

## MEDIA KIT



# COMPANY OVERVIEW



Based in Golden, Colorado, PharmaJet's mission is worldwide acceptance of PharmaJet Needle-Free devices as a standard of care in the vaccine delivery market.

The innovative PharmaJet Stratis® Needle-Free Injector has U.S. FDA 510(k) marketing clearance, CE Mark and WHO PQS certification among other countries' specific regulatory approvals to deliver medications and vaccines intramuscularly or subcutaneously. In August 2014, the PharmaJet Stratis Needle-Free Injector was approved for delivery of an influenza vaccine to deliver needle-free flu shots.

The PharmaJet Tropis® device for intradermal injections received authorization to apply the CE Mark in May 2016. An FDA Master File was established in August of 2017 as a precursor to 510(k) and Tropis received WHO Pre-Qualification (PQS) in June of 2018. The PharmaJet Needle-Free Injectors are easy-to-use, eliminate needlestick injuries, needle reuse, and cross contamination, and help reduce sharps waste disposal.

For more information, visit [www.PharmaJet.com](http://www.PharmaJet.com)

# SUMMARY

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PharmaJet has developed a user-friendly, inexpensive device platform for fluid injection into the body without a needle that has been optimized for vaccine immunizations. The technology replaces traditional needle-syringe delivery, which inherently poses costly needlestick, re-use, and cross contamination issues. It is unique in the field of jet injection with specific claims and regulatory clearances to effectively address the 2.5B annual immunization injection market.

## PHARMAJET'S "NEEDLE-FREE" SOLUTION

- Eliminates needlestick injuries and reduces disease transmission
  - 800,000 needlesticks reported in U.S./year<sup>1</sup>; \$3B+ cost<sup>2</sup>
- 8 out of 10 patients and providers preference<sup>3,4</sup>
  - 24% of adults / 63% of children report a fear of needles<sup>5</sup>
- Improves immune response of multiple vaccines e.g., RNA/DNA based<sup>6,7,8</sup>
- Delivers superior immune response with fractional dose intradermal delivery (e.g., polio)<sup>9</sup>
- Market clearances for all tissue depths (IM/SC/ID) across global regulatory bodies (e.g., FDA, CE, DCGI, ANVISA, etc.)
- Safe, fast, and easy-to-use



# THE NEEDLE-FREE OPPORTUNITY

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## WHY IS NEEDLE-FREE IMPORTANT?

- The Occupational Safety & Health Administration (OSHA) estimates that there are as many as 800,000 needle-stick injuries, from all sources, to healthcare workers every year in the U.S. alone.<sup>1</sup>
- As many as 500 million used needles are added to trash dumps and landfills every year as a result of vaccination. 75 million of those needles may be infected with blood borne illnesses.<sup>10</sup>
- Needlestick injuries can expose healthcare workers to up to 20 different blood borne pathogens including HIV and hepatitis B and/or C.<sup>10</sup>
- Each needlestick injury costs approximately \$3,000 for lab fees, labor, and post-exposure follow-ups.<sup>11</sup>

*PharmaJet's Needle-Free Injectors provide a safe option for patients and healthcare providers. Because there is no needle, needlestick injuries are eliminated, and sharps management and disposal costs are reduced.*

## CLEAR BENEFITS

- Expand Immunization Coverage
  - Provides an option for the 1 in 4 adults that have a fear of needles
- Eliminate Risks of Needles
  - No needlestick injuries
  - No needle re-use
  - No cross-contamination or spread of infectious disease
- Reduce Health Care Costs
  - No need for sharps management and disposal costs
  - Eliminates costs for needlestick injury testing and treatment
- Protect Patient and Practitioner; Better Patient Experience
  - Safe, auto-disabling, needle-free syringe.

