PROPOSAL

VILLAGEB.IO

SPONSORSHIP 2022
BIOHACKING VILLAGE

BIOHACKING VILLAGE

The Biohacking Village emerged at DEF CON with a small space and a big idea: Bring the forefront of citizen science and biomedical cybersecurity to deliver action-oriented reinvention of the safety of the bioeconomy toward our mission of **Healthier Tech for Healthier People.**

THE BIOHACKING VILLAGE, a 501(C)3 organization, (EIN:83-3941279), is uniquely poised to inform global conversations in health care cybersecurity research. The Biohacking Village brings forth compelling issues in emerging biotechnology, regulations, medical and pharmaceutical manufacturing, cybersecurity, and citizen science. We have been an intimate platform for innovation, exploring new avenues for collaborations, and pursuing greater depth in the bioeconomy. Our participants include: patients, clinicians, hackers, manufacturers, regulators, hospital administrators, and others seeking healthier futures through meaningful technology. This community delivers hands-on, strident learning labs to influence healthcare, industry, and manufacturing.

We build trusting relationships with key senior stakeholders at medical societies, healthcare associations, and other organizations. We provide an environment for industry partners, government officials, security researchers, citizen scientists, and other leading experts to participate in discussions that focus on solutions to strengthen their collaboration. By maintaining the pulse on the biomedical ecosystem and healthcare industry and trends among key external groups, we identify opportunities to collaborate on common objectives to improve patient outcomes.

We are keen on finding like minded partners who are interested in supporting and growing with us. Here's how:
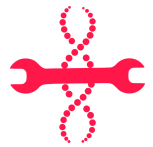
BIOHACKING VILLAGE

DEVICE LAB

Highly-collaborative environment builds health care, connecting security researchers, manufacturers, clinicians, and regulators, to learn from each other and develop skills, codifying best practices and paths for high fidelity cyber safety.

SPEAKER LAB

Fostering critical thinking, problem solving, human interaction literacy, ethics debates, creativity, and collaboration. Subject matter experts and researchers share the future of their research, reflecting the biological technologies and emerging threats.

CATALYST LAB

Providing interaction with thought leaders from the medical device and citizen science communities through training and hands-on workshops and solutions design, to cover the entirety of the biomedical device and security ecosystem.

CAPTURE THE FLAG

Featuring the virtual learning environment of St. Elvis Hospital, the CTF offers protocol, regulatory, and biological challenges to access and assess vulnerabilities in real devices.

TABLETOP EXERCISES

Discussion and hands-on sessions of increasing complexity and difficulty regarding vulnerabilities in a series of Machiavellian healthcare industry scenarios.
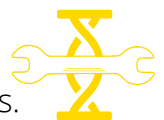
VITAL SIGNS - Biohacking Village at DEF CON (August 2021):
Met and exceeded many milestones from our last virtual event:

15,000 Attendees
50 Speakers
95 Volunteers

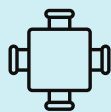30 Devices
15 Sponsors
7 MDMs

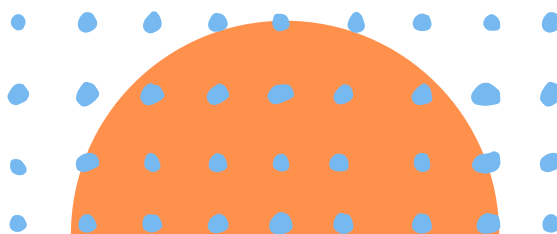4,500 volunteer hours
134 curated content hours

CTF
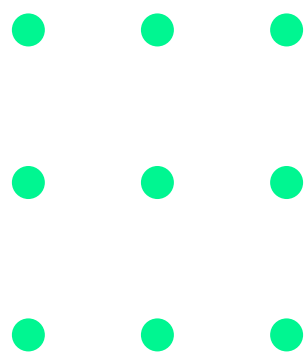184 Players
130 Teams
140 Challenges
75 Consecutive hours

2 Customized ISAC
Sponsored TTXs
1000+ Discord users

New Virtual "Loft" Space

WHAT ARE WE PLANNING FOR 2022?

YEAR ROUND INVESTMENT IN BIOTECHNOLOGY AND CYBERSECURITY

The Biohacking Village hosts events which foster meaningful conversations about the capital markets and provide valuable professional development opportunities via global events throughout the year, in addition to DEF CON. Supporting the Biohacking Village contributes to planned educational and facilitated communication offerings nearly every month. The Biohacking Village supports year-round events and gatherings across these primary levers of strategic action through empathy, innovation, and creativity.

