

Perma-Fix Medical Investor Presentation - June 2015

NewConnect: PFM



Safe Harbor

Certain statements contained within this presentation may be deemed “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended (collectively, the “Private Securities Litigation Reform Act of 1995”). All statements in this presentation other than a statement of historical fact are forward-looking statements that are subject to known and unknown risks, uncertainties and other factors which could cause actual results and performance of the Company to differ materially from such statements. The words “believe,” “expect,” “anticipate,” “intend,” “will,” and similar expressions identify forward-looking statements.

While the Company believes the expectations reflected in such forward-looking statements are reasonable, it can give no assurance such expectations will prove to have been correct. There are a variety of factors which could cause future outcomes to differ materially from those described in this report.

Investment Highlights

Disruptive technology to produce the most commonly used medical isotope in the world – Technetium-99m (Tc-99m)

Leading institutions in North America & Europe have validated the process

Strong intellectual property portfolio

40% of current N.A. supply chain for Tc-99m will be eliminated in 2016

Highly scalable business model leveraging strategic partners

Management Board



Stephen Belcher, CEO and Management Board, Member of Board of Directors of Perma-Fix Environmental Services. Founder, principal, and former Vice President of Triad Isotopes, which was formed in 2007 and has grown to 60 pharmacies and \$270 million in sales. Mr. Belcher served as an officer and principle architect of multiple ventures, including establishing the first unit dose radiopharmaceutical sales in Puerto Rico. Mr. Belcher served as Chairman of the Board for the Association for Independent Nuclear Pharmacies.



John Climaco, Executive Vice President and Management Board, Member of Board of Directors of Perma-Fix Environmental Services. He is cofounder and former President, Chief Executive Officer and Member of Board of Directors of Axial Biotech, Inc., a molecular diagnostics company specializing in spine disorders. Mr. Climaco serves as a Member of Board of Directors for Digirad Corporation, a provider of in-office nuclear cardiology imaging. Mr. Climaco served as a Board Member of InfuSystem Holdings, Inc., a supplier of infusion services to oncologists and out-patient treatment settings.



Ben Naccarato, Acting CFO, joined Perma-Fix in 2004. He brings 24 years experience in senior financial positions in the waste management and used oil industries. Previous positions include Chief Financial Officer for Culp Petroleum Company Inc, a fuel distribution and used waste oil company and Director of Financial Planning and Analysis with Safety-Kleen Corp.



Dr. Louis Francis Centofanti, Chairman of Supervisory Board, founded Perma-Fix Environmental Services in 1991. Former Chairman and CEO of Perma-Fix Medical. Previously founded PPM, Inc., a hazardous waste management company. PPM's revenues grew to \$15 million at which time it was sold to USPCI. Under Dr. Centofanti's leadership (Senior Vice President), USPCI was sold for \$600 million (2 years after purchase of PPM). Served as senior official to the U.S. Department of Energy under the Carter Administration.

Isotope Market Overview



- **Tc-99m is the most widely used medical isotope in the world**
 - Allows medical practitioners to image internal body organs
 - Used in 80-85% of the 25M diagnostic nuclear medical procedures each year
 - Common procedures include:
 - cardiac imaging
 - gastrointestinal issues
 - cancer detection bone scans
 - Imaging of the brain, kidney, spleen and infections
- **The radioisotope market in Europe alone is expected to reach \$1.6B in 2017, up from \$1.1B in 2012**
 - Nearly all of the world's supply comes from the thermal fission of highly enriched uranium (HEU) targets in a small number of highly specialized reactors
 - Current process is costly and unreliable; raises serious proliferation concerns

Supply Chain Elimination – A Perfect Storm

- Beginning in 2016, the National Research Universal (NRU) reactor in Canada **will no longer receive government funding** for isotope production
 - 40% of the supply of Tc-99m in North America derived from this one reactor (referred to as the Chalk River Reactor)
- The OSIRIS reactor in France is also **scheduled to close in 2018**
- Without an alternative source of Tc-99m, these planned shut downs will put **billions of USD in medical procedures at risk**