# TROPIS PRODUCT OVERVIEW

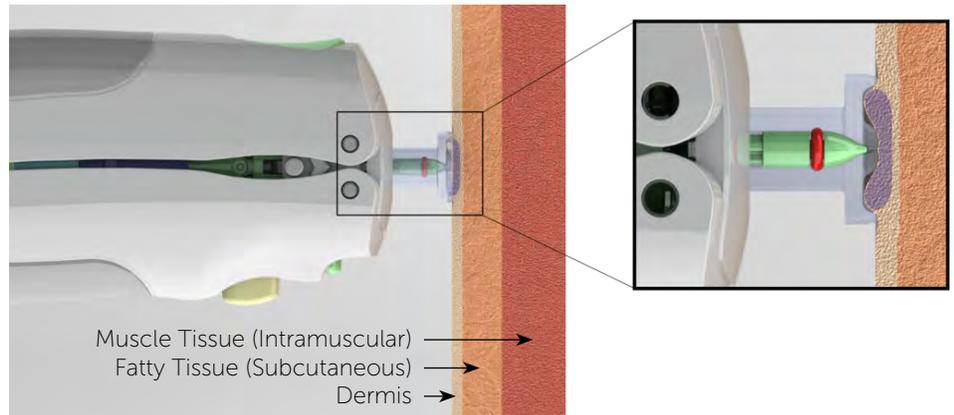
The PharmaJet Tropis Needle-Free Injector delivers vaccines intradermally by means of a narrow, precise fluid stream that delivers the medicine or vaccine into the skin.

## APPLICATIONS



- Vaccine Injectable
- ID
- 0.1 mL

## PRECISE BY DESIGN



## SYSTEM COMPONENTS



Injector – 0.1 mL ID



Syringe – 0.1 mL Needle-free



Filling Adapter

## EASY FOUR STEP PROCESS

1

Prepare the Injector



2

Fill the Syringe



3

Load Injector



4

Give Injection  
(Deltoid or Lateral Thigh)



Refer to Instructions for Use and the individual device and vaccine labeling to ensure safe injections and to review risks.

# NEEDLE-FREE INJECTION & POLIO ERADICATION

## HELPING PROTECT EVERY LAST CHILD

The Market Opportunity for Needle-free Polio Vaccinations

- The World Health Organization's (WHO) Polio Eradication and Endgame Strategic Plan<sup>12</sup> calls on countries to:
  - Introduce at least 1 dose of inactivated polio vaccine (IPV) into routine immunization schedules
  - Strengthen routine immunization
  - Phase out Oral Polio Vaccine (OPV)<sup>13</sup>
- Current Challenges
  - Vaccine supply shortage – supply is less than half the demand
  - Increased cost – IPV is up to 15x more expensive than OPV<sup>14</sup>



*Clinical researchers identified ways to stretch the limited supply of injectable polio vaccine and deliver higher immunogenicity.*

*"...two fractional intradermal (fiPV) doses are superior to one IM Dose"<sup>15</sup>  
- WHO and Gates Foundation*

## TROPIS VACCINATES MORE CHILDREN CONSISTENTLY AND SAFELY

- Stretches Limited Resources
  - Gets 25% more doses out of a vial<sup>16</sup>
- Keeps Clinicians and Patients Safe
  - Auto-disabling, single use Syringe
  - No needle trash
  - No needlestick injuries
- Easy to use and Master
  - Fast, accurate, and consistent intradermal delivery



BILL & MELINDA  
GATES foundation



POLIO GLOBAL  
ERADICATION  
INITIATIVE

# STRATIS PRODUCT OVERVIEW

The PharmaJet Stratis Needle-Free Injector administers vaccines either intramuscularly (directly into the muscle) or subcutaneously (just below the skin) by means of a narrow, precise fluid stream that penetrates the skin in about one-tenth of a second and gets the vaccine where it needs to be.

## SPECIFICATIONS



- Vaccine Injectable
- IM/SC
- 0.5 mL
- Adults 18-64 years of age

## STRATIS® DESIGN



- Convenient one-hand Syringe attachment and ejection
- Smooth, easy trigger force and ergonomic design
- Minimal training required
- Tested to 20,000 cycles

## SYSTEM COMPONENTS

### Reusable Hardware



Injector – 0.5 mL  
IM, SC



Reset Station

### Disposables



Syringe – 0.5 mL  
Needle-free



13mm  
Vial/Filling Adapter

## EASY FOUR STEP PROCESS

1

Prepare the Injector



2

Fill the Syringe



3

Load Injector



4

Give Injection



Refer to Instructions for Use and the individual device and vaccine labeling to ensure safe injections and to review risks.

