



Vital 3D Technologies

Vidmantas Šakalys, CEO

Company

Mission: technology for 3D printing of human organs (kidney)

Founded: November 30, 2021

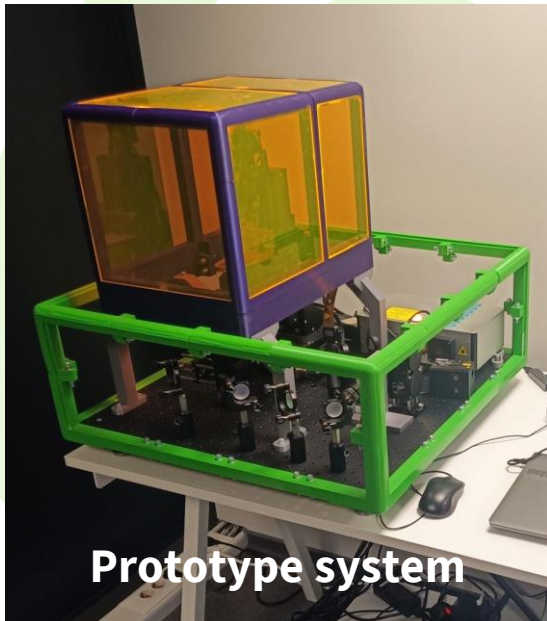
Number of employees: 8

Investment raised: 2 MEUR

Patents: 3 pending

Products: worlds fastest bioprinter Vital Light 3D

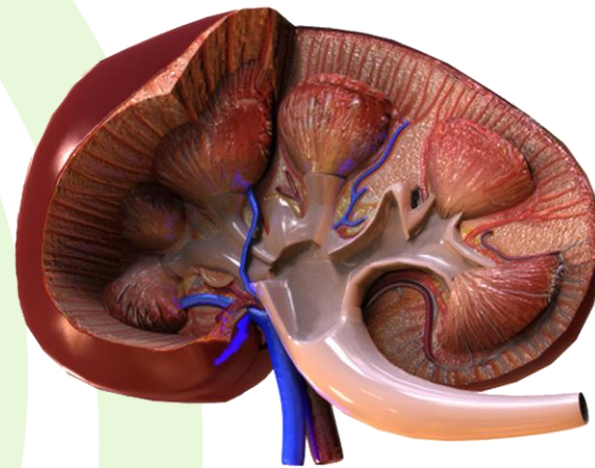
Services: R&D of medical devices (stents, micro-fluidics, lab-on-chips, organoids)



Vision

To be **3D bio-printing** technology leader in personalized medicine providing services and tools for **personalized patient therapies**, including printing natural size vital **human organs** with a **complex vascular system**.

Developing world's **fastest** technology to enable printing full size **kidney in 24 hours**.



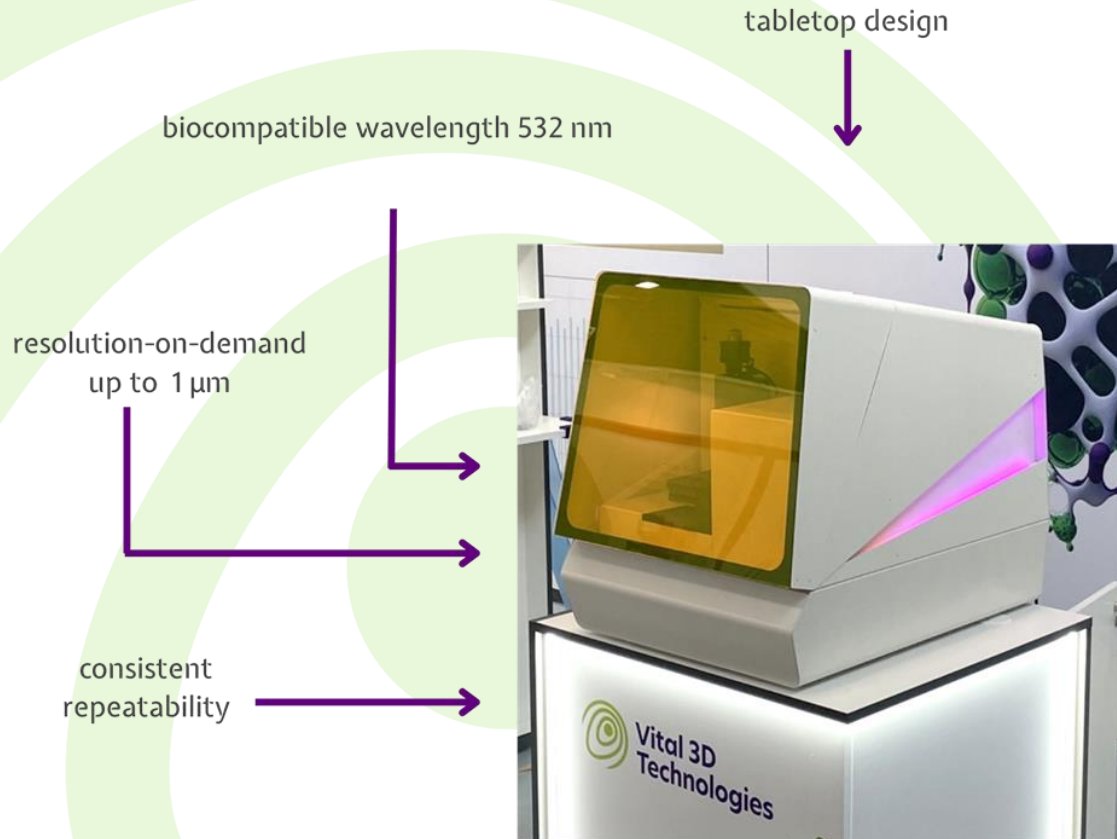
Cooperating with world leading institutions to create **advanced dense tissue 3D printing** processes.

