



# A New Discovery in Every Chip

- INITIO CELL provides the unique solution of DR-CHIP for drug development.
- DR-CHIP can enable pharma/biotech companies accelerate their drug development via high throughput.
- Unlike existing solutions, DR-CHIP can determine single and combinatorial drug dose response, creating value for both diagnostics and therapy.
- We are looking for funding and B2B.

# Why now?

For the first time in history, FDA has allowed a clinical trial to begin based on data acquired using OOC. No animal testing was required.

USA and many countries have begun to enact alternative methods that can determine drug effects and side effects without animal testing.

**RESEARCH ARTICLE**

**ADVANCED  
THERAPEUTICS**  
www.advtherap.com

**Classical Complement Pathway Inhibition in a  
“Human-On-A-Chip” Model of Autoimmune Demyelinating  
Neuropathies**

117<sup>TH</sup> CONGRESS  
1<sup>ST</sup> SESSION

# H. R. 2565

To amend the Federal Food, Drug, and Cosmetic Act to allow manufacturers and sponsors of a drug to use alternative testing methods to animal testing to investigate the safety and effectiveness of a drug, and for other purposes.

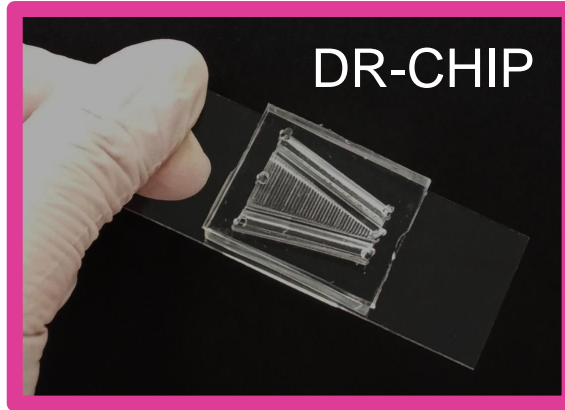
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IN THE HOUSE OF REPRESENTATIVES

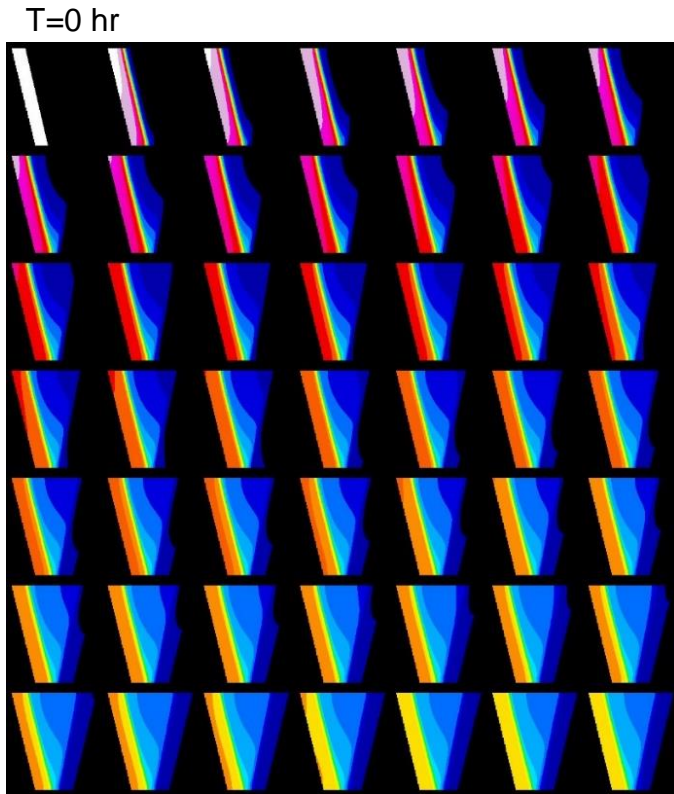
APRIL 15, 2021

Mr. BUCHANAN (for himself, Mrs. LURIA, Ms. MACE, Ms. SHERRILL, and Mr. BRENDAN F. BOYLE of Pennsylvania) introduced the following bill; which was referred to the Committee on Energy and Commerce

- Determination of drug dose response is time and resource consuming.
  - Eight or more concentrations to be tested
- Extra steps are needed to move from *in vitro* (the lab) to *in vivo* (humans).
  - Need to go from mg/ml to mg/kg



