

# GRIP

MOLECULAR

Lab-grade diagnostics  
at the Point-of-Need



*Now validated via Phase 1 Clinical Feasibility Study results!*



- ✓ Highly accurate
- ✓ Easy to use
- ✓ Simultaneous multi-disease detection
- ✓ Minutes to result
- ✓ Facilitates telehealth
- ✓ Adaptable to new diseases
- ✓ High-volume production

# Executive Summary

- GRIP Molecular Technologies offers a **medical diagnostic platform** that **fundamentally changes** how diseases are **detected, diagnosed, and treated**.
- GRIP enables **rapid diagnosis** and the **prompt application of appropriate therapy**, by offering consumers and their clinicians **convenient, accurate, rapid, multi-disease, and telecommunications-connected diagnostic results at the time and location of need**.
- GRIP's **single-use cartridge** determines in **5-minutes** if there is an infection associated with a **broad array of diseases** using a **single, easy to collect bio-sample**. The cartridge contains **graphene enhanced solid-state biosensors** that provide **extraordinarily accurate results**, far surpassing the competition.
- Detection of a wide array of bacterial and viral pathogens** has been demonstrated.
- The test **does not require multistep sample processing** and the results can be displayed on a **standard cell phone** and **securely transmitted**.
- GRIP's technology is **patent protected**.
- GRIP's first product, an upper respiratory infection panel, represents a **\$3.6B potential annual revenue generation opportunity**. Other applications represent significant additional business opportunities.
- Investment via GRIP's Convertible Note is available. A **\$12M Series A** round is being pursued.

# Fast Facts

**\$32B**

Total Addressable Market (TAM) in infectious disease diagnostics

**70%**

Clinician and consumer interest in at-home testing for upper respiratory and urinary tract infection<sup>1</sup>

**40%**

Percentage of infections undetected by leading home-based COVID-19 tests on first day of symptoms<sup>2</sup>, when therapy is most effective.

**>100X**

GRIP pathogen detection sensitivity vs alternative antigen detection technologies; GRIP is at PCR level detection.

**9**

Number of diseases clinicians desire in an upper respiratory infection diagnostic panel.<sup>1</sup>

**93%**

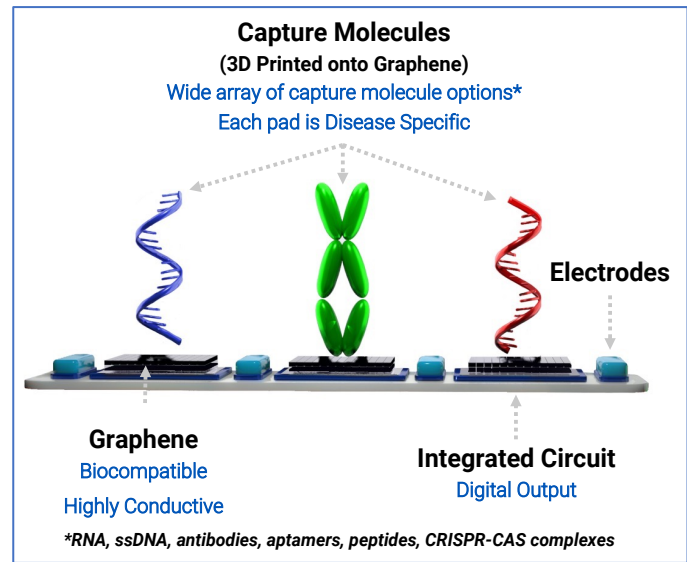
Percentage of Consumers, Primary Care Physicians and Pediatricians with a positive reaction to GRIP product concept.<sup>1</sup>

1. GRIP research - consumer (331 respondents) and clinician (41 respondents)

2. <https://doi.org/10.7326/M23-0385>

# Underlying Technology

- Based upon a **Graphene Field-Effect Transistor (GFET)** electronic biosensor
- Produced with high-yield **proprietary production technologies**
- Enhanced with **patented technologies** that attract the target biomarkers to the sensor surface to **increase detection speed and sensitivity**



