



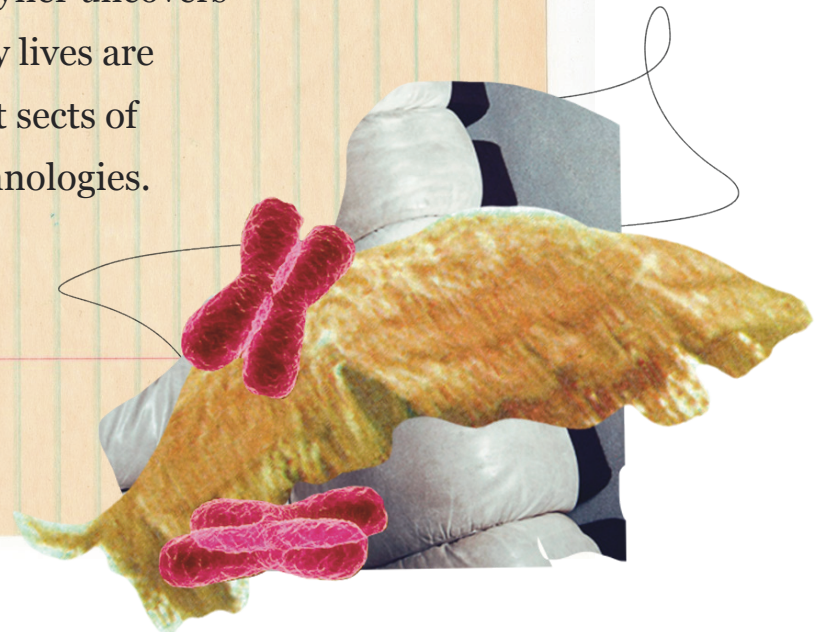
# BIOHACK THE PLANET

THIS ISN'T YOUR TYPICAL DOC-STYLE SHOW ABOUT SCIENCE.

In this one-hour travel and science series, we will seek out and explore the stories of individuals involved with the ever-changing and fast paced world of science.

Hosted by one of the most preeminent names in the world of genetic engineering, Dr. Josiah Zayner, *Biohack the Planet* isn't just a show about science, rather a show that fundamentally explores people's connections to science.

In *Biohack the Planet*, Dr. Josiah Zayner uncovers stories of real people whose everyday lives are impacted and influenced by different sects of science, medicine and emerging technologies.



## SCIENCE SHAPES OUR CULTURE ;

We live in an era in which the dissemination of scientific information is at an all-time high. However, access to resources which are required for progress in science are often alien to the average person even if the ideas are readily available. This creates mistrust by rendering science as something exclusive to lab-coat clad scholars and large organizations. Where trust is low and information is high - it's easy to feel disconnected. That's why *Biohack the Planet* aims to show its audience the engaging, intimate, responsive and even subversive personal stories of modern day scientific inquiry.

A mother, Amber Freed, who travels to Columbia for lifesaving therapy to treat her sick son. A Scandinavian chef, David Zilber, who wrangles microbes for fermenting foods at the world renowned restaurant, Noma. A scientist, Dr. He Jiankui, who genetically modified babies to prevent them from contracting HIV and winds up in jail.

## SCIENCE ISN'T CONFINED TO THE LABORATORY ;

Biology, chemistry and medicine permeate our society and culture. *Biohack the Planet* aims to show people the artistic, creative, fun and poignant parts of science that are all around us. With curiosity as a constant theme, we'll be stepping outside of traditional institutions and laboratories to explore what science really means to the masses.

It is all too common to think of science as an austere and logical process devoid of the richness of artistic endeavours. However, this is far from the truth. Science is still human and the lives of those who it touches are no less dramatic, beautiful, and heartfelt for it.

Ostensibly a show about science, *Biohack the Planet* is really about human stories. We want to expose the core beliefs of our subjects, who obsessively devote their time and energy to some kind of scientific exploration - whether it be the science of agriculture, the science of health or even the fight to disseminate science once believed to be reserved for ivory tower institutions.

Through our investigations *Biohack the Planet* will show its audience just how beautiful, daring, controversial and accessible science can be.