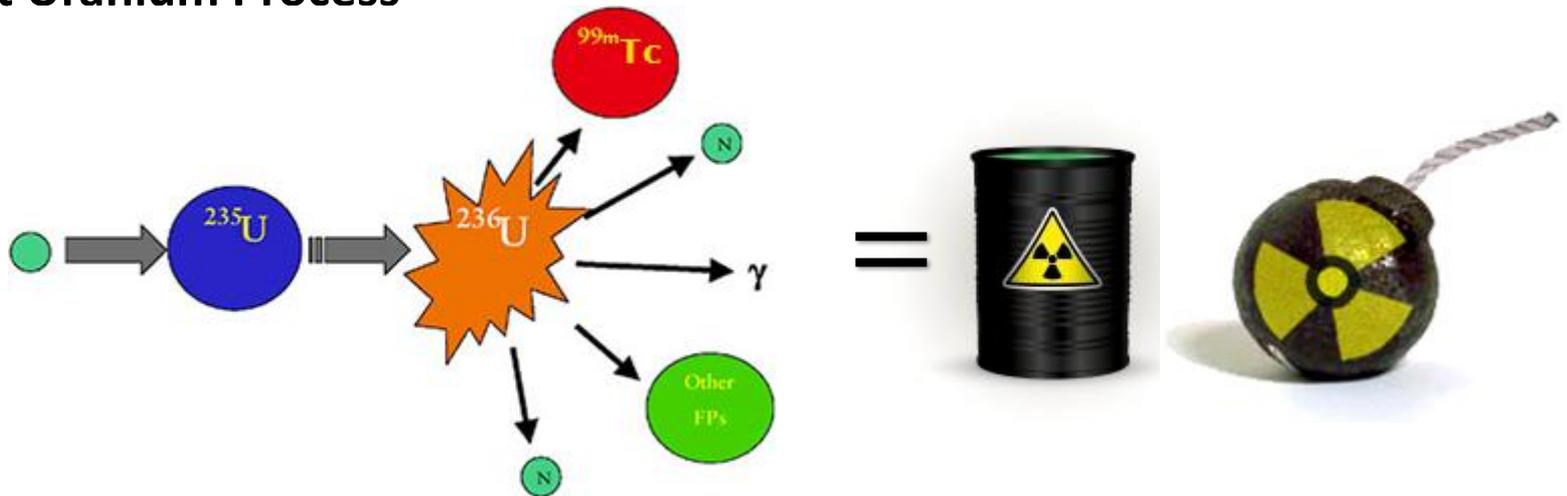
Chalk River, ON

Isotope Production

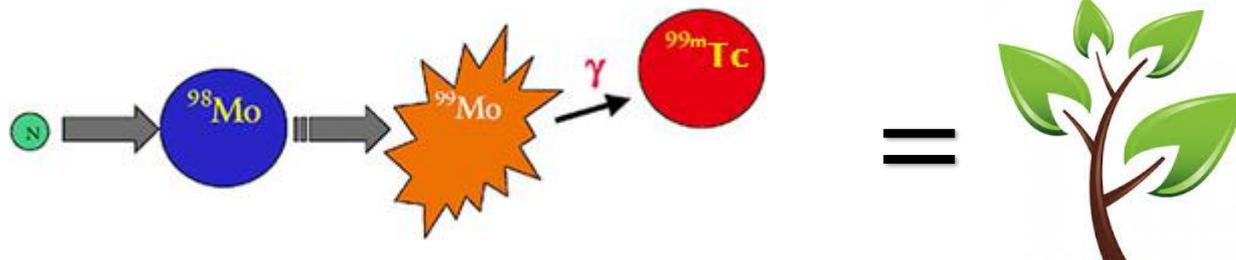
- Completed initial development of **new process to produce Tc-99m** for medical diagnostic tests
 - ✓ **Expected to solve worldwide shortages of Tc-99m**
 - ✓ Far **less expensive** process
 - ✓ Does not require the use of government-subsidized, weapons-grade materials
 - ✓ Designed to **improve safety** and **security of radioactive materials**
- Process encompasses full production cycle: reactor to final medical supply
 - Easily deployed worldwide using standard research and commercial reactors
 - **Eliminates the need for special purpose reactors**
 - **Stabilizes the worldwide supply of Tc-99m by decentralizing production**