# Performance

- ✓ **Ultrasensitive pathogen detection**
  - COVID-19, Influenza A and RSV protein
  - Highly specific multiplexed detection**
    - Demonstrated distinct COVID-19, Influenza A and RSV detection in a mixed pathogen sample (maintaining sensitivity, as noted in table), **in 2-minutes!**
- ✓ **Phase 1 Clinical Feasibility results:**
  - 90% correlation with PCR using infected COVID-19 patient nasal swab samples

*New data*

Most Sensitive

GRIP Protein

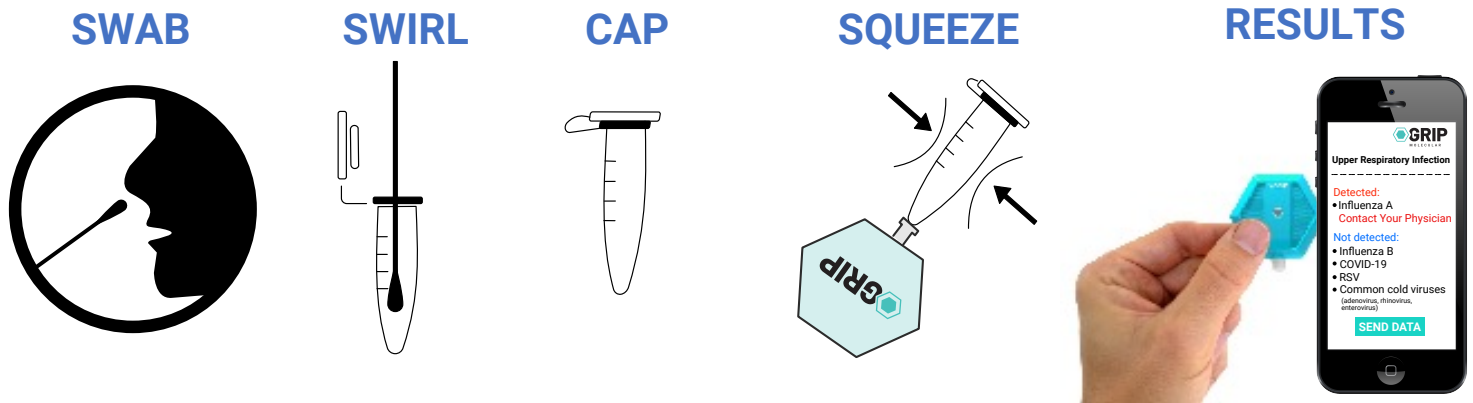
Nucleic Acid

Protein

Least Sensitive

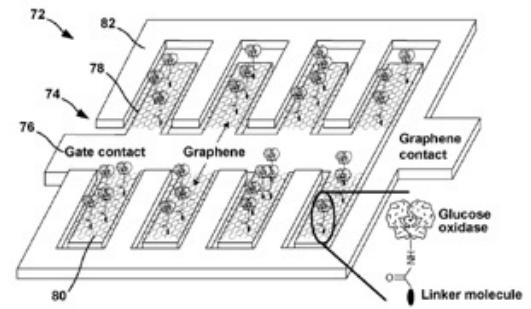
Company	Test Brand Name	Loc	Type	LOD BioSample (copies/ml)
Thermo	Accula	POC	NaaT	150
BioRad	Reliance	Lab	NaaT	600
Hologic	Panther Fusion & Aptima	Lab	NaaT	600
Lucira	All-In-One	PON	NaaT	900
BD	BD MAX (BioGX reagents)	Lab	NaaT	1,800
Roche	cobas	Lab	NaaT	1,800
LumiraDx	STAR Complete	POC	NaaT	1,875
Abbott	RealTime (m2000 assay)	Lab	NaaT	2,700
BGI	RT-PCR Kit	Lab	NaaT	3,000
<b>GRIP</b>		<b>PON</b>	<b>Protein</b>	<b>5,000</b>
Cepheid	GeneXpert Xpress	POC	NaaT	5,400
Luminex	NxTAG	Lab	NaaT	5,400
bioMerieux	BioFire	Lab	NaaT	5,400
DiaSorin	Simplexa COVID-19 Direct	POC	NaaT	6,000
Sherlock	CRISPR	Lab	NaaT	6,000
bioMerieux	R-GENE, ARGENE	Lab	NaaT	18,000
Visby		POC	NaaT	54,000
Cue Health		PON	NaaT	60,000
<b>SARS-CoV-2</b>	<b>SYMPTOMATIC MIN. VIRAL LOAD</b>			<b>100,000</b>
Qiagen	QIAstat-Dx Respiratory	POC	NaaT	180,000
Luminex	ARIES	POC	NaaT	180,000
Thermo	TaqPath	Lab	NaaT	180,000
Atilia	iAMP	Lab	NaaT	180,000
Abbott	ID NOW	POC	NaaT	300,000
Quidel	Sofia 2 FIA	POC	Protein	368,000
Quidel	Lyra assay	LAB	Protein	540,000
BD	Veritor	PON	Protein	560,000
Abbott	Bionax NOW	PON	Protein	562,400
Abbott	PANBIO	PON	Protein	630,957
SD	Pilot	PON	Protein	2,000,000
Access Bio	CareStart	PON	Protein	3,200,000
ACON	FlowFlex	PON	Protein	10,000,000
InBios	Detect	PON	Protein	25,200,000
Ellume		PON	Protein	28,640,000
Quidel	QuickVue	PON	Protein	30,280,000