Enable wider usage of **personalized medicine** by introducing 3D printing technology to the hospitals.

Vital Light 3D

Vital Light 3D bio-printer is based on unique 3D printing technology **FemtoBrush**.

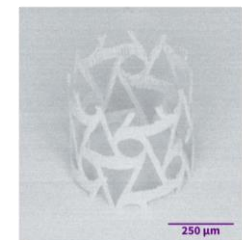
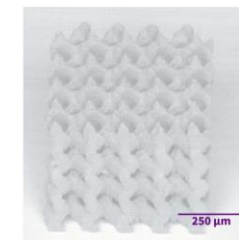
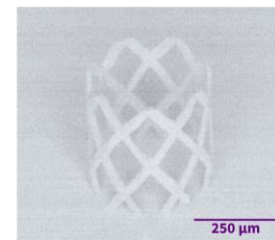
There are **3 patents pending** for this technology.



cold processing,
nozzle-free
technology

Wavelength	532 nm
Size	Tabletop, 60 x 60 x 70 cm
Build volume	50 mm x 50 mm x 100 mm
Type of technology	Two Photon Polymerization (2PP) Stereolithography
Feature size	XY - $\sim 1 \mu\text{m}$, Z - $\sim 5 \mu\text{m}$

Technology stands out due to its extraordinary printing efficiency thanks to **resolution-on-demand** capability. This makes Vital Light 3D **the fastest bio-printer** in the market with printable feature size down to $\sim 1 \mu\text{m}$.



Future plans

Development of **fast and precise** printing technology **FemtoBrush** to enable 24 hour kidney printing.

Adoption of existing and development of proprietary **printing materials**.

Cooperation and R&D with worlds bio-tech leaders on **tissue engineering**.

Laboratories for kidney printing located by the hospitals.

Step 1

Step 2

Step 3

Step 4

		2023	2024	2025	2026	2027	2028	2029	2030	2031
Microdevices	Stent	Proof of concept	Partnerships	Comercialization						
	Microfluidics	Proof of concept	Partnerships	Comercialization						
	Microneedles		Proof of concept	Partnerships	Comercialization					
Lab-on-chip	Cancer models			Proof of concept	Partnerships	Partnerships	Comercialization			
	Tissue models					Proof of concept	Partnerships	Partnerships	Comercialization	
	Organ-on-chip							Proof of concept	Partnerships	Partnerships
Bionic organs	Cornea		Proof of concept	Partnerships	Comercialization	Comercialization				
	Pancreas			Proof of concept	Partnerships	Partnerships	Comercialization	Comercialization	Comercialization	
	Kidney				Partnerships	Partnerships	EU Project	EU Project	EU Project	Proof of concept

Looking for partnerships

1. Joint development of improved **artificial kidney/dialysis machines filtering technology**.
2. Joint development of **thick tissue models** incorporating **dense vascular systems**.
3. Joint development of **photosensitive printing materials** for advanced bio-printing techniques.
4. Joint development of **micro-medical devices with advanced capabilities** – stents with integrated sensors, 3D micro-fluidic chips, Organ-On-Chip.





Vital 3D Technologies

Let's build personalized medicine together!