OUR OBJECTIVES

- Virtual Event Space for increased accessibility and remote testing of our *new* virtual hospital space with device connectivity, Industrial Control Systems, and Biohacking Village Labs
- Development Sessions and Events:
  - Catalyst Workshops and Education courses
  - Capture the Flag with Partners, Universities, and Government
  - Customized Tabletop Exercises
  - Newsletter Updates for healthcare cybersecurity issues
  - Facilitate HCISPP study sessions and trainings
- Partner Speaking/Podcast Engagements and Organization Device Labs
- Fun and Games: Interactive Learning via quizzes and trivia

GLOBAL PRESENCE | COLLABORATIONS

We are slated to present at:
- Hack the Capitol (4 May in Washington DC)
- Israeli Cyber Week (27-30 June at Tel Aviv University)
- May Contain Hackers (22-26 July 2022 in the Netherlands)
- DEF CON (11-14 August, Las Vegas)
- Puerto Rico (TBD)

OUR TEAM

Our leadership team has years of experience in the field and has been on the bleeding edge and setting the tone for biomedical cybersecurity collaboration since its inception, to bring a full and comprehensive view of the complex and diverse ecosystem of biomedical technology, citizen science, cybersecurity, and healthcare. The Biohacking Village is organized by volunteers from all facets of the worldwide hacker community.

Nina Alli, Executive Director
Former Marine Corps, DoD Information Analysis Center: Electronic Medical Records and IoMT SME

Nicholas Farr, Treasurer
Non-Profit Focused CPA

Sydney Swaine-Simon, Board Secretary
Project Lead for the NeuroTech Primer, Co-founder @District 3, Co-founder @ NeuroTechX

Jay Radcliffe: Device Lab Lead
Director of Product Security Testing and Research at Thermo Fisher Scientific

Lee Wilkins: Communications Lead
Head Of Strategic & Community Initiatives Head Of Strategic & Community Initiatives
Milieux Institute

Zena Ahmed: Speaker Lab Lead
MPH Health Policy candidate at Yale School of Public Health | MS in Translational Medicine | Health Justice Fellow at BFA

Šárka Pekarova: Capture the Flag Lead
Security Consultant at Dreamlab Technologies | Healthcare/Medical Cyber Security | Industrial Control Systems | Social Engineering & Physical Security

Scott Hanson: Business Development Lead
Medical Device and Product Security Leader at MedSec

John William Volock: Fun and Games Lead
Embedded Security Engineer at Medtronic

Jasmine Jackson: Education Lead
Senior Application Security Engineer at The Walt Disney Company and Adjunct Professor

Advisors

Andrea Coravos (CEO of HumanFirst):
HumanFirst serves leading organizations pioneering decentralized clinical trials and virtual care.

Charles Fracchia (CEO of BioBright):
BioBright platform, enables organizations to make better, data-driven decisions in near realtime.

Matias Katz (CEO of Byos):
Byos is a Edge Microsegmentation company dedicated to helping organizations protect themselves from the risk of ubiquitous remote, guest and IoT network connectivity

OUR PARTNERS

Join your peers in supporting the Biohacking Village in 2022 to unify our efforts to inform cybersecurity research, advance biomedical technology, empower a growing workforce demand, and unite our shared mission for healthier tech and healthier people. Bringing together key stakeholders in the healthcare community to educate and facilitate conversations. Biohackers, Security Researchers, Policy Makers, Medical Device Manufacturers, and Healthcare Providers all combined with a focus on shared learning.

DEVELOP STRATEGY through rigorous, real-time testing, analysis, and disclosure reporting to identify recommendations from global researchers and experts in security and design.

INCREASE PARTNERSHIPS within the industry to improve transparency, collaboration, and communication about cybersecurity in the biomedical ecosystem, pharmaceutical, start up, and healthcare industry.

DEVELOP TALENT that exceed the needs of traditional healthcare practice in care delivery and cybersecurity, while sharing your technology with researchers, regulators, clinicians, manufacturers, citizen scientists, DIY biologists, and the media.

COMMUNITY OUTREACH and gaining insights through the information and intelligence shared with and by Biohacking VIllage partnerships to develop strategy but also have an unique insight though hackers and researchers, boots on ground.
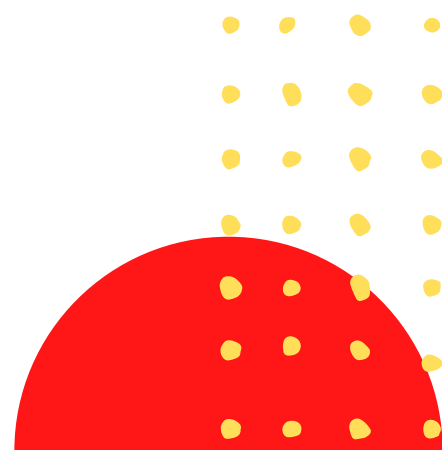
If global indicators on ROI are any barometer, the value you get from being at the Biohacking Village are, for example, 20 hours over 2.5 days by 5 people (paid at $150/hr), is $15,000.

Global Medical Cyber Market:

Digital biosecurity vulnerabilities directly translate to breaches in the bio-manufacturing industry. This could lead to disruptions in production, recalls, reputational damage, financial loss, PII risk: informational damage (data leakage from trials and data generated from medical devices), files being accessed/copied or malicious code introduced into the system.
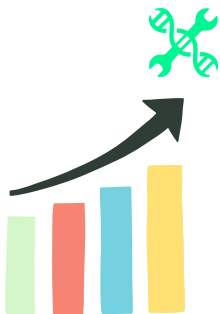
- What is the estimated value of the Global Healthcare Cybersecurity Market?
  - The Global Healthcare Cybersecurity Market was estimated to be valued at $16.2 Billion in 2021.