# User Steps



# Patent Protected

- 5 issued US patents
- 14 pending applications
- Claims related to:
  - Generation of electric field to attract targeted biomarkers to sensor's surface (enhances speed and sensitivity)
  - Printing features on sensor surface (enables high-speed production)
  - "Tuning" and results assessment from each individual GFET on the sensor's surface (enables simultaneous multi-disease detection)



# Manufacturing and Scale-Up

- GRIP's product design **leverages high volume integrated circuit and other well-established medical device manufacturing techniques** to enable rapid production scale-up at a fraction of the required investment associated with other comparable performance diagnostic technologies.
- GRIP has established relationships with vendors that provide key raw materials and sub-components. Various sources have been identified to provide supply redundancy.

# Business Model

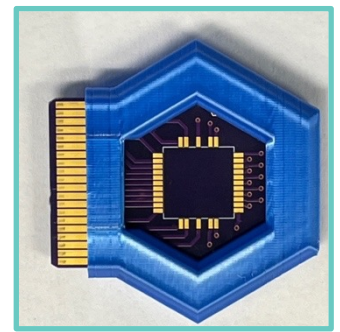
- GRIP intends to sell its products to end user consumers **without the need for a prescription via standard retail pharmacy** and increasingly popular direct fulfillment channels.
- GRIP intends to employ **a small, specialized team of marketing and sales professionals** to lead these efforts.

# Regulatory Pathway

- The FDA has indicated an FDA 510(k) pathway will be appropriate to gain US commercial licensure. CE mark status will be pursued to enable commercial licensure in the European Union.