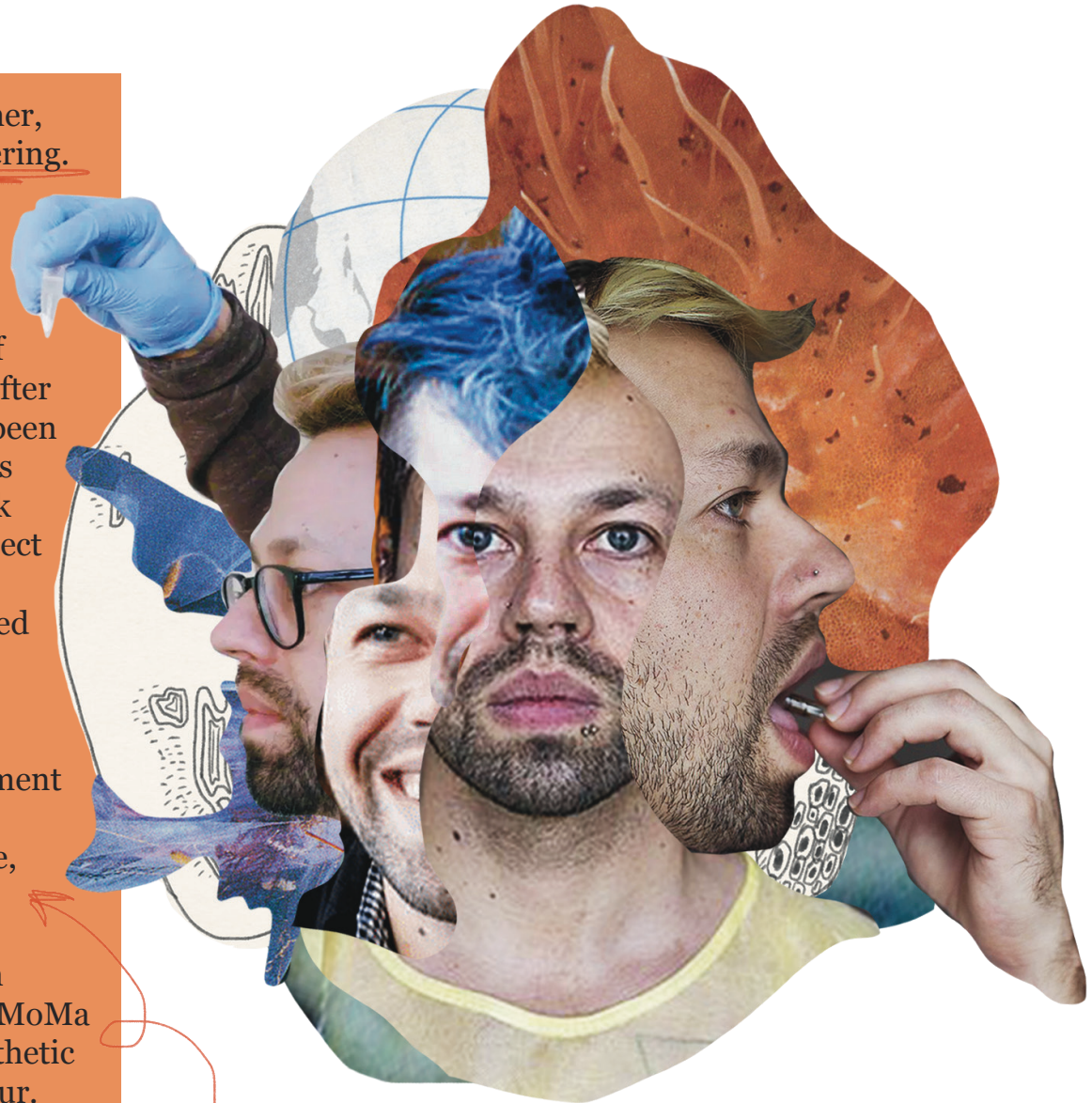
# OUR HOST, JOSIAH

*Biohack the Planet* will be hosted by Dr. Josiah Zayner, one of the most prominent names in genetic engineering.