# NEEDLE-FREE FLU SHOTS

## THE MARKET OPPORTUNITY FOR NEEDLE-FREE FLU SHOTS

- PharmaJet Needle-Free Flu Shots are an alternative for everyone 18-64 years of age.
- According to the Centers for Disease Control, flu immunization rates have stood at about 40% over the past 5 years and over HALF of those that get flu shots would prefer no needle.<sup>17</sup>
- Of the 60% that forego a seasonal flu shot, nearly a quarter do so because they have an aversion to needles.<sup>18</sup>
- Combining these statistics results in 35% of the U.S. adult market, or 71 million people that could be interested in a needle-free option.

*The PharmaJet Stratis Needle-Free Injector is the only jet injector to be indicated on a flu vaccine label.*

## PHARMAJET® BENEFITS

### SAFE FOR PATIENTS & HEALTHCARE PROVIDERS

- Eliminates needlestick injuries
- Reduces sharps management and disposal costs

### FAST & EASY

- Delivers the vaccine into the muscle in about 1/10 of a second
- Majority of users self-trained within 20 minutes

### PATIENTS & HEALTHCARE PROVIDERS CHOOSE IT

Post marketing surveys support patient and healthcare provider preference, and satisfaction with needle-free flu shots.

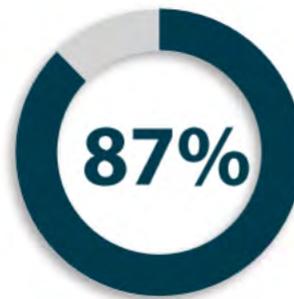
### PATIENTS CHOOSE IT



of patients surveyed would choose a needle-free flu shot again.<sup>3</sup>



### HEALTHCARE PROVIDERS WANT IT



of healthcare providers surveyed want needle-free flu shots at their facility.<sup>4</sup>

# EXECUTIVE BIOS

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## **Ron Lowy, Chairman and Chief Executive Officer**

Mr. Lowy has a Bachelor of Science degree in Mechanical Engineering from the University of New Hampshire and a MBA from the University of Wisconsin. Ron was appointed Chairman and Chief Executive Officer in early 2013.

Mr. Lowy serves on the boards and as an advisor to several medical device, education and information technology companies. Ron previously served as the President and CEO of the Biosciences division of Thermo Fisher Scientific. Prior to that he was President of Global Connectivity Solutions for ADC Telecommunications. He also served as President and Chief Operating Officer at the KRONE Group. Mr. Lowy spent the first 15 years of his career in operations, technology and general management positions at GE Healthcare.

## **Jeffrey A. Jordan, Chief Financial Officer**

Mr. Jordan has a Bachelor of Science degree in Mechanical Engineering from the United States Military Academy at West Point and a MBA from the University of Maryland. Jeff has more than 25 years of experience in corporate finance. In his previous role, he directed the global finance functions for the Laboratory Products Group of Thermo Fisher Scientific, supporting \$1.9B in annual revenue and 10,000 employees. Jeff has worked in several industries including life science tools, telecommunications and industrial chemicals. He has extensive experience in strategic planning, forecasting, significant capital investments, acquisitions and integration activities.

## **Heather Callender-Potters, Vice Chairman and Chief Business Development Officer**

Ms. Callender-Potters has a Bachelor of Arts degree in International Management from Claremont McKenna College and an MBA from Wharton, the University of Pennsylvania. One of the co-founders of the company, Heather has over 25 years of active investment experience, including Private Equity fund management and international investment (BCEE; Enterprise Investors) across multiple international jurisdictions, and has managed individual investments and financial investor consortiums, ranging from \$1 million to an excess of \$100 million. She has also held board positions with several companies across a variety of industries ranging from auto-parts, to systems integration, publishing, light-manufacturing and healthcare.

## **Chris Cappello, Chief Operating Officer**

Mr. Cappello has a Bachelor of Science degree in Mechanical Engineering from Colorado State University and his PMP certification. He has over 15 years of Project/Program Management experience and experiential Medical Device development. Chris has managed multiple cross functional teams and departments in the successful design, development, clearance and launch of both reusable & high volume disposable medical devices. He has driven the development of disruptive medical device technologies at companies such as AlloSource and Applied Medical.

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