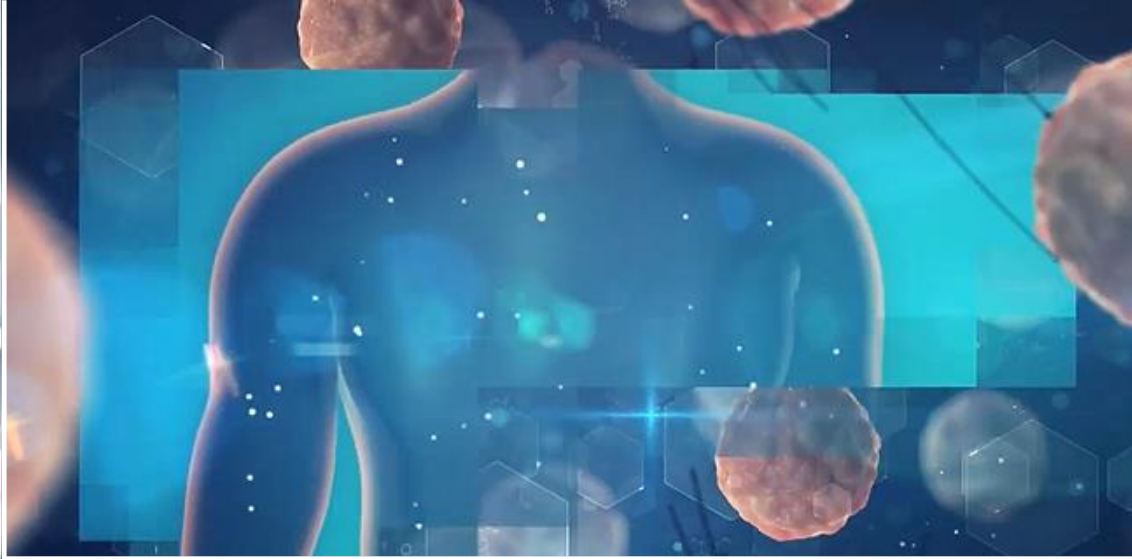
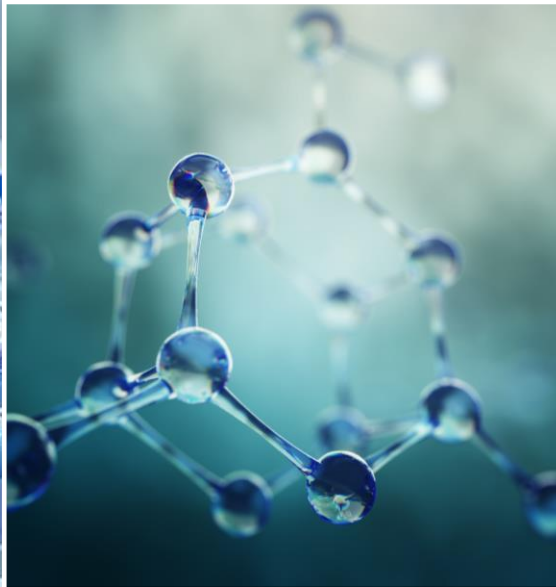


# **Current Experiences in Handling Ra-226 at SpectronRx**

**30May2024**



SpectronRx



*SpectronRx is led by a passionate team comprised of radiopharmaceutical industry pioneers*

**Senior Management Supported by Experienced and Committed Team In Place to Drive Future Growth**



**John Zehner**  
CEO,  
Founder



**Anwer Rizvi**  
President,  
Founder



**Peter Webner**  
Chief Operating  
Officer



**Tim Vertz**  
SVP of Finance /  
Business  
Development



**Beth Kraemer**  
SVP of Quality,  
Regulatory / Tech  
Compliance



**Dr. David Trump**  
SVP, Research  
and Development



**Bill Monachino**  
Chief Business  
Officer



**Rudi Verbruggen**  
Senior Business  
Development  
Advisor



**Deep bench of nuclear pharmacists, radiochemists, and engineers**



**History of building and growing with the Company over time**



**Company-wide focus on client service**



**Extensive track record in radiopharmaceuticals and medical isotopes**

*SpectronRx is a differentiated CDMO platform well-positioned for growth in the global radiopharmaceutical market*

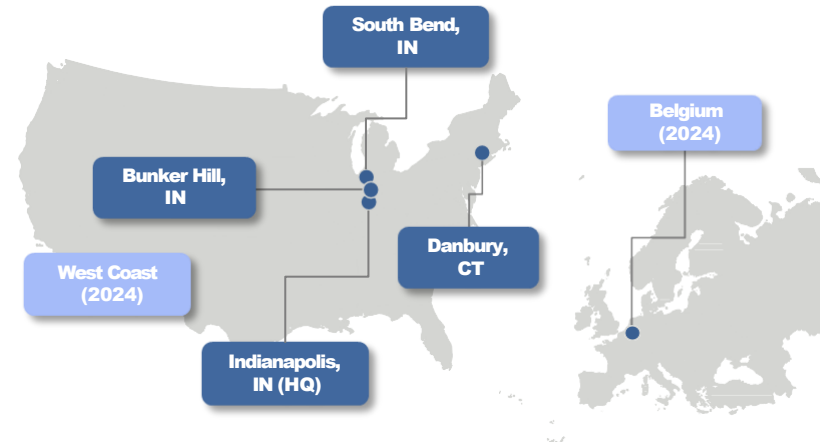
## Company Overview

- SpectronRx is a leading contract development and manufacturing organization of therapeutic and diagnostic radiopharmaceuticals ("RCDMO")
- Ships Radiotherapies to Europe, South America, Asia and Canada weekly with experience in over 29 countries.
- Offers a comprehensive suite of services across the product development lifecycle, from formulation development to commercial-scale manufacturing to regulatory support and logistics
- Uniquely positioned for global growth as an established player in the rapidly growing \$8B+ radiopharmaceutical market
- State-of-the-art RCDMO infrastructure supported by a deep bench of scientific talent, including 30+ nuclear pharmacists, radiochemists, and engineers.
- Profitable with a strong Balance Sheet.

## By the Numbers

<b>17</b> Active Customers	<b>31</b> Active Projects	<b>&gt;170,000</b> Sq. Feet of Facilities	<b>&gt;34</b> Cleanrooms
-------------------------------	------------------------------	--	-----------------------------

## Geographic Presence







