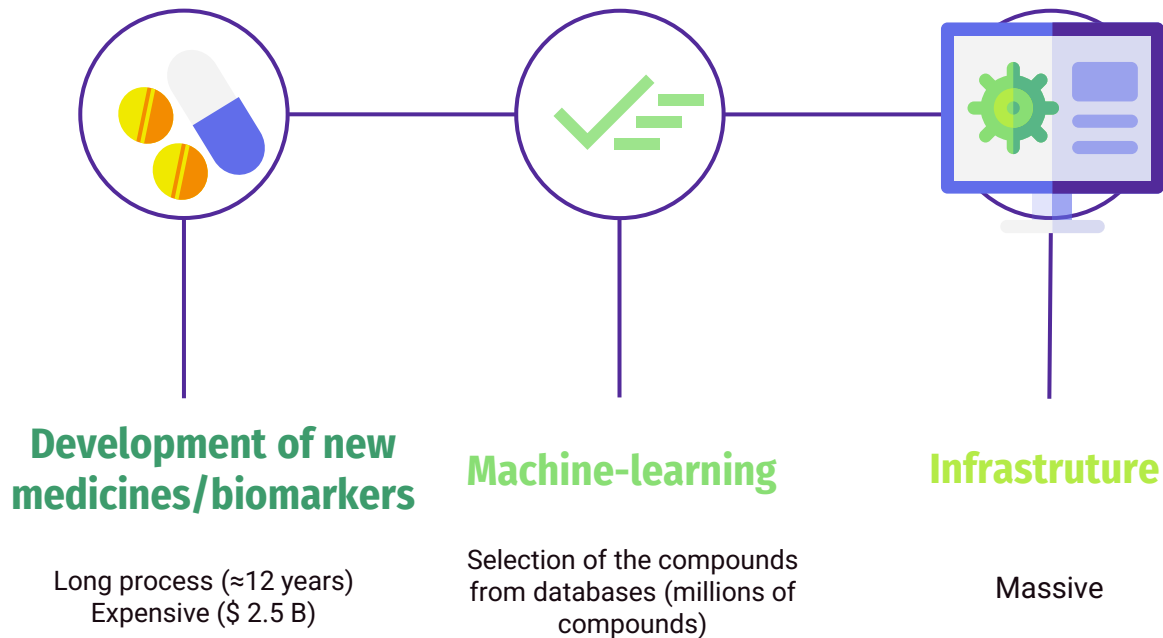


# New Approach

A graphic of a mortar and pestle. The mortar is a dark grey bowl shape. The pestle is a thin grey line with a small circle at the top. To the right of the mortar, there are two rows of red binary code (0s and 1s).

Machine learning for Pharma & Nutraceuticals

# Problem





# Solution

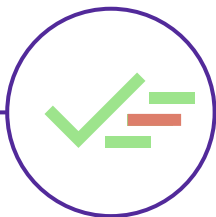


iMilkWay



## Development of new medicines/biomarkers

Long process ( $\approx 5,5$  years)  
Expensive ( $\sim \$ 300$  million)



## Machine-learning

Selection of the **most promising** compounds from databases  
(millions of compounds)



## Infrastructure

Massive



**iMilkWay** – an improvement of the **WAY** of **Mathematical Interpretation** of the **Logistic rankK**



**What does this  
method do?**

# Product

**Machine learning** technique for **virtual screening** of drug/nutraceutical databases to **choose** the most promising ones