Isotope Production

Current Uranium Process*



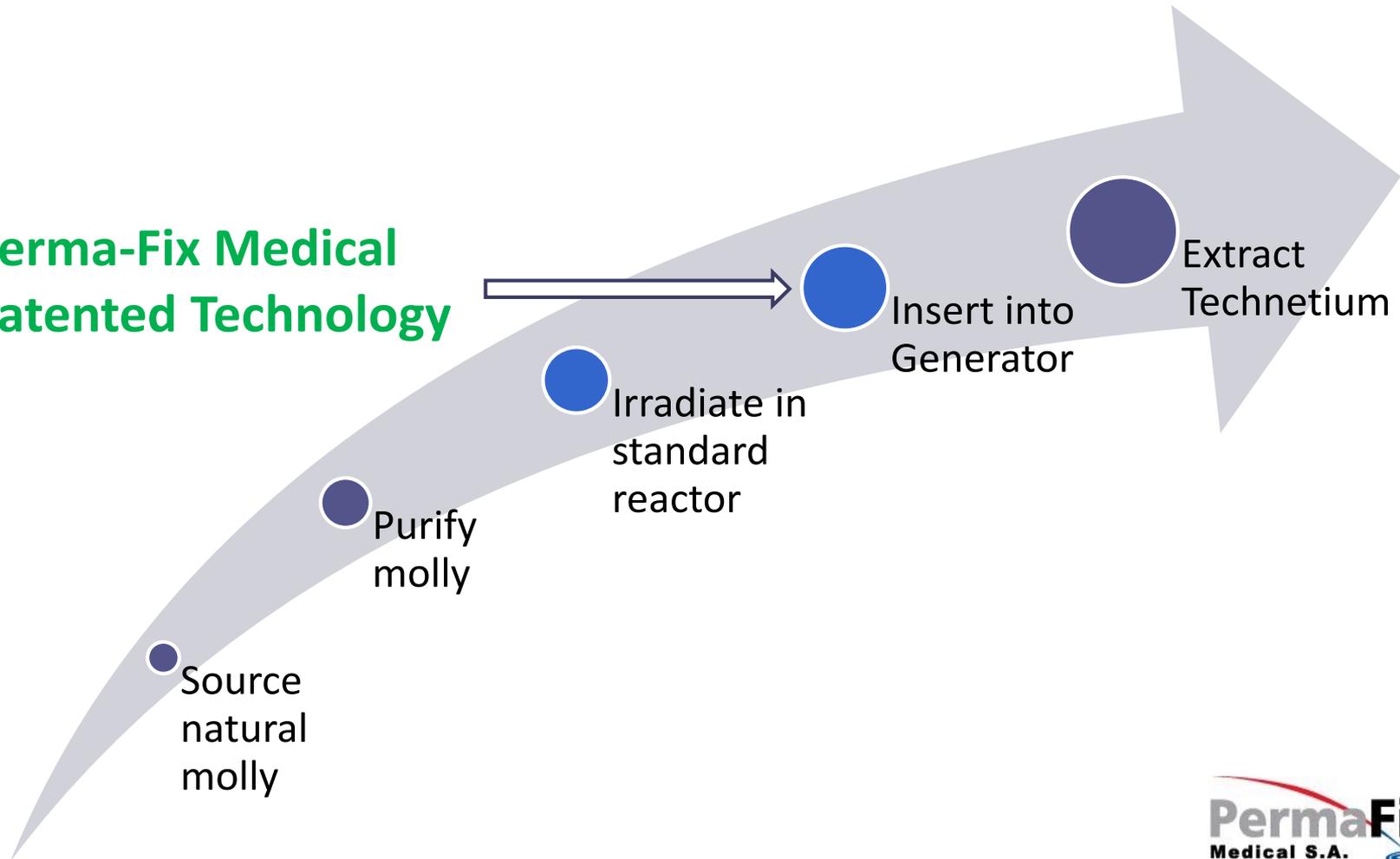
Perma-Fix Molybdenum Process*



*Source: NATIONAL RESEARCH COUNCIL OF THE NATIONAL ACADEMIES

Proprietary Production Process

**Perma-Fix Medical
Patented Technology**

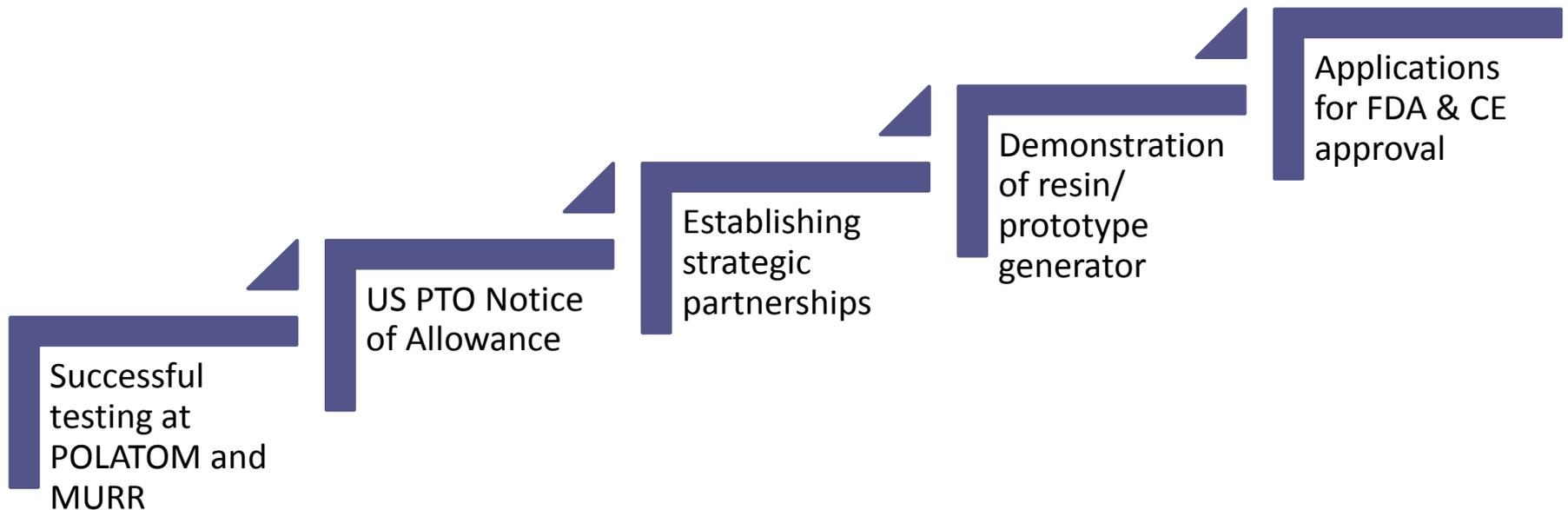


Patents & Licenses

- In January 2015, the US Patent Office issued patent to Perma-Fix Environmental Services, Inc.
 - Allowed all claims in the key patent application
 - Composition of matter and use patent
- Additional patents underway
- Third-party license agreements in place



Key Milestones



Technology Validation

- First set of independent tests conducted at POLATOM, the national center for nuclear research in Warsaw, Poland
 - Reaffirmed previous testing
- Second set of tests conducted at the Missouri University Research Reactor (MURR) in Columbia, Missouri, USA
 - Demonstrated higher elution efficiencies



Independent testing validates strength of the technology

Recent Announcements

Perma-Fix Medical Announces Important Milestone Towards Scale-Up of Non-Uranium Process to Produce Technetium-99m

Confirms Successful Tests at Higher Radiation Levels; New Process Eliminates Proliferation Risk and the Need for Either High or Low Enriched Uranium Targets