Before pursuing his life's mission of working to bring genetic engineering to the people, Josiah gave his time and knowledge to the NASA Synthetic Biology Program. Josiah's prolific work inside and outside of the scientific system has made him a highly sought after media authority in the realm of biohacking. He has been featured in thousands of news articles as a result. His microbiome engineering was the focus of a New York Times Op-Doc, *Gut Hack*. He was also a central subject of Showtime's documentary, *Citizen Bio* and in the Netflix series *Unnatural Selection*, wherein he worked to bring his particular scientific ethos to a mass audience.

Josiah is notable for being the first person to experiment with the cutting edge CRISPR gene-editing tool on a human. In a groundbreaking and controversial move, he used himself as the subject of the CRISPR test.

Josiah is also known for his artwork, which has been featured in NY MoMA PS1, SF MoMA, Philadelphia MoMa and the Smithsonian Design Museum. His punk aesthetic lends credence to his stance as a scientific provocateur. He brings a straight-talk approach to distilling high-level scientific concepts into layman terms.



## LOCATION

Location is fundamental to the exploration of different sects of science. For this reason, location geography and culture will feature heavily in each segment. We'll take our time to explore our various locations, their unique style, beauty, and culture, and how the environment has influenced the subjects who inhabit them.

For instance, no conversation about gene therapy would be complete without a look at the socio-political culture of China which has influenced this topic to a massive degree. Similarly, a look at Copenhagen's climate will illustrate how cold temperatures have led to efforts in food fermentation and preservation, which have in turn become the foundations of the world-famous Scandinavian restaurant Noma.

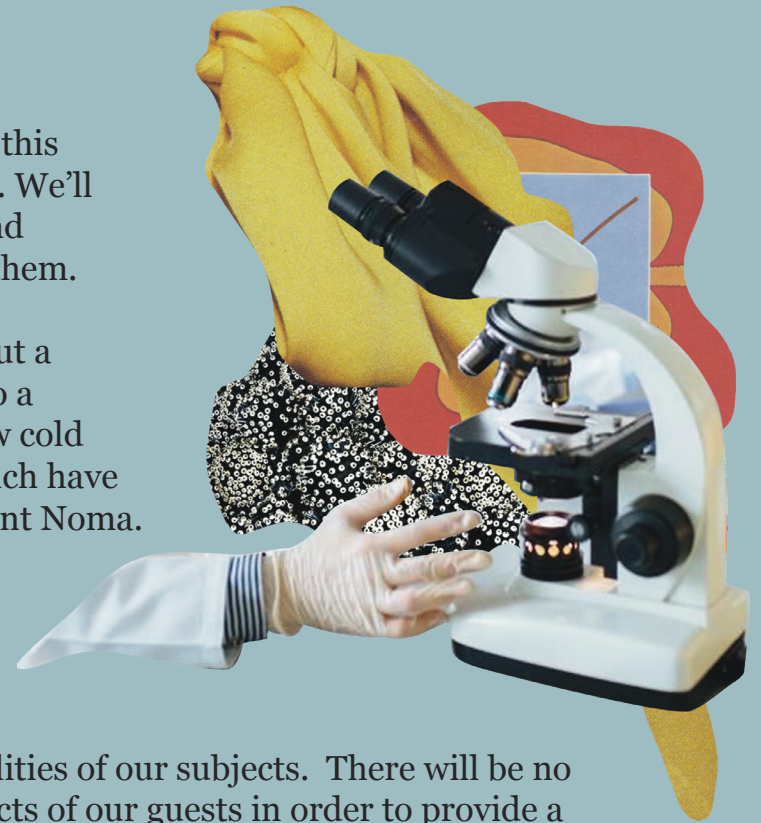
## STYLE

### **More explore than explain;**

*Biohack the Planet* will employ a kinetic style that suits the unique personalities of our subjects. There will be no talking head interviews. We will instead focus on the autobiographical aspects of our guests in order to provide a familiar background on which the unfamiliar landscape of science can be presented. This allows us to meet the express aim of humanizing science. Personal stories will be featured heavily and subjects will be interviewed within their natural environments. Consequently, the natural environments of individuals will be prioritized over a more clinical interview setting. The emphasis will be on the ways lives have been impacted, rather than on what has been discovered.