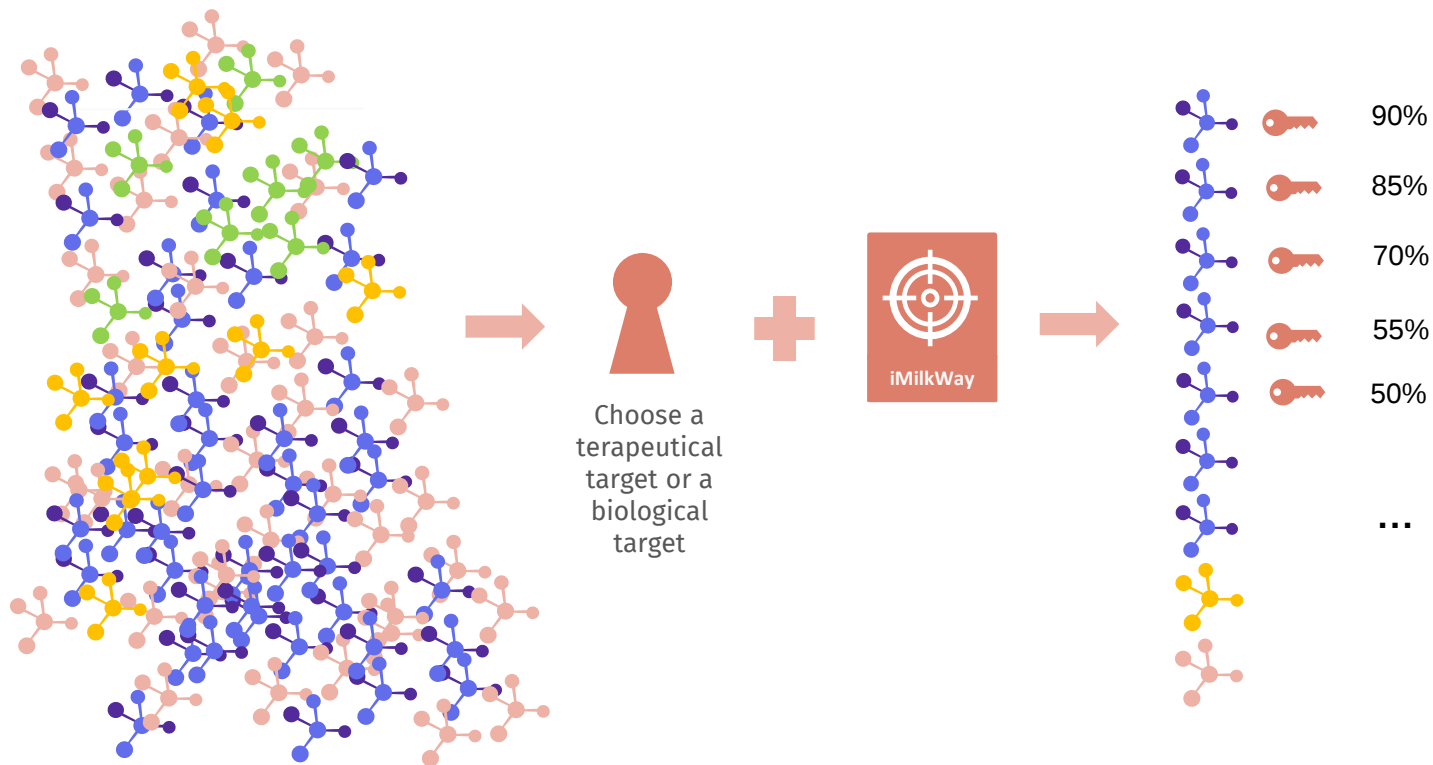
Propose the most promising "**key**"  
(drug or nutraceutical)  
to its "**lock**"   
(Therapeutic or biological target)



**High Performance** (good results in a short time!)



# Produt-Scheme





DISEASE



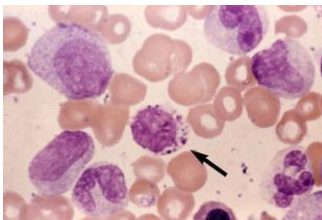
TARGET



PROPOSALS



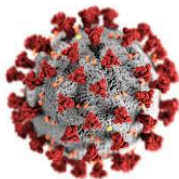
### Chronic myeloid leukaemia



Cyclin-dependent kinase  
type 2 - CDK-2

**Pramocaine** <sup>[1]</sup>  
**Prochlorperazine** <sup>[2]</sup>  
**Trifluoperazine** <sup>[2, 3]</sup>

### SARS-CoV-2



SARS-CoV-2

**Benzoic acid** - SARS  
**Ribavirin** - SARS  
**Taribavirin** - SARS  
**Tetrachlorodecaoxido\***(08/04/2020)



1. Hardt, C., Beber, M. E., Rasche, A., Kamburov, A. and Herwig, R. 2019, ToxDB. Vertebrate Genomics Department at the Max Planck Institute for Molecular Genetics in Berlin, Germany.  
2. Qi, L. and Ding, Y. 2013, Science China Life Sciences, 56(11), 1020-1027.  
3. Feng, Z., Xia, Y., Gao, T., Xu, F., Lei, Q., Peng, C., Yang, Y., Xue, Q., Hu, X., Wang, Q., Wang, R., Ran, Z., Zeng, Z., Yang, N., Xie, Z. and Yu, L. 2018, Cell Death & Disease, 9(10), 1006.