# Solution

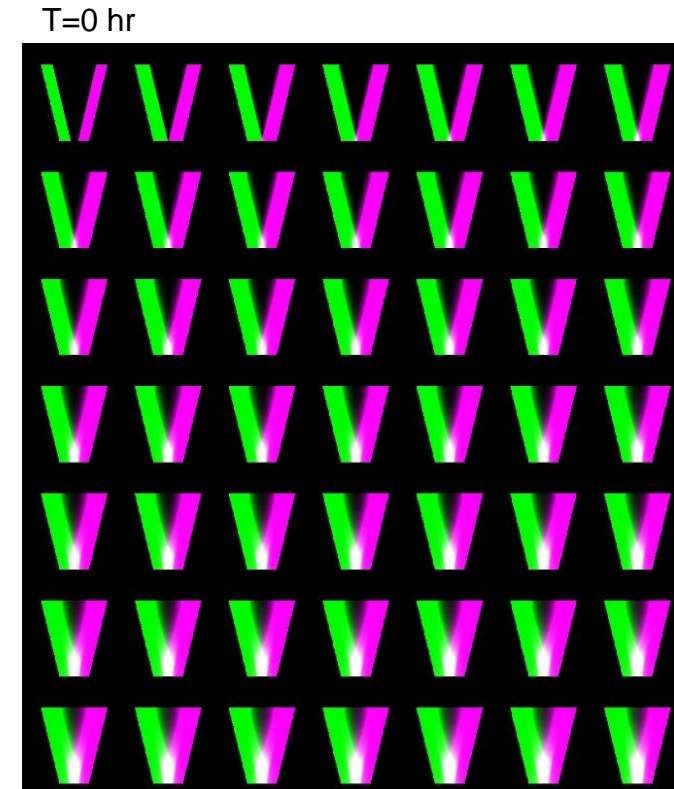
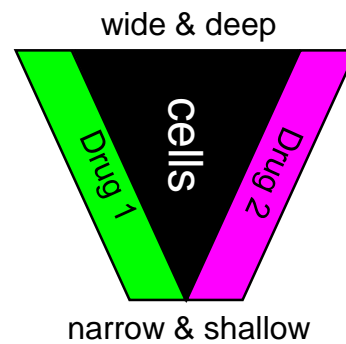


T=0 hr

T=48 hr

Single drug

Simultaneously test multiple drug doses & combinations



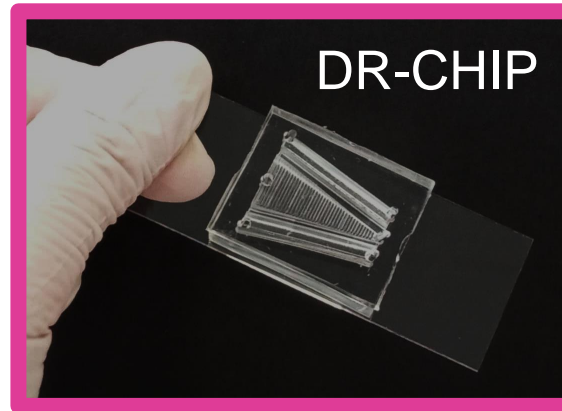
T=0 hr

T=48 hr

Two drugs



**INITIO CELL**



# Solution

- Reduce number (cost) of OOC to be used 10+ fold
- Reduce time costs 10+ fold
- Reduce material costs 2+ fold
- Reduce research personnel costs 2+ fold
- Test a wide range of drugs (small molecules, antibodies, antibiotics, agrochemicals)