We will travel to our subjects to speak to them in their intimate environments and workspaces; be it their home, lab, kitchen or garden, we want to meet them in their distinctive spaces to get a true sense of the person we are talking to.

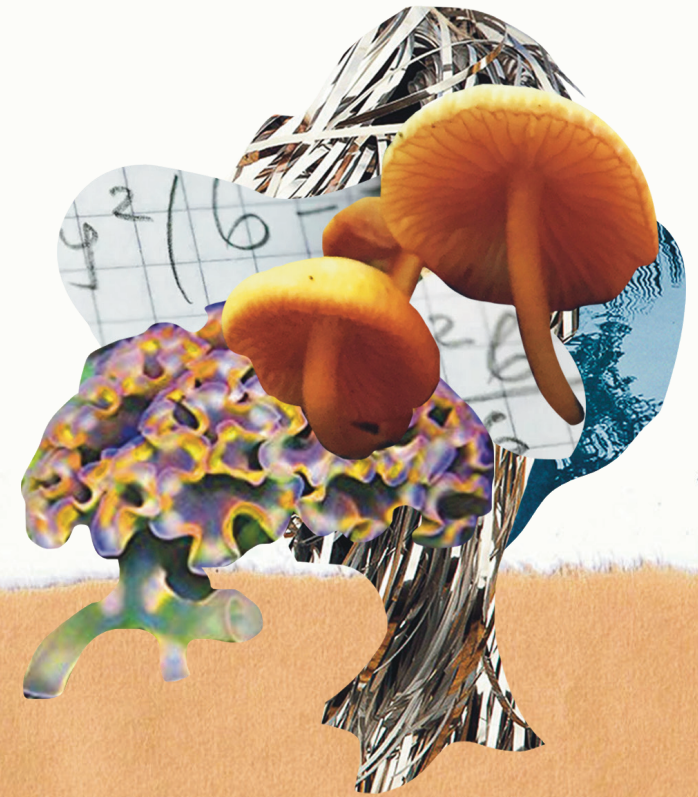
Using montages of locations will help paint the above picture in a way that emphasizes the relatability of these peoples lives. We will depict a variety of locations this way, ranging from kitchens, farms, labs, and homes. Capturing the place in which science and life meet is the express aim of *Biohack the Planet*. The show will echo traditional forms of gonzo journalism- which emphasizes personal perspective and lived experience over the pretension of objectivity which accompanies more detached forms of journalism.



## INSPIRATION

**Anthony Bourdain: No Reservations:** As a host, Josiah will emulate Bourdain's congenial manner and almost anthropological approach to uncovering a deeper story from within his interviewees. Just as Bourdain's show was more about people's connection to the food than the actual food, we hope to show peoples' connection to science with science as the backdrop.

**Unnatural Selection: Biohack the Planet** would aim to present complex scientific concepts in an entertaining, digestible manner purposed for mass appeal, just like *Unnatural Selection*.



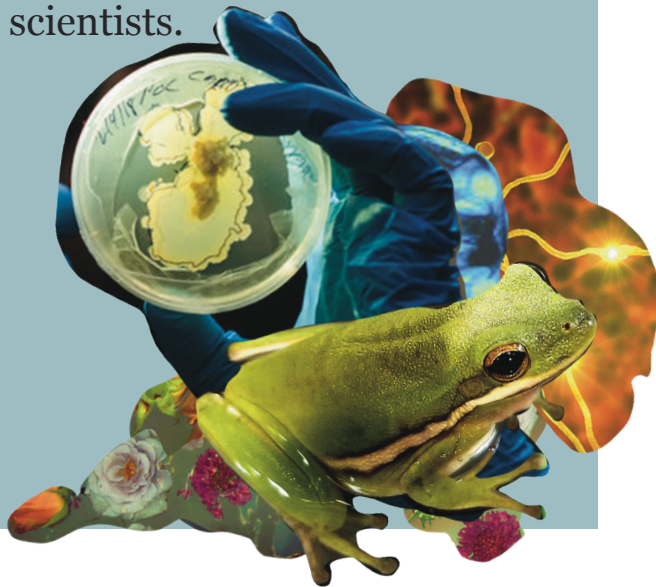
## EPISODE OVERVIEW

Josiah will give an introduction to each episode directly to the audience and then step back to take on the role of a guide who will usher us through the stories of each of the subjects in the style of Anthony Bourdain in *No Reservations*.

