



Platform technology to modulate inflammation quickly at home using a wearable ultrasound device

[iniabiosciences@gmail.com](mailto:iniabiosciences@gmail.com)



[www.iniabiosciences.com](http://www.iniabiosciences.com)



# Patient journey

Global burden

100,000



Kidney transplants every year

# Patient journey

Global burden

100,000

Kidney transplants every year

Standard of care

3-6MO

Frequency of post-transplant health  
checks

# Patient journey

Global burden

100,000

Kidney transplants every year

Standard of care

3-6<sub>MO</sub>

Frequency of post-transplant health  
checks

Problem

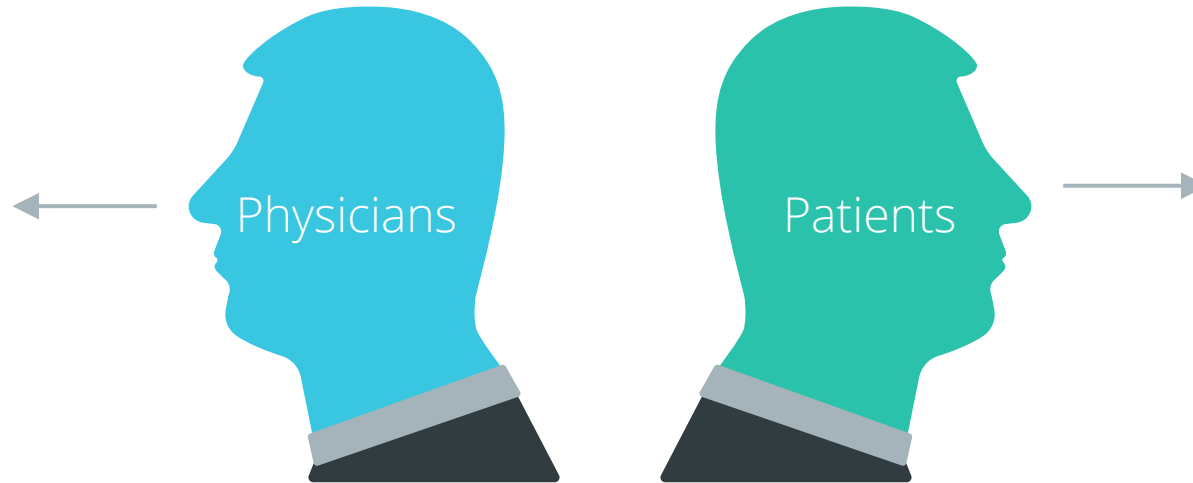
30%

Risk of rejection

# Problem

## Problem 01

Patients are **not monitored** frequently enough to detect and prevent rejection.



## Problem 02

Immunosuppressant drugs are expensive and have **dangerous side effects**, such as infections, cancers, etc.

# Our solution

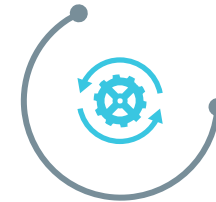
Non-invasive treatment with real-time monitoring



Confidential Wearable Device Design  
*Patent in progress*

# Our solution

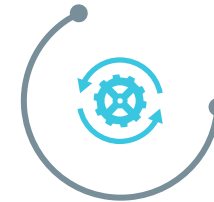
Non-invasive treatment with real-time monitoring