*compared to other OOC products*

# Competition

Body on-a-Chip			Tissue interface on-a-Chip			Parenchymal tissue on-a-Chip					
Scientific founders	Selected products	Scientific founders	Selected products	Scientific founders	Selected products	Scientific founders	Selected products	Scientific founders	Selected products		
Hesperos® Michael Shuler James Hickman	Multi-Organ Chip (2, 4 organs) (5-10 organs)	cnBio innovations Linda G Griffith	LiverChip® LiverChip® 36	Hepregen Sangeeta Bhatia	HepatoPac® HepatoMune™	TARA Milica Radisic Gordana Vunjak-Novakovic	Cardiac Blowire™ II AngioChip®	organovo™ Gabor Forgacs Keith Murphy	ExVive3D™ Liver ExVive3D™ Kidney®	μOrgano Kevin Healy	μOrgano
TiSSUSE Uwe Marx	2-Organ-Chip (2-OC) 4-Organ-Chip (4-OC) Human-on-a-Chip (HoC)®	DRAPER Joseph Charest	Microphysiological Systems	emulate Donald Ingber	Lung on-a-Chip Airway on-a-Chip Gut on-a-Chip Kidney on-a-Chip Bone Marrow on-a-Chip	MIMETAS the organ-on-a-chip company Jos Joore Paul Vulto Thomas Hankemeier	OrganoPlates®	Aspect biosystems Tamer Mohamed Konrad Walus Sam Wadsworth Simon Beyer	Lab-on-a-Printer™ 3DBioRing™ Airway	EHT Technologies Thomas Eschenhagen	Engineered Heart Tissue (EHT)
AlveoliX Olivier Guenat	Lung-on-a-chip array	SYNVIVO Kapil Pant B. Prabhakar Pandian	SynTumor SynBBB SynRAM SynTox	NORTIS Thomas Neumann	Kidney on-a-Chip Vessel on-a-Chip	Bio G. Wesley Hatfield Christopher Hughes Steven George Abraham Lee	Vascularized micro-organ (VMO) platform	Quorum Axel Guenther	Artery on-a-Chip	AIM BIOTECH Roger Kamm	3D cell culture chips
Hepregan Sangeeta Bhatia	HepatoPac® HepatoMune™	TARA Milica Radisic Gordana Vunjak-Novakovic	Cardiac Blowire™ II AngioChip®	organovo™ Gabor Forgacs Keith Murphy	ExVive3D™ Liver ExVive3D™ Kidney®	μOrgano Kevin Healy	μOrgano	Aspect biosystems Tamer Mohamed Konrad Walus Sam Wadsworth Simon Beyer	Lab-on-a-Printer™ 3DBioRing™ Airway	EHT Technologies Thomas Eschenhagen	Engineered Heart Tissue (EHT)
insphero Jan Lichtenberg Jens M. Kelm Wolfgang Moritz	3D Insight™ Liver 3D Insight™ Islet 3D Insight™ Tumor	myriamed Wolfram-Hubertus Zimmermann	3D Cardiac Systems	3D Biomatrix™ Nicholas Kotov	PERFECTA3D® HANGING DROP PLATES	AxaSim Michael Moore	Nerve-on-a-Chip™	HuRel Corporation Greg Baxter Robert Freedman	HuRelHuman™ HuRelFlow™ HuRelTox™ HuRelFlow™	Xona Noo Li Jeon Carl W. Colman Anne Taylor	Standard / Triple Chamber Neuron Device
Kiyatec Matthew R. Gevaert	3DKUBE™	MicriBrainBT Bernadette Bung	Neuronal Diode	VAX DESIGN William L. Warren	MIMIC® Technology	Jananda Margaret Magdesian	Neuro Device				

Only DR-CHIP can determine single and combination drug dose response in a cost-effective way

**Founder  
CEO**



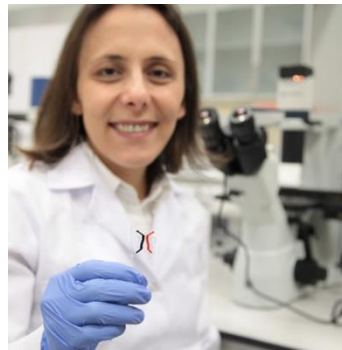
Aydin Oztunali  
PhD MBA

Competition analysis

Business  
development

Investment

**Founder  
CTO**



Prof. Devrim  
Pesen Okvur PhD

Organ-on-chip

Cancer cell biology

Image analysis

**Founder  
Scientific Advisor**



Prof. Ozden  
Yalcin Ozuysal PhD

Molecular biology of  
cancer

**Executive in Residence @  
BioPartner Leiden**



Barbara  
Brunnhuber

Business  
development

**Advisor**



Mert Firat

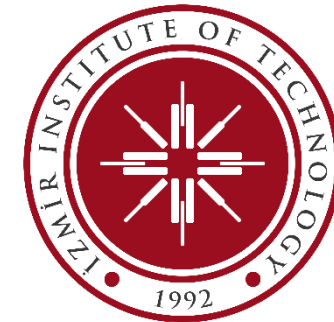
Ambassador UN  
Development  
Programme

Ashoka Fellow

SOS CHAIN



# Partners



- Organ-on-chip € 1.5B by 2028  $CAGR_{2021 - 2030} = 31\%$
- Contract Research Organization (CROs) Services Market € 118B by 2028
- Drug Discovery € 150B by 2030