DISEASE



TARGET

### Depression



Selective serotonin reuptake inhibitors (5-HT1A) - P31645

### Migraine



Triptans and derivatives - P28222, P28221

### Obesity



Receptor agonists MC-4R - P31645



DISEASE



TARGET

### Hyperglycemia



AMP-activated protein kinase (AMPK) - Q9Y478 - Biguanides

### Hypercholesterolemia



3-hydroxy-3-methylglutaryl-coenzyme A reductase inhibitors (HMG-CoA reductase)

### Erectile dysfunction

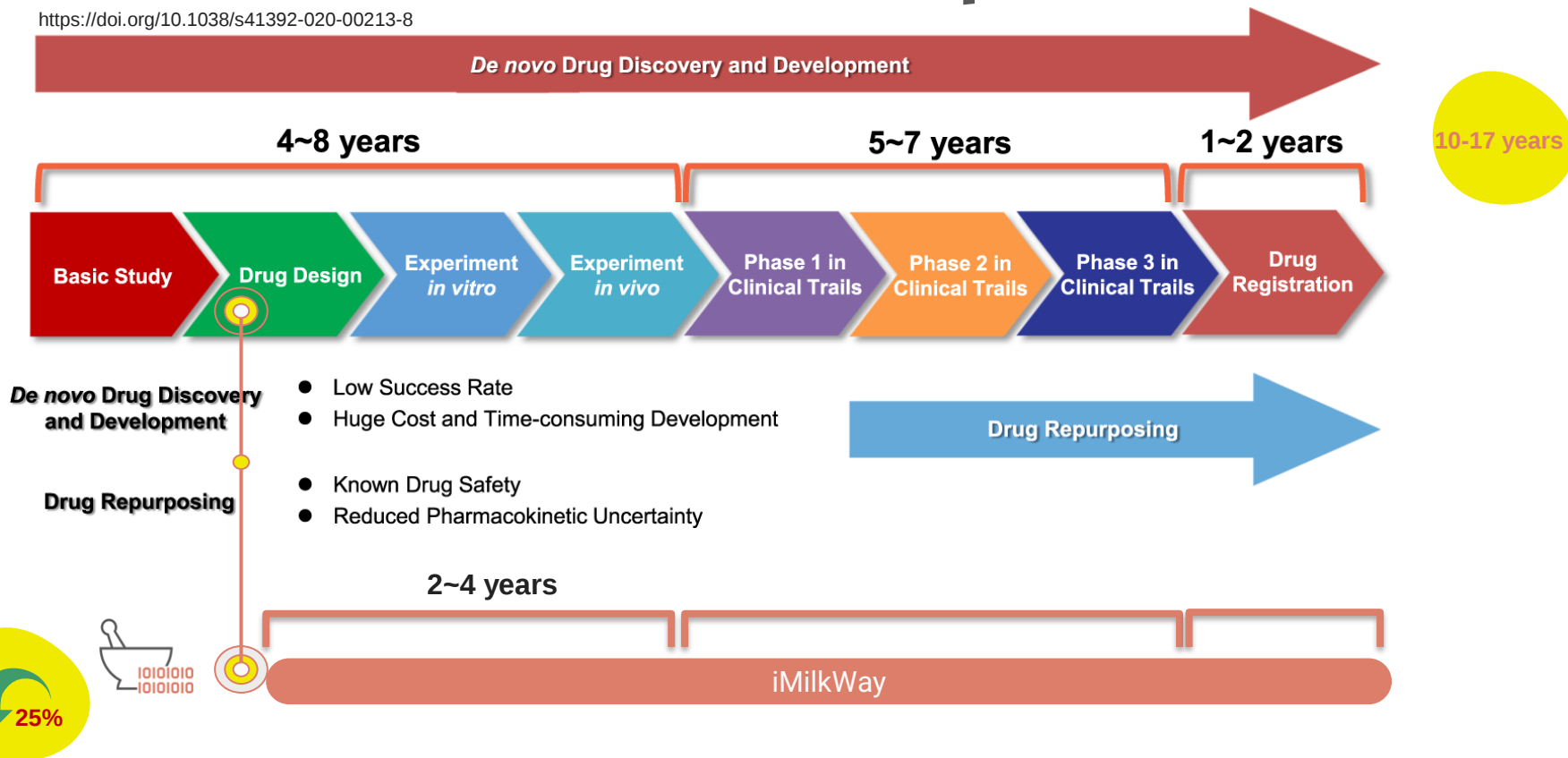


Phosphodiesterase inhibitors -type 5 - 076074



# Customer Value Proposition

<https://doi.org/10.1038/s41392-020-00213-8>





# Market

## Best 5 biggest biotechnology companies

### **Novo Nordisk A/S**

Revenue (TTM): **\$24.31 billion**  
Net Income (TTM): \$7.68 billion  
Market Cap: \$293.94 billion  
1-Year Trailing Total Return: 23.38%