Ultrasound  
stimulation

# Our solution

Non-invasive treatment with real-time monitoring



Ultrasound  
stimulation

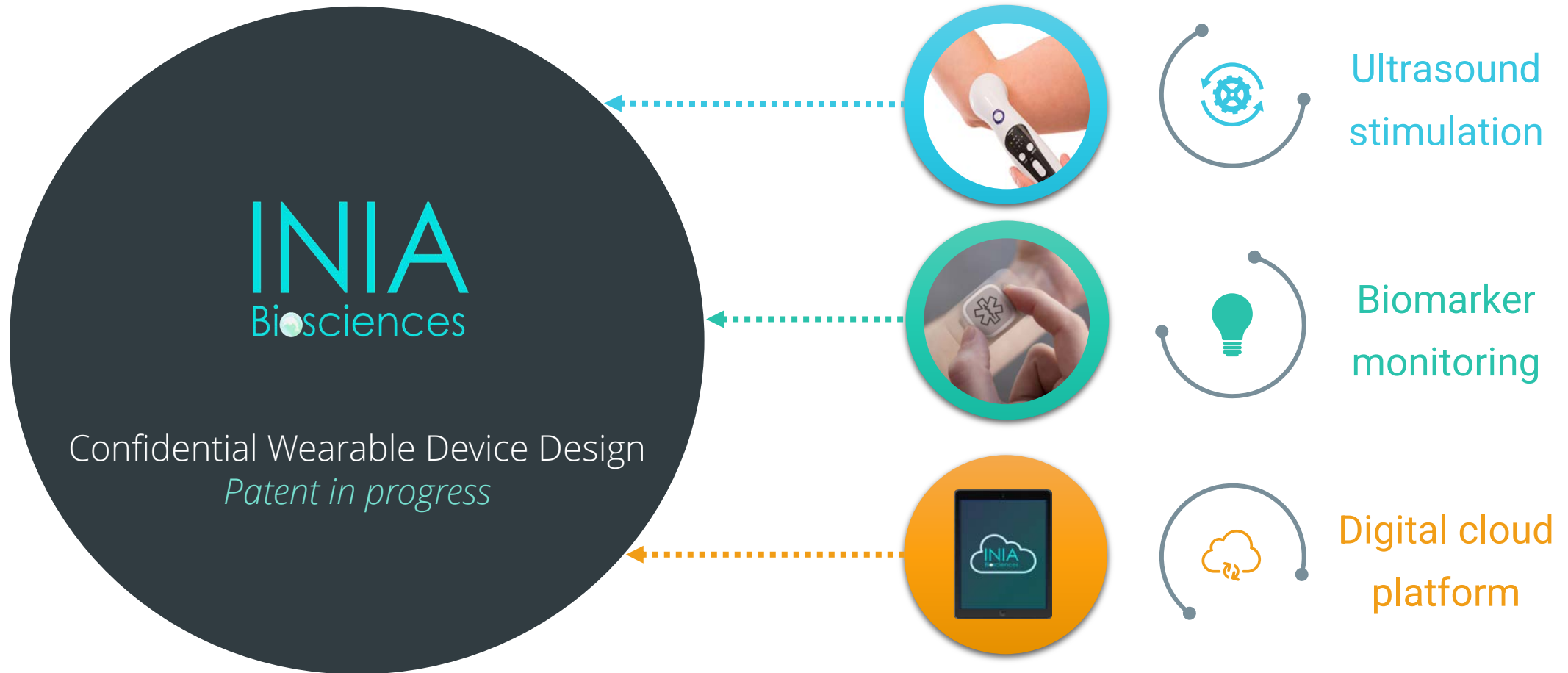


Biomarker  
monitoring



# Our solution

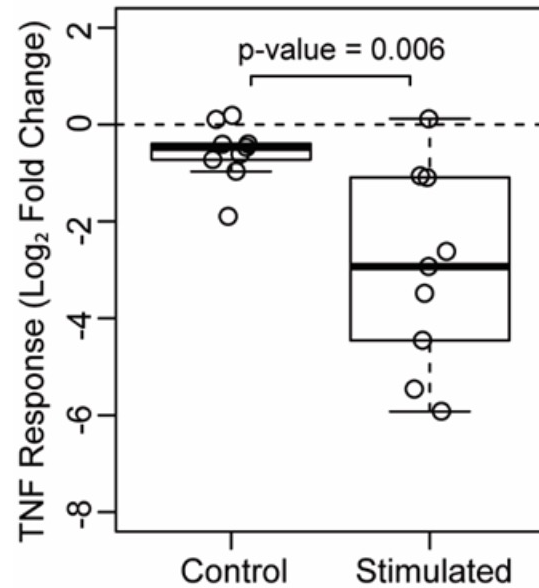
Non-invasive treatment with real-time monitoring



