

Protein Evolution in a Microscope To Advance KAND Therapies

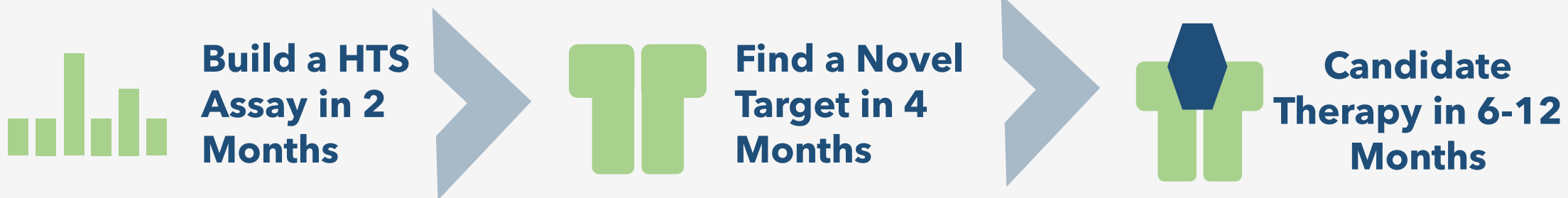


BioLoomics

Doug Chapnick, PhD
Founder & CEO

DougChapnick@BioLoomics.com

Our Project Plan For Finding Candidate Treatments for KIF1a



Our Startup Has Been Building A New Pharma Tech For 2 Years



Douglas Chapnick, PhD
Founder, CEO
Former Senior Researcher
DARPA RTA Program
University of Colorado



Jeremy Jacobsen, M.S.
Dir. of Bioinformatics & Automation
Former Bioinformatics Analyst & Mechanical Engineer
DARPA RTA Program
University of Colorado



Ted Kee
Dir. of R&D
Former Process Engineer at Genentech (Roche), KBI, AMGEN



Karen Foster
Dir. of Operations
Entrepreneur and Former Operations Management in Climate Research, Construction Industry



Michael Stowell, PhD
Scientific Advisory Board
Entrepreneur
Protein Pharma Veteran
Current CSO AmideBio
Current University of Colorado Professor



Michael Minson, PhD
Synthetic Biology Scientist
Former Scientist at ArcherDX/Invitae and Sartorius

Inventing Our Evolution in a Microscope Technology

2019



**Pre-Seed
Financing**

Grant

**Seed
Financing**



Our Story Started in The DARPA RTA Project

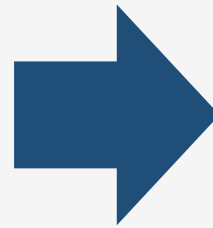


Defense Advanced Research Projects Agency

Rapid Threat Assessment Project (RTA) 2012-2018

Lesson After 6 Years:

Mechanisms Are Not Absolutely
Required to Find Antidotes.



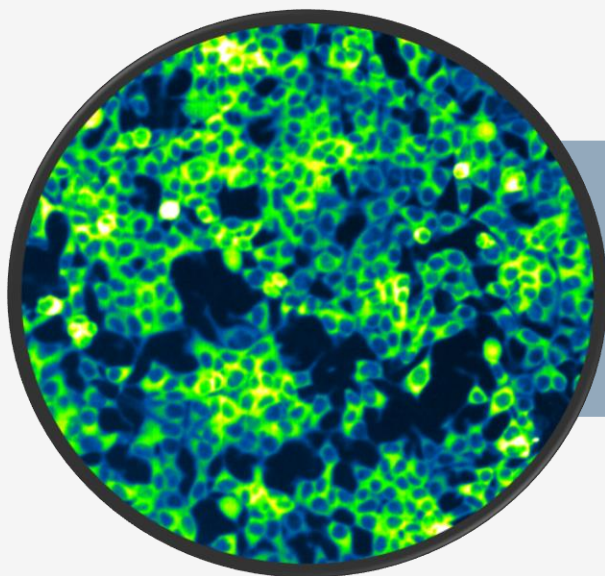
BioLoomics

**Massively Parallel Experimental Testing
To Find Assays and Drugs From Gene
Libraries With Little Dependence on
Mechanism**