# Traction

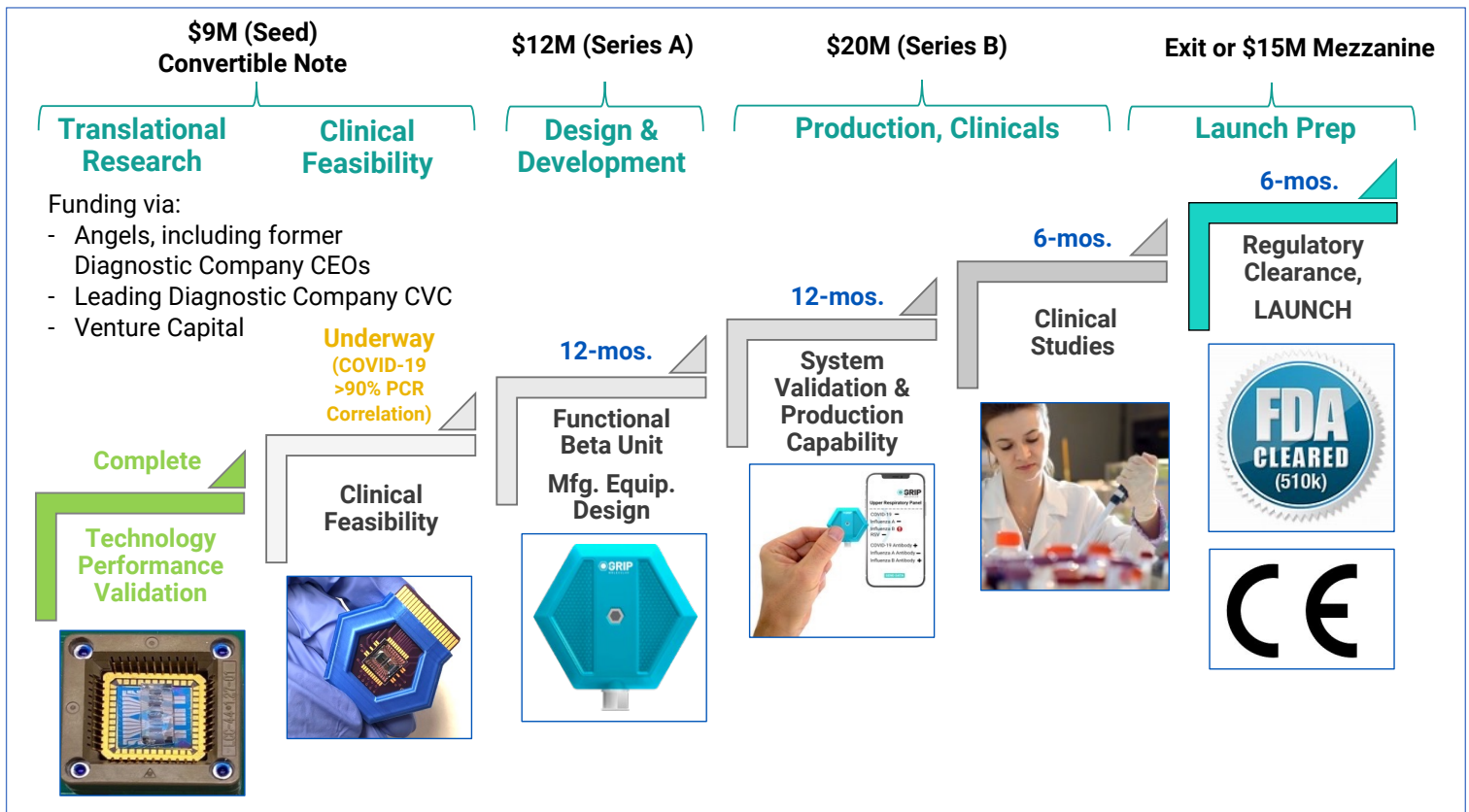
## New data



- **Clinical feasibility testing (COVID-19) = 90% correlation with PCR results!**
- **Limit of detection = PCR (5,000 copies/micro liter)**
- **Proof-of-concept of novel fluid delivery**
- **Sensor production using wafer-scale integrated circuit production technology, >95% yield.**
- **Leading medical diagnostic company has invested in the company.**

# Plans and Investment

- Seed Round underway via Convertible Note
- \$12M Series A sought to fund product development
- Significantly less capital required to scale production vs alternative technologies.



# Experienced Team

## Edward Ludwig - Board Chair



- Former CEO, COB – Becton Dickinson
- 45+ years senior executive in medical industry
- Numerous Board roles, including; Boston Scientific, CVS, Aetna, AdvaMed (Chairman)
- MBA – Columbia University

## Edward Gillen - CEO



- 30+ years medical device industry experience
- Former CEO Medality Medical
- 23-year career at Becton Dickinson (BD)
- MBA – Penn State University

## Bruce Batten, PhD - Founder, CTO



- 30+ years research and industry exp.
- Diagnostic industry - BioRad, Thermo
- Ph.D. Anatomy & Cell Biology Medical College of Virginia, post-doc Harvard

## Richard Minicus - Chief Financial Officer



- 30+ years in finance
- 30-years M&A, VC and Bus. Dev. – Merrill Lynch, JPM, BD, Pfizer
- MBA - Harvard Business School