ATLANTA, GA--(Marketwired - June 02, 2015) - **Perma-Fix Environmental Services, Inc.** (NASDAQ: PESI) today announced that Perma-Fix Medical SA, a Polish subsidiary of the company, completed a successful scale-up of its process to produce Technetium-99m (Tc-99m) from Molybdenum-99 (Mo-99). The tests confirmed that the Company's proprietary resins could withstand high levels of radiation, up to 2 curies, while producing usable doses of Tc-99m. We have also demonstrated the successful tagging of some of the more popular kits used to target organs. Perma-Fix Medical plans to conduct additional demonstrations at even higher curie levels in the near future, as part of its multi-step validation of its technology.

Perma-Fix Medical Confirms Successful Tests at 4 Curie Level; Achieves Another Major Milestone Towards Scale-Up of Non-Uranium Process to Produce Technetium-99m

New Process Eliminates Proliferation Risk and the Need for Either High or Low Enriched Uranium Targets

ATLANTA, GA--(Marketwired - June 08, 2015) - **Perma-Fix Environmental Services, Inc.** (NASDAQ: PESI), today announced that Perma-Fix Medical SA, a subsidiary of the company, completed another successful scale-up of its process to produce Technetium-99m (Tc-99m) from Molybdenum-99 (Mo-99). The tests confirmed that the Company's proprietary resins could withstand higher levels of radiation, up to 4 curies, while producing clinically useful doses of Tc-99m. These results follow previously announced tests that verified success at the 2 curie level. Perma-Fix Medical plans to conduct additional demonstrations at higher curie levels in the near future, as part of its multi-step validation of its technology.