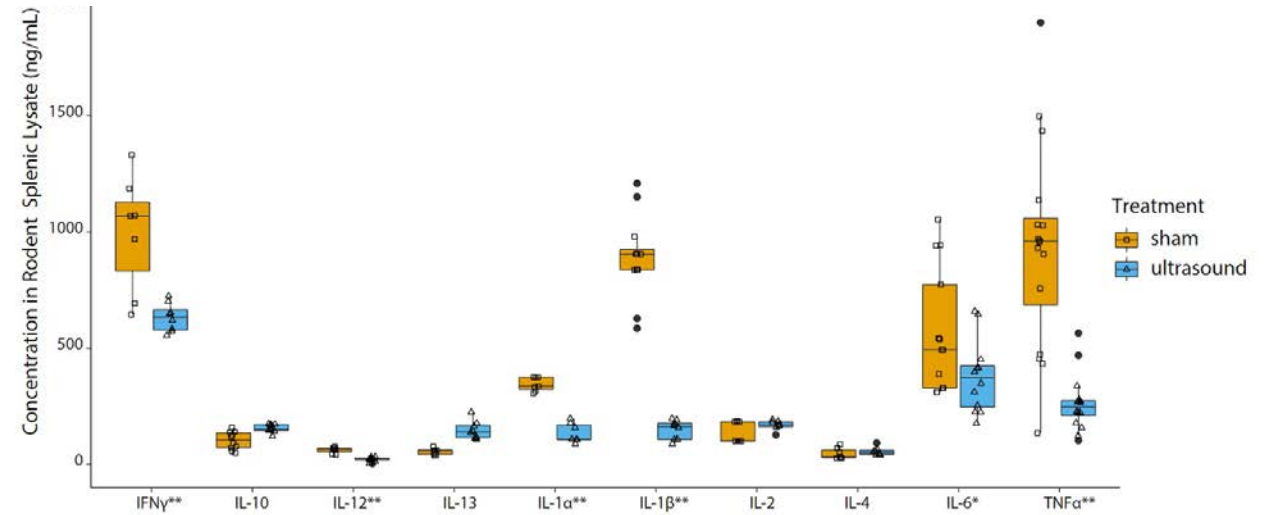
# Scientific Rationale

Ultrasound stimulation to reduce cytokines

Human



Mouse model



Graham, R.S. et al. medRxiv 2020

# Market size

\$61.3B

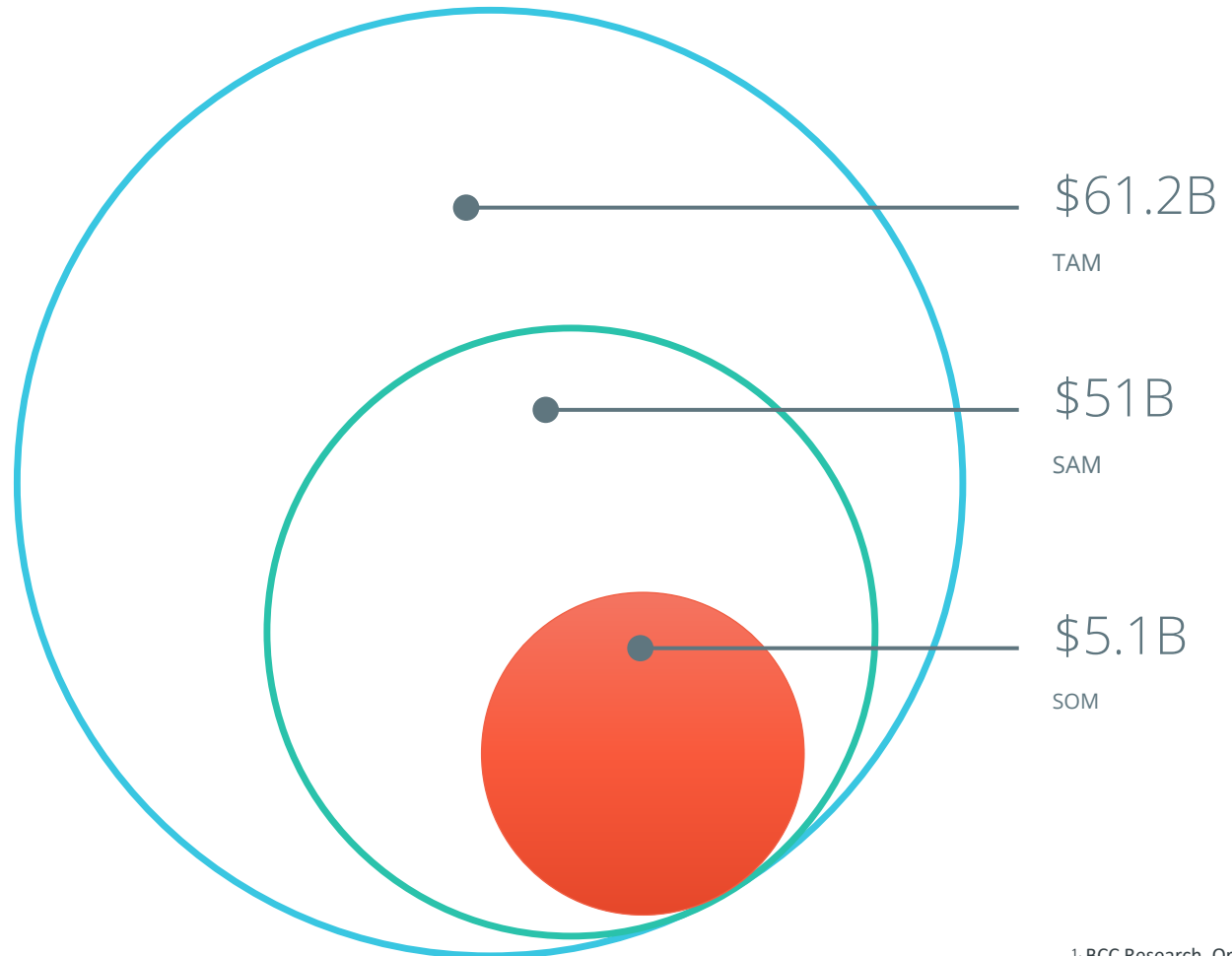
Immunosuppressant drugs + diagnostics

7.4%

CAGR

\$97B<sup>1</sup>

By 2031



<sup>1</sup> BCC Research, Organ and tissue transplantation