# Why GRIP Wins



**Rapid:** Consumers and their clinicians need timely results to promptly apply appropriate therapy.

**Accurate:** GRIP's handheld cartridge offers extraordinary diagnostic accuracy, far surpassing what can be achieved with today's most popular at-home tests and matching what can be achieved with lab quality PCR tests

**Comprehensive:** GRIP simultaneously detects multiple diseases to facilitate the correct diagnosis.

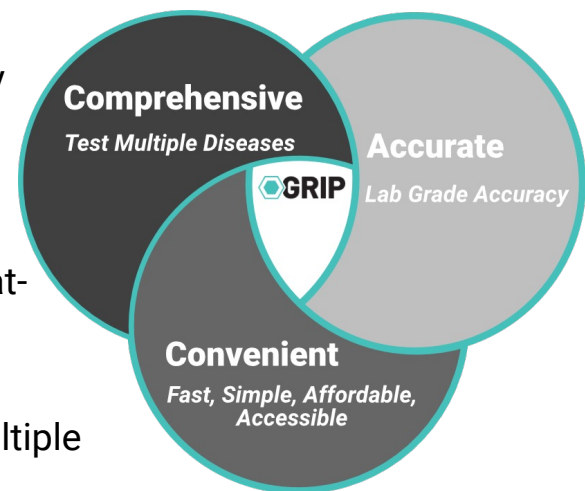
**Uncomplicated:** No complex sample preparation, training, or specialized equipment to provide highly accurate results, in minutes; anytime, anywhere.

**Connected:** The test results can be securely transmitted to others using a standard cell phone.

**Adaptable:** GRIP's biosensors can be rapidly adapted to quickly address new disease threats

**Scalable:** Product design leverages established manufacturing techniques.

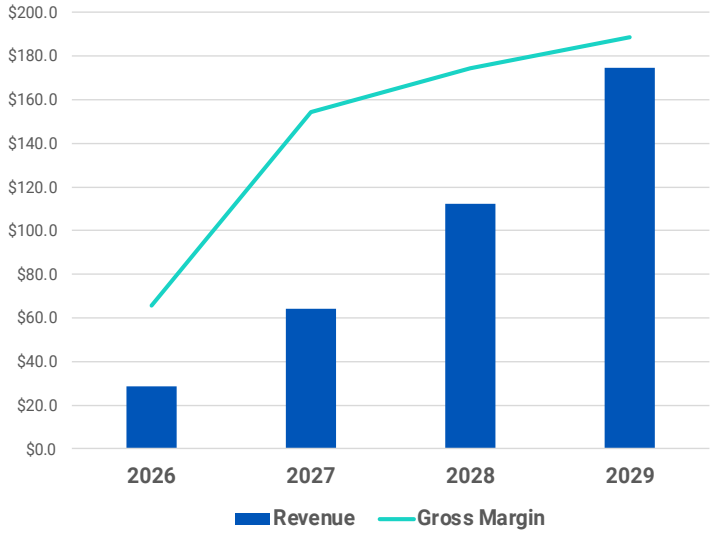
**Patented:** 5 issued patents, 14 pending