Episodes will consist of three features, each relating to the overarching episode theme so as to connect or contrast each interviewee within the broader scope of the episode's given subject.

## EPISODE 1: BIOHACKERS

In the inaugural episode of *Biohack the Planet*, Josiah will give an overview of the ethos and personalities behind the nascent genetic biohacking scene, while offering three compelling examples of the humans behind the hacking. Biohackers are a rising subculture of individuals doing biology and genetic engineering outside the traditional environment of a university lab or large biotech company. These biohackers push the boundaries of both science and medicine because they aren't encumbered by institutional rules and are open to take more risks than traditional scientists.



### **First Feature: The ODIN**

**Location: Oakland, California**

CRISPR Kits, Genetically Engineered Frogs and even Glow-in-the-dark beer. Our host, Dr. Josiah Zayner, will lay out his pedigree for the audience and we'll take a look at his company, The ODIN, which specializes in democratizing biotechnology. We'll meet his team and explore some of their most popular "Do it at Home" biology kits. Archival footage of Josiah's coverage in the media will intercut to show Josiah's footprint in the biohacking sphere.

### **Second Feature: The Origins of Biohacking**

**Location: Los Angeles, California**

Josiah speaks with one of the originators of genetic biohacking, Dr. Rob Carlson. Rob will give an overview of the history of biohacking and we'll take a tour of one of the first biohacking labs in one of the roughest parts of Los Angeles. Throughout the discussion, Rob will describe the evolution of biohacking, for better or worse. Some goals from the biohacking originators that have come to pass—others have been distorted and shifted into something unrecognizable from the original intent.

### **Third Feature: David Ishee**

**Location: Mendenhall, Mississippi**

Josiah visits with David Ishee, an oil worker and dog breeder who is working on genetically modifying dogs to remove inherited genetic diseases. With only an 8th grade education, David is a self-taught biohacker who learnt bioengineering from the comfort of his own home. Josiah will delve into misconceptions, challenges and successes of this self-made biohacking renegade. While David gives us a tour of rural Mississippi, we'll explore how the Biohacking community has helped David grow from an amateur enthusiast to a full-fledged scientist.

## EPISODE 2: MEDICAL TOURISM

In this episode, Josiah will introduce an atypical form of healthcare in the controversial concept of medical tourism. Travelling abroad to seek out novel or experimental therapies is just one of the ways individuals take steps to circumvent the regulatory systems that would block or delay their desired remedies. This form of systemic hacking of medical institutions has seen a steep rise in cases in recent years. We'll explore three women's stories from around the globe.



### **First feature: Women on Waves**

**Location: Mexico**

Josiah will travel to Mexico to speak with the women of Women on Waves. Women on Waves is a group that offers safe medical abortions within the safety of a boat which is outside of the jurisdiction of Mexico, within international waters.

### **Second Feature: Amber Freed—A Mother with a Mission**

**Location: Texas/Columbia**

Amber Freed's son, Maxwell, was born with a neurological disorder that is so rare that Maxwell is one of only fifty known cases in history. With her options in the U.S. exhausted and nowhere left to turn, Amber discovered an experimental procedure in Columbia that may prevent any other child from suffering Maxwell's malady in the future. Josiah will discuss Amber and Maxwell's journey and the bold steps that Amber has taken to create the groundwork for an innovative cure to an obscure disease.