### **Moderna Inc.**

Revenue (TTM): **\$20.68 billion**  
Net Income (TTM): \$11.76 billion  
Market Cap: \$72.95 billion  
1-Year Trailing Total Return: -35.59%

### **BioNTech SE (BNTX)**

Revenue (TTM): **\$20.37 billion**  
Net Income (TTM): \$11.35 billion  
Market Cap: \$40.91 billion  
1-Year Trailing Total Return: -40.54%

### **Regeneron Pharmaceuticals Inc.**

Revenue (TTM): **\$13.71 billion**  
Net Income (TTM): \$5.37 billion  
Market Cap: \$78.53 billion  
1-Year Trailing Total Return: 16.44%

### **Vertex Pharmaceuticals Inc.**

Revenue (TTM): **\$8.7 billion**  
Net Income (TTM): \$3.27 billion  
Market Cap: \$74.85 billion  
1-Year Trailing Total Return: 35.91%



# Market

## Best colleges and universities in the world for clinical and industrial drug development

**Massachusetts Institute of Technology (MIT) - USA**

Revenue (2023): **\$4,655 million**  
Expenses (2023): **\$4,338 million**

**University of Oxford - UK**

Revenue (2021/22): **£2.78 billion**  
Expenses (2021/22): **£2.90 billion**

**University of California, San Francisco (UCSF) - USA**

Revenue (2021/22): **\$9,45 billion**  
Expenses (2021/22): **\$8.77 billion**

**ETH Zurich - SWITZERLAND**

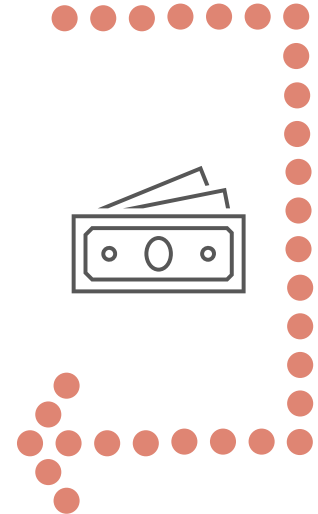
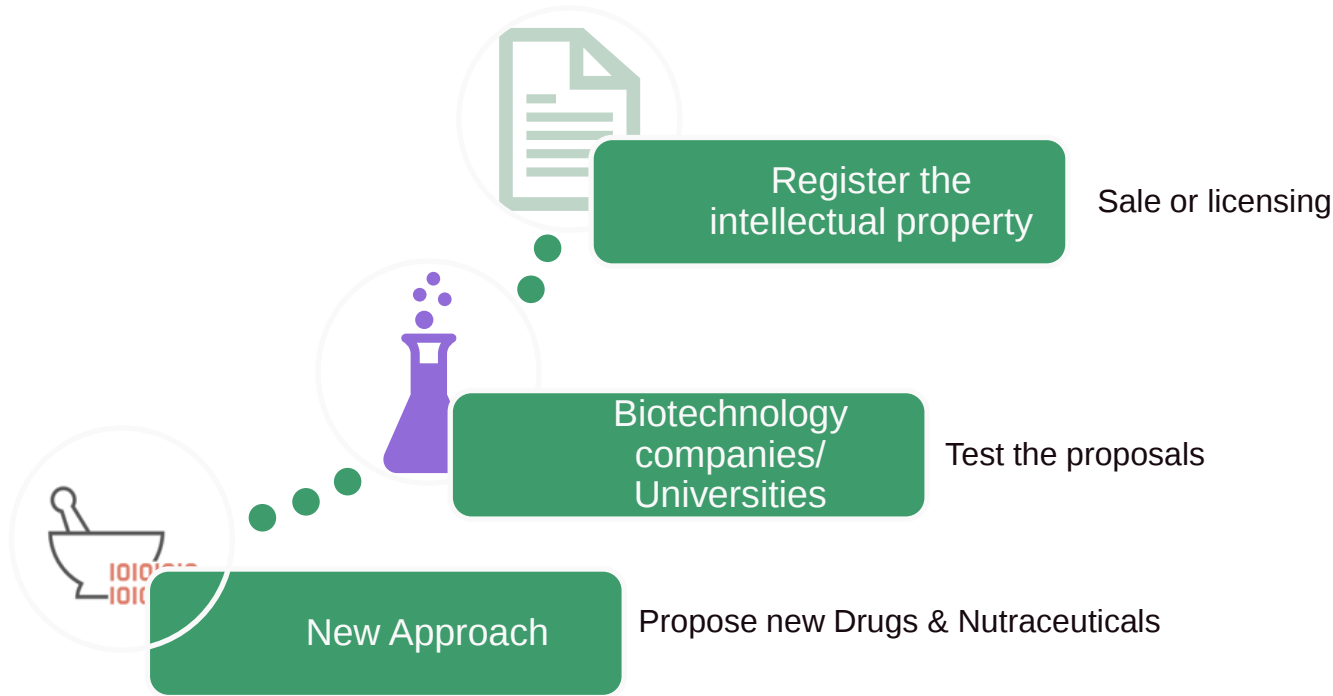
Revenue (2022): **CHF 1,804 million**