# Competitors

	 	Drugs	  	
MONITORING	✓			✓
TREATMENT		✓	✓	✓
AI-BACKED				✓
HOME-USE		✓	✓	✓
NO SIDE EFFECTS			✓	✓

# Competitive advantage



## Non-invasive treatment

No risk for over-suppression  
Easy and fast use at home



## Real-time monitoring

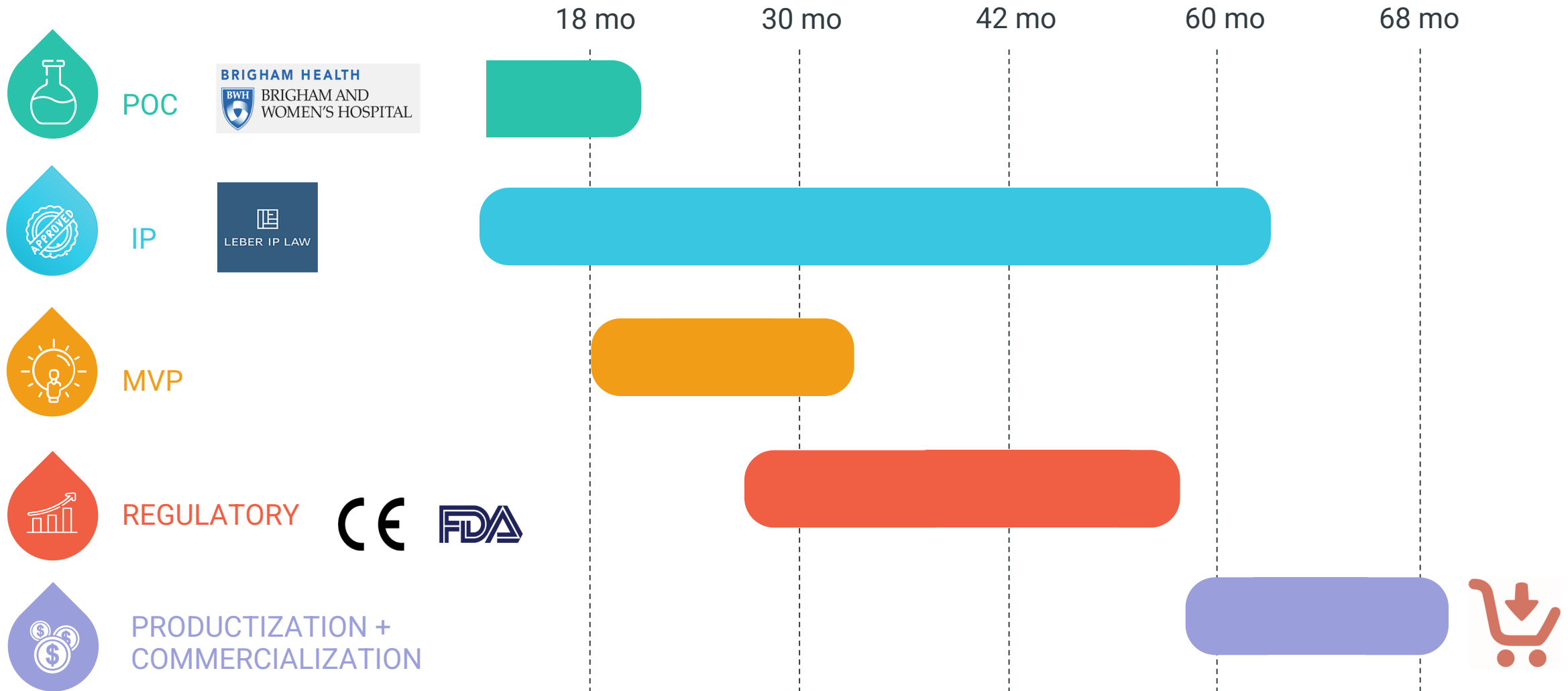
Immediate read-out  
Automatically goes to the cloud