# Business model

## Revenue

Contract research services

## Marketing

Direct sales

Scientific conferences

Trade fairs

## Customers

Pharma/biotech companies

Universities

Research Institutions

## Cost Structure

Personnel

R&D

Marketing

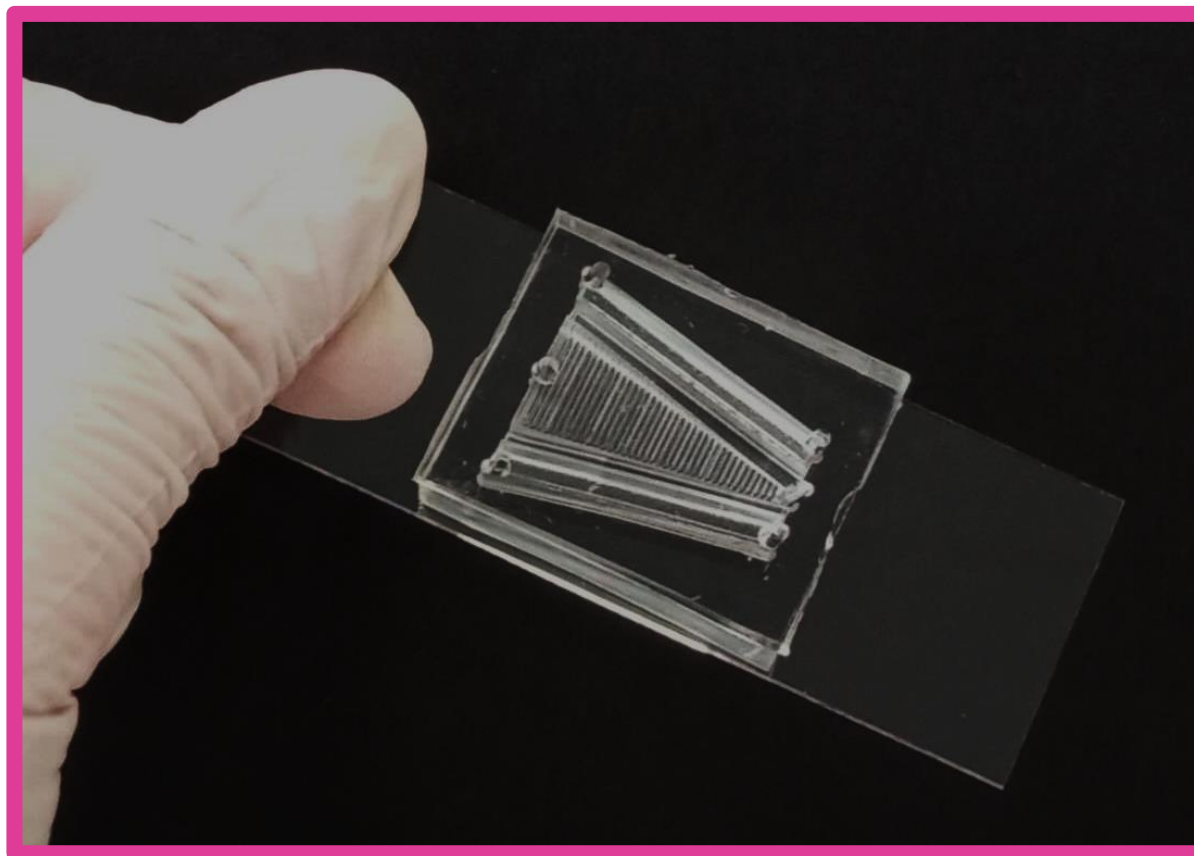
IP

Manufacturing

# Seeking 1.5 M €

<i>in thousands of €</i>	<b>Months 1-6</b>	<b>Months 7-12</b>	<b>Months 13-18</b>	<b>Months 19-24</b>	<b>Total</b>
Salaries (CEO, CTO, Researchers)	200	200	200	200	800
R&D	100	90	30	30	250
Marketing	70	60	60	60	250
IP	15	30	30	-	75
Manufacturing	15	15	30	15	75
Lab & Office	12.5	12.5	12.5	12.5	50
<b>Total</b>	<b>412.5</b>	<b>407.5</b>	<b>362.5</b>	<b>317.5</b>	<b>1500</b>

Exit: Acquisition by a leading pharma/biotech company, Roche, Merck, GSK, etc.



***Thank you***  
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