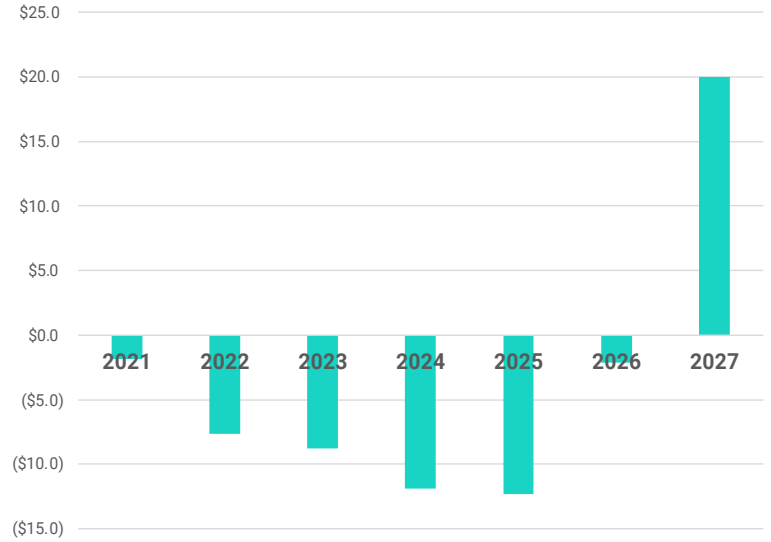
# Financial Outlook

\$ millions

### Revenue and Gross Margin Outlook

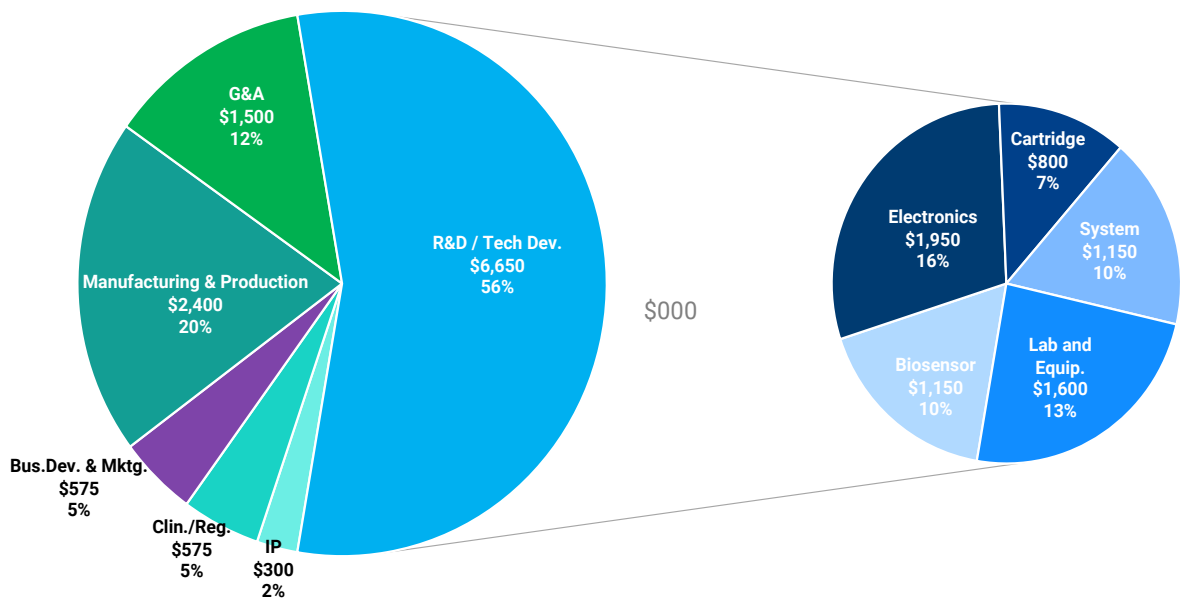


### Cash Flow From Operations



# Use of Series A Funds

Total = \$12.0M



# Liquidity Paths

- ⬢ **Acquisition** by leading diagnostic, consumer healthcare or telehealth company, or an **Initial Public Offering (IPO)**.
- ⬢ GRIP has had interactions with **many leading diagnostic industry players**. **One is an investor**, and several have expressed interest in GRIP's novel technology and are **tracking GRIP's progress**.

## Why Invest in GRIP?

- ✓ **Home-based diagnostics are the future**, >\$2.0B Total Addressable Market (TAM)
- ✓ **Performance advantages** not available via alternative technologies
- ✓ GRIP's **platform technology has broad applicability** (e.g. upper respiratory infection, urinary tract infection, concussion, etc.)
- ✓ **Production is low-cost and scalable** yielding high gross margin business
- ✓ **Digital output is HIPAA-compliant and ready for transmission** to doctor and can be enhanced via AI analysis
- ✓ **Highly experienced** management team, investors, and advisors
- ✓ **Numerous paths to liquidity**

## Interested in Learning More?



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