## Digital health platform

Communication with doctors  
Saves everyone time

# Roadmap



# Business model



# Financial projections

10-year timeline

MARKET SHARE: 12 %

NET MARGIN: 43 %





# Proof of concept



BRIGHAM AND  
WOMEN'S HOSPITAL  
HARVARD MEDICAL SCHOOL  
TEACHING HOSPITAL  
Mass General Brigham



## Parameter Optimization

Determine ultrasound device parameter



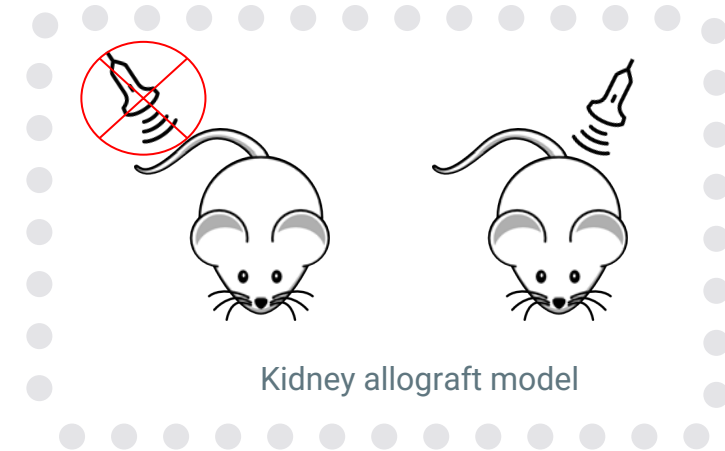
## Efficacy validation

Validate efficacy of treatment in a kidney allograft animal model



## Drug additive effect comparison

Comparison of treatment efficacy with and without immunosuppressant drugs



# Team



**SHEN NING**  
**CEO**

Shen graduate from Cornell University in 2015 is a MD/PhD with expertise in Alzheimer's disease (Tanzi lab, MGH/HMS), neurostimulation, and drug delivery (Langer Lab). She is also a Fulbright Fellow, MIT IMPACT Fellow, and BUNano Cross-disciplinary Fellow.



**PABLO ELVIRA**  
**CSO**

Pablo holds a B.S. in Chemistry and Biological Chemistry from The University of Chicago. He is currently a PhD candidate at the Department of Chemistry at Stanford University and holds several awards including the NIH predoctoral fellowship, the ChEM-H Chemistry-Biology Interface Fellow and the Center for Molecular Analysis and Design Fellow.



**DRAGANA SAVIC, MSc, DPhil, MBA**  
**CTO**

Dragana is a Fellow at University of Oxford leading metabolic research and has a DPhil in physiology. She is a trained biomedical engineer from the Technical University of Denmark and Yale University and was a lead specialist in the departmental implementation and FDA approval of a human scanner at UCSF.



# Advisory Team



Stefan Tullius, MD, PhD

Chair in Transplantation Surgery  
Brigham and Women's Hospital  
Harvard Medical School



Paul Wilks, LLB, EMBA  
Partner at Osney Capital



Arun Sridhar, PhD  
Stealth Bioelectronics, Galvani



Jean Francis, MD  
Nephrologist  
Boston Medical Center  
Brigham and Women's Hospital



Damion Corrigan, PhD  
Professor of Biomedical  
Engineering



Vinit Nijhawan  
Managing Partner  
MassVentures





# Our Mission

---

Platform technology to modulate inflammation quickly at home using a wearable ultrasound device.



[iniabiosciences@gmail.com](mailto:iniabiosciences@gmail.com)



[Iniabiosciences.com](http://Iniabiosciences.com)



[linkedin.com/company/inia-biosciences](https://linkedin.com/company/inia-biosciences)

*Inia* is a genus of river dolphins that utilizes biosonar.