Summary Value Proposition

Winner	Perma-Fix	Uranium
Reliable global supply chain		
Environmentally friendly		
Eliminates proliferation risk		
Flexibility in multiple reactor types		
Non government subsidized		
Cost effective		

Warsaw listing

- In 2014, Perma-Fix Medical listed and commenced trading on the NewConnect Market of the Warsaw Stock Exchange
- Raised \$2.75M at the subsidiary level - led by one of the largest mutual funds in Central Europe
- Plans to uplist to Main Market of the Warsaw Stock Exchange and list on Nasdaq in the United States



WARSAW
STOCK
EXCHANGE



EU Grant Award

- Awarded \$2.8M grant to advance development of technetium generator for cancer and cardiac imaging
- Consists of four additional entities from Poland, including:
 - The National Centre for Nuclear Research - Radioisotope Centre POLATOM in Otwock
 - The Institute for Biopolymers and Chemical Fibers - Department of Biopolymers in Łódź
 - Warsaw Medical University - Department of Nuclear Administration
 - The Institute of Industrial Organic Chemistry Branch in Pszczyna
- Non-dilutive funding to develop proprietary commercial generator

TOTAL INVESTMENT TO-DATE ON PRODUCT DEVELOPMENT UNDER \$1 MILLION USD

Supervisory Board



Robert Louis Ferguson, Supervisory Board, has over 45 years of management and technical experience in the government and private sectors. He previously served as the Department of Energy's Deputy Assistant Secretary for Nuclear Programs, and as CEO of the Washington Public Power Supply System (now Energy Northwest). His government experience includes various roles, including management of isotope programs for the Atomic Energy Commission, the Energy Research and Development Administration, and the U.S. Department of Energy.



Larry Shelton, Supervisory Board, is currently the Chief Financial Officer of S K Hart Management, LC, an investment holding company. Mr. Shelton has over 18 years of experience as financial executive officer for several waste management companies. Mr. Shelton has a B.A. in accounting from the University of Oklahoma.



Robert Schreiber, Supervisory Board, is the president of Schreiber, Yonley & Associates. He is an internationally recognized environmental engineer with over 43 years of experience. Between 1972 and 1985 he held a variety of positions with the States of Missouri and Illinois, including Director of Air Pollution Control (1978 – 1980) and Director of the Division of Environmental Quality (1980 – 1985), both positions with the Missouri Department of Natural Resources.



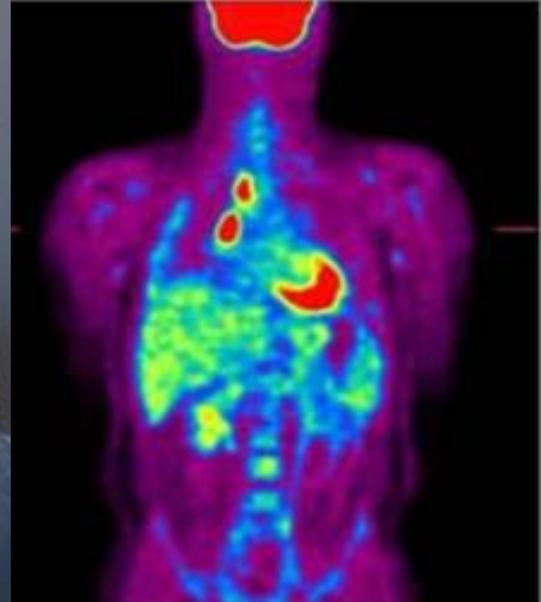
Dr. Gary Kugler, Supervisory Board, serves as Member of the Board of Directors of Perma-Fix Environmental Services. He was Chairman of the Board of Directors of Nuclear Waste Management Organization from 2006 to June 2014.. Dr. Kugler also served on the board of Ontario Power Generation, Inc. He also served for 34 years with Atomic Energy of Canada Ltd where he held various project management, business development, and executive positions including Senior Vice President. He holds a PH.D. in nuclear physics from McMaster University.



Ewa Szlachetka, Supervisory Board, a partner at Wierzbowski Eversheds where she heads the M&A team. Recognized as one of the leading lawyers specializing in financial and corporate law in the International Financial Law Review ranking. She was an attorney with many years of professional experience gained in renowned law firms with the focus on M&A, private equity/venture capital transactions and restructuring of capital groups.

Digirad (NASDAQ:DRAD): An End User Perspective

- All North American providers of nuclear imaging are headed “over the falls” in 2016
- Perma-Fix Medical presents a reliable alternative to a fragile supply chain
 - A custom “direct to end user” solution
 - Decentralized production
 - Ease of production in existing reactors worldwide
- A low cost solution to the 2nd biggest COG after labor
- Benefit to service providers, patients and payors



Perma-Fix Medical – Investor Presentation

Thank you.

For additional information:

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