Our Tech Shrinks Millions of Years of Evolution to Weeks By Using Single Human Cells As Test Tubes

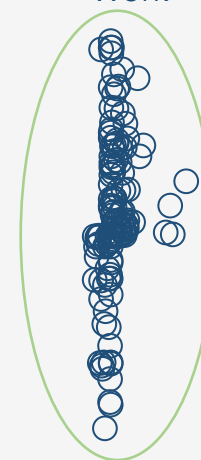
Biosensor Cells Each Expressing a Unique Fluorescent Tool Design



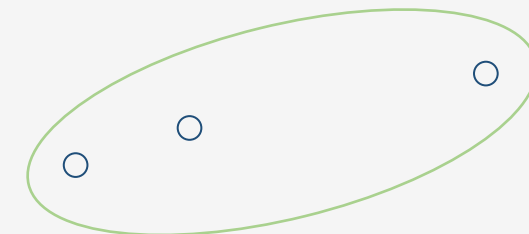
Parallel Testing

Searching For Rare Designs

Design That Don't Work



Design That Work



Building Tools and Finding Drugs Without A Detailed Mechanism

Conventional Drug Discovery

5-10 Years Determine A Mechanism

1-3 Years Build a Drug Searching Tool

1-3 Years Screen Drugs

Our Way Is Faster...By A lot

2-4 Months Build a Drug Searching Tool

1-3 Years Screen Drugs



Example of How Less Information Can Be Leveraged

Street Cameras Can Be Used To Tell When The City is 'Normal' and 'Abnormal'

Tokyo 2019

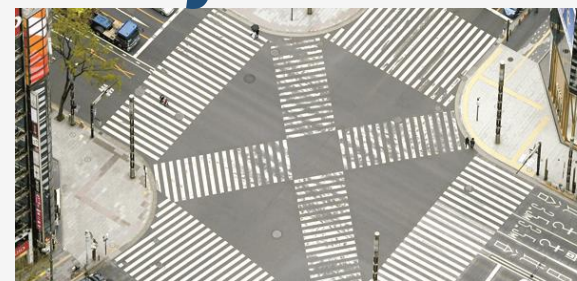
Healthy City



Virus

Something's
Wrong With
City

Tokyo 2020



With Street Cameras...

- City Health Can Be Measured
- The Mechanism of City Health Can't Be Measured
- You CAN Determine on What Day People Went Back to Work



Example of How Less Information Can Be Leveraged in Drug Discovery

Our Fluorescent Biosensor Cells Can Be Used To Tell When The Drug Normalizes The Effects of KIF1A mutants



With Biosensor Tools...

- Cell Health Can Be Measured
- The Mechanism of Cell Health Can't Be Measured
- The Drugs We Are Looking For Can Be Detected



Our Tech Is Well Equipped to Make an Impact For KAND Therapy

KAND

- No High Throughput Assays
- Limited Mechanistic Understanding
- No Drug Targets Beyond KIF1A

Our Tech

- Builds High Throughput Assays Quickly
- Does Not Require Substantial Mechanistic Understanding
- Has the Potential to Identify Drug Targets



How You Can Help This Project

Donate to KIF1A.ORG to Enable Us to Grow the Team For The Project

If You Have Grant Resources, Help Us Fund this Project With Grant Money

Contact Dougchapnick@BioLoomics.Com

Follow Us & Spread the Word By Sharing Our Mission Via Social Media
LinkedIn, FB, Instagram @BioLoomics,Inc.

Special Thanks To The Organizers of The KAND Conference!!!



Protein Evolution in a Microscope To Advance KAND Therapies



BioLoomics

Doug Chapnick, PhD
Founder & CEO

DougChapnick@BioLoomics.com