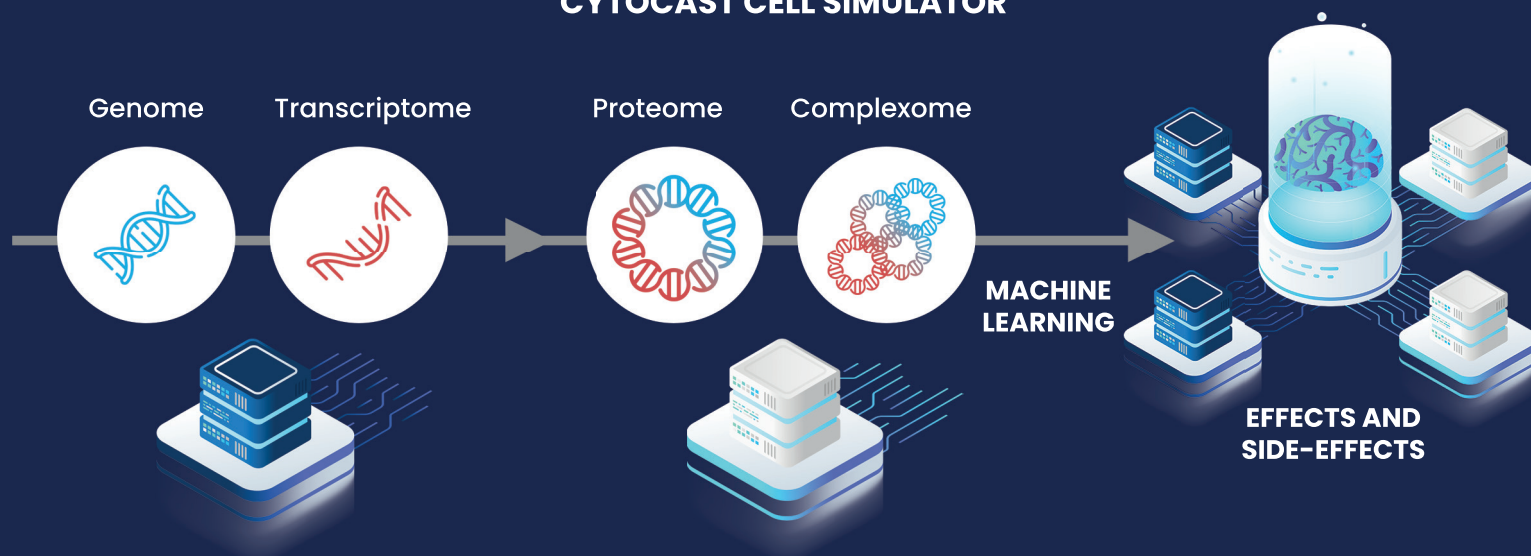
JOIN OUR PARTNERSHIP PROGRAM!

WHAT WE OFFER

- as part of a pilot project, we provide a digital evaluation of a drug candidate before a clinical trial
- giving you a unique insight into drug-effect mechanisms
- help you to find new applications for already approved drugs through digitalized drug repositioning
- fine-tune dosage recommendations and test them on 17 tissue types to assess system-wide effects side-effects when applying one drug or multiple drugs simultaneously



CYTOCAST CELL SIMULATOR



SHARE OF BUDGET
21,5%

5000-10000
COMPOUNDS

**DRUG
DISCOVERY**

3-6
years

250

PRECLINICAL

SHARE OF BUDGET
65,5%

5

CLINICAL

6-7
years

FDA REVIEW

SHARE OF BUDGET
3,5%

1

**SCALE UP TO
MANUFACTURE**

0,5-2
years

CYTOCAST DIGITAL TWIN™

Leveraging our expertise in systems- and computational biology, and all available knowledge of how complex cellular processes work, we created the Cytocast Digital Twin™, a high-resolution model of individual patients. At Cytocast, we treat the patient, not the statistics. The Cytocast Digital Twin offers the possibility to computationally test any combination or dosage of treatments and find the most suitable therapy for the patient.

TECHNOLOGY

The Cytocast Digital Twin™ technology is based on our Cytocast Simulated Cell™ which is the most detailed model of human cells. We integrate and process a full spectrum of genomics, transcriptomics, proteomics, and single-cell data coming from our highly curated in-house database and individual patients to understand how perturbations, like diseases or drugs, affect cellular health. Our simulations result in a tissue-specific report showing the newly formed protein complexes linked to phenotypes and possible side effects. Our reports provide decision support to the doctors in selecting the best treatment for each patient.

IF YOU WANT TO TAKE YOUR PRECISION MEDICINE SERVICES TO THE NEXT LEVEL, JOIN OUR MISSION, AND BECOME A PARTNER!

WHAT WE OFFER

- if you are a **diagnostics company providing diagnostic data** (genetic, proteomics, and transcriptomics data), we help you turn your data into valuable therapeutic decision support
- if you are a **medical device company**, our tool can translate your output data into an easy-to-understand format that provides diagnostic value to the user
- if you are a **personalized treatment provider**, increase your patient base by targeting a wider range of diseases and testing multiple drugs

SIMULATION

The Cytocast Digital Twin™, as a Medical Decision Support System



1

Biological data collected from a patient is merged with our extensively curated multi-omics database, including all available information on how cells work.

2

The Cytocast Simulation Engine™ creates the high-resolution digital replica of the patient's 17 tissue types.

3

We test several treatment options on these digital cells and prepare a report including their effects, dosage recommendations, and possible system-wide side-effects

4

After regulatory clearance, the Cytocast Digital Twin™, as a medical decision support system, will give doctors an additional base for personalized therapy selection



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