**Shanghai Jiao Tong University - CHINA**

Revenue (2021): **¥15.8 B**



# Business Model



# PARTNERSHIP





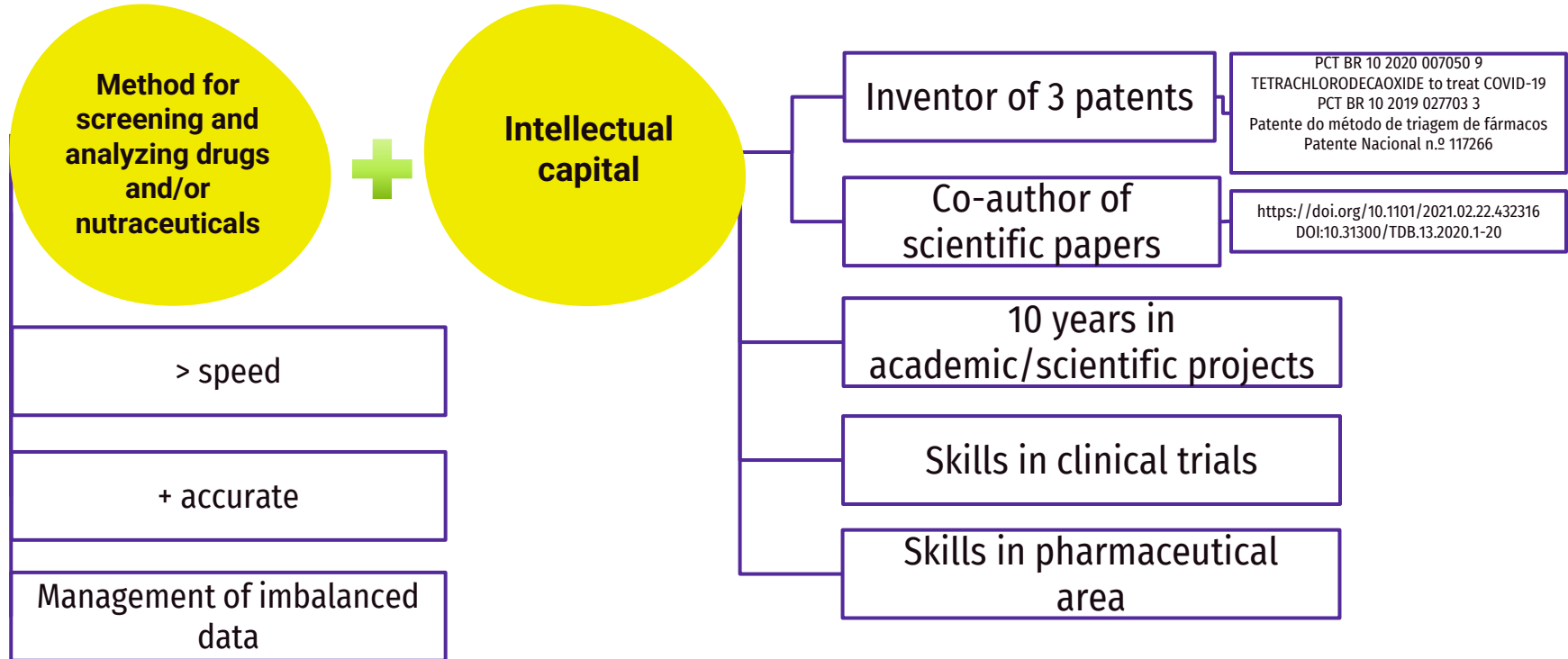
# Financial support to

Pay salaries

Purchase services and software licenses

Pay fees for intellectual property

# Competitive Advantages



# Team & Founder's Dream



**PhD, MSc Bioinformatics**

**MSc Pharmaceutical Sciences**

**Experience in IP and knowledge transfer**



**MSc Pharmaceutical Sciences**

**Postgraduate in Management and Direction of Health Services**

**Training and monitoring clinical trials**

**Make the DIFFERENCE in the HEALTH MARKET**  
**NOVEL and EFFICIENT AI techniques (own PATENT)**

***Thank you!***

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