### **Third Feature: Liz Parrish and Illegitimate Longevity**

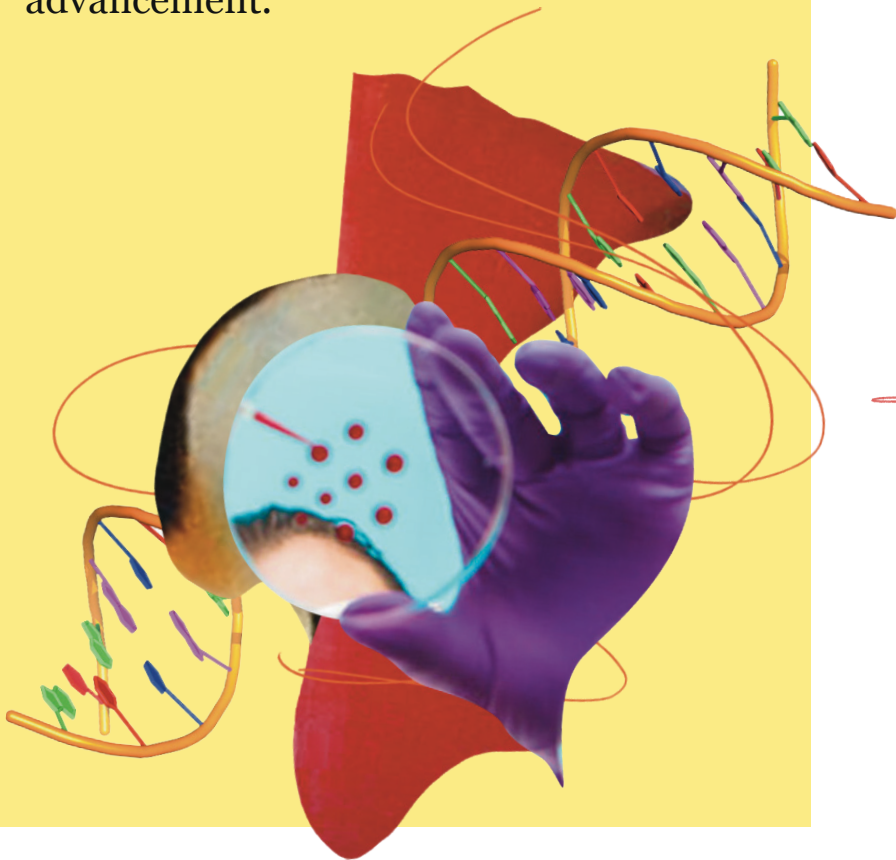
**Location: Columbia**

Josiah will speak with Liz Parrish, the owner of a controversial company called BioViva which purports to offer a treatment that may or may not extend human life. Liz made waves in 2015 when she travelled to Bogota, Columbia, to be administered an experimental gene therapy. Josiah will discuss the effects that the therapies had on Liz and the ramifications of her wonton experimentation on her body and her pursuit of longevity.



## EPISODE 3: GENE THERAPY

In episode three, Josiah will give an overview of gene therapy as a biohack and dig into three stories of gene therapy warriors. Vilified by their legitimate peers in the traditional scientific community, and heroized by their denizens, these are the people who are using gene therapy to make strides in biological advancement.



### **First Feature: William French Anderson—The Founding Father of Gene Therapy**

**Location: Chino, California**

Josiah will visit with William French Anderson, the “Father of Gene Therapy”. Anderson was a controversial figure who made staggering advancements throughout his career as a geneticist only to be incarcerated for a charge that he has vehemently denied for 15 years. Josiah will get a sense of what the early days of gene therapy research looked like and discuss current developments in the study with Dr. Anderson.

### **Second Feature: He Jiankui**

**Location: Shenzhen, China**

Josiah will speak with He Jiankui, a Chinese researcher who announced that he had illegally manipulated the genetic makeup of three babies from HIV positive parents to ensure that the children would be immune from HIV. Amidst an outcry from the scientific community, Jiankui was jailed for his actions. Josiah will discuss the circumstances surrounding the arrest and delve into China’s current beliefs surrounding the ethics of this decision. We’ll take the time to further explore China’s gene editing research as they race to compete with other countries for radical enhancements.

### **Third Feature: Jackson Kennedy**

**Location: Washington, New Jersey**

Josiah will speak with the Kennedy family about their decision to pursue a radical gene therapy solution for their son, Jackson. Jackson received two separate eye surgeries to administer Luxturna, a drug aimed at curing Jackson’s rare diagnosis of Leber Congenital Amaurosis. The only caveat is that Luxturna therapy comes with a \$800,000 price tag. Josiah will speak with the family about their decision to move forward with a potentially life-altering treatment for Jackson, and how they fought to have this new, wildly expensive therapy covered by health insurance.



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