

Include 3 bullets (< 30 words total) per slide – the most important messages associated with the particular slide

Team name:

Date updated:

S1: Title & Elevator Pitch/Headline	Inia is a platform technology to modulate inflammation quickly at home using a wearable ultrasound device
S2: The problem and who has it	<p>Every year, 100 000 kidney transplants are performed worldwide. And for every single patient, their immunosuppressive treatment costs the healthcare system \$30K a year. Despite the high cost and rigorous treatment regimen, 30% of patients will reject the new kidney. Additionally, these drugs have dangerous side effects, like increased risk of infections and cancer. These facts put a strain on physicians that need to frequently adjust doses, and on patients who are worried about their surgery, their transplant, and all of the current side effects and future ones that they may face.</p> <p>While organ transplant is a very complex field, it fundamentally boils down to two challenges. First, patients are not monitored frequently enough to detect and prevent rejection, and second, immunosuppressant drugs are only moderately effective and have serious side effects</p>
S3: The solution	INIA Biosciences is developing a non-invasive bioelectronic device with 3 interconnected components. First, is a device which treats the patient with ultrasound stimulation. The second is the diagnostic component that monitors the biomarker. Finally, there is a digital cloud platform that allows the physician to remotely follow all data and, in the future, get predictive readouts from our AI algorithm.
S4: Product (how it addresses the problem)	<p>The ultrasound stimulation device can suppress the immune system without the use of drugs. This is an advantage to the patients because bioelectronics leverages normal physiology to dampen the immune system, avoiding the side effects typically seen with drugs. Behind this lies many years of research and strong scientific evidence. Not going to go into the details, there is already clinical data, as you see on this slide, to prove the concept. INIA is currently patenting a novel way for patients to wear this at home, without having to know where to stimulate at all.</p> <p>The diagnostic component is similar to a glucose meter that diabetic patients use, this device will automatically give feedback and inform the ultrasound device to provide guidance on the treatment dosage.</p> <p>We will collect all clinical data for each patient and provide a predictive readout using our trained algorithm. This platform provides huge value since it will save physicians valuable time that they would normally spend sifting through records by hand.</p>
S5: Technology	Direct stimulation of the spleen via focused ultrasound stimulates the splenic nerve to activate the splenic T cells to secrete Ach. which then interact with a receptor expressed on <i>cytokine producing macrophages</i> to reduce inflammation. This is important because rejection is fundamentally an immune process and is mediated by cytokines.
S6: Competing approaches	<p>In the diagnostic space companies like Abbott, CareDx, and Natera are our largest competitors in the kidney disease monitoring field and offer multiple opportunities for future partnerships.</p> <p>Traditional pharma giants like GSK, Pfizer, and AstraZeneca are indirect competitors as they produce the immunosuppressive drugs we hope to replace. They are also a potential partner, as we aim to first become a companion device to help reduce the number of drugs used.</p> <p>Finally, our direct competitors are actually those in the field of bio-electronics; companies like SecondWave, Setpoint medical, Sonogenix, and Galvani. While more established, most of them are using invasive devices that have to be surgically implanted around a nerve, which means we can differentiate ourselves with our <i>non-invasive</i> device.</p>

S7: Traction	Just this year, we have won and been a finalist at several accelerators in Boston, Imagine IF in Oxford, Antler in Sweden, Oxford Inspires, MassChallenge in Texas, IDEA2 at MIT, was selected as a deep tech pioneer by Hello Tomorrow, shortlisted for Tech Stars, and now are finalizing our first SBIR grant.
S8: Team	<p>Our international team, with backgrounds in science, medicine, and business has a proven record of bringing a med device to the innovation pipeline of Merck.</p> <p>Shen has a background in neurostimulation and drug delivery, and I lead vision, strategy, and the medical integration.</p> <p>Pablo, our CSO, with his training as a chemical biologist from Stanford, will lead the scientific development and partnerships.</p> <p>In addition to her MBA, Dragana is a trained biomedical engineer with a PhD in Physiology from Oxford with commercialization and clinical trial experience working with MRIs, and she will lead the technology and operations as our CTO.</p>
S9: Closing	<p>INIA's mission is to ensure that no organ goes to waste.</p> <p>We believe that our ultrasound-based platform technology could set a new standard of care for non-invasive treatments. We ask you today to be a part of our medical revolution.</p>