- What is the growth rate of the Global Healthcare Cybersecurity Market?
  - The growth rate of the Global Healthcare Cybersecurity Market is 16.6%.

- What is the forecasted size of the Global Healthcare Cybersecurity Market?
  - The Global Healthcare Cybersecurity Market is estimated to be worth $40.6 Billion by 2027.

Report looks at countries as defined in the MDSAP: Healthcare Cybersecurity Market Research Report by Type, by Deployment, by End User, by Region - Global Forecast to 2027 - Cumulative Impact of COVID-19

Return on Investment (ROI): Cybersecurity has traditionally not been something device or pharmaceutical manufacturers have benefited from financially. However, with the COVID-19 pandemic, governments have recognized the need for improvements in this area:

On January 21, 2021, President Biden's National Security Memorandum on Advancing Global Health Security and Biological Preparedness declared, "The United States is committed to strengthening U.S. biopreparedness and capacity and counter COVID-19 and future biological emerging threats."The Cybersecurity and Infrastructure Security Agency (CISA) Cyber Safety Review Board was established pursuant to President Biden's Executive Order (EO) 14028 on 'Improving the Nation's Cybersecurity'. Presidential Policy Directive 21 (PPD-21) on Critical Infrastructure Security and Resilience addressed the reality that advances in technology led to increases in each sector's interconnectivity and reliance on online and networked resources to accomplish their fundamental missions. These along with the most recent in healthcare technology legislations, the Healthcare Cybersecurity Act of 2022 and the PATCH Act, to strengthen the nation's early warning system for health threats are defining increased provenance facilitating healthier tech for healthier people.

The ESRB report 'Mitigating systemic cyber risk' explains in detail how the EU-SCICF would facilitate an effective response to a major cyber incident. The report also assesses the ability of the current macroprudential framework to address the risks and vulnerabilities stemming from systemic cyber risk and needs to be expanded to include cyber resilience. According to the National Law Review, U.S. Medical Device Manufacturers Should Take Note of New European Medical Device Regulations, Regulation 2017/745 on Medical Devices (MDR) (May 2021) and Regulation 2017/746 on In-Vitro Diagnostic Devices (IVDR)(May 2022), intended to enhance public health and ensure access to safe and effective medical devices and should be taken into consideration for future legislation.

SCALING

DIGITAL TWIN HOSPITAL

We have been working on a virtual hospital for presentation in August during DEF CON

The hospital will showcase:
- Specialties and services related to healthcare, including medical devices and ability to walk through clinical care areas
- Future State:
  - Functionality of healthcare delivery organizations to build a community of trust, visibility, and understanding the mechanisms of care
  - Integration of medical devices, EMRs, digital medicine, and telehealth
  - Testing capabilities will include: updates, latency, resiliency, cyber components
  - We will be scaling up from device testing to full integration testing, from single device to hospital to RHIO/HIE.
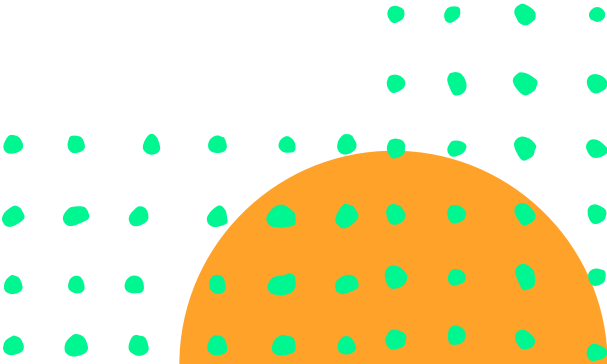
CONFERENCE EXPANSION

Along with a presence at medical and cybersecurity conferences, we are creating a conference with the **Science Trust Puerto Rico** to exemplify the magnitude and importance of the Medical, Pharmaceutical, Education and Employability on the island.

Stats from InvestPR about the bioscience space:
- #1 bioscience manufacturing hub in the U.S.
- 75% share of FDA Class III device manufacturers in Puerto Rico
- 30 medical device companies operating on the Island

TABLE TOP EXERCISE

We are integrating multiple viewpoints and country legislation into our tabletop exercise. WIth the addition of hands on challenges, this will make for quite a dramatic escapade with lots of opportunities for team work and learning.

OPPORTUNITY

	$65,000	$50,000	$35,000	$20,000	$10,000
BHV Donor Level/Social Media Recognition	✹	✹	✹	✹	✹
Swag and DEF CON badges (1 person)					✹
Swag and DEF CON badges (2 people)	✹	✹	✹	✹	
Podcast/Interview Feature	✹	✹	✹	✹	
2 additional DEF CON badges	✹	✹	✹		
Disclosure Assistance	✹	✹			
Digital Twin Hospital Wing Name (Year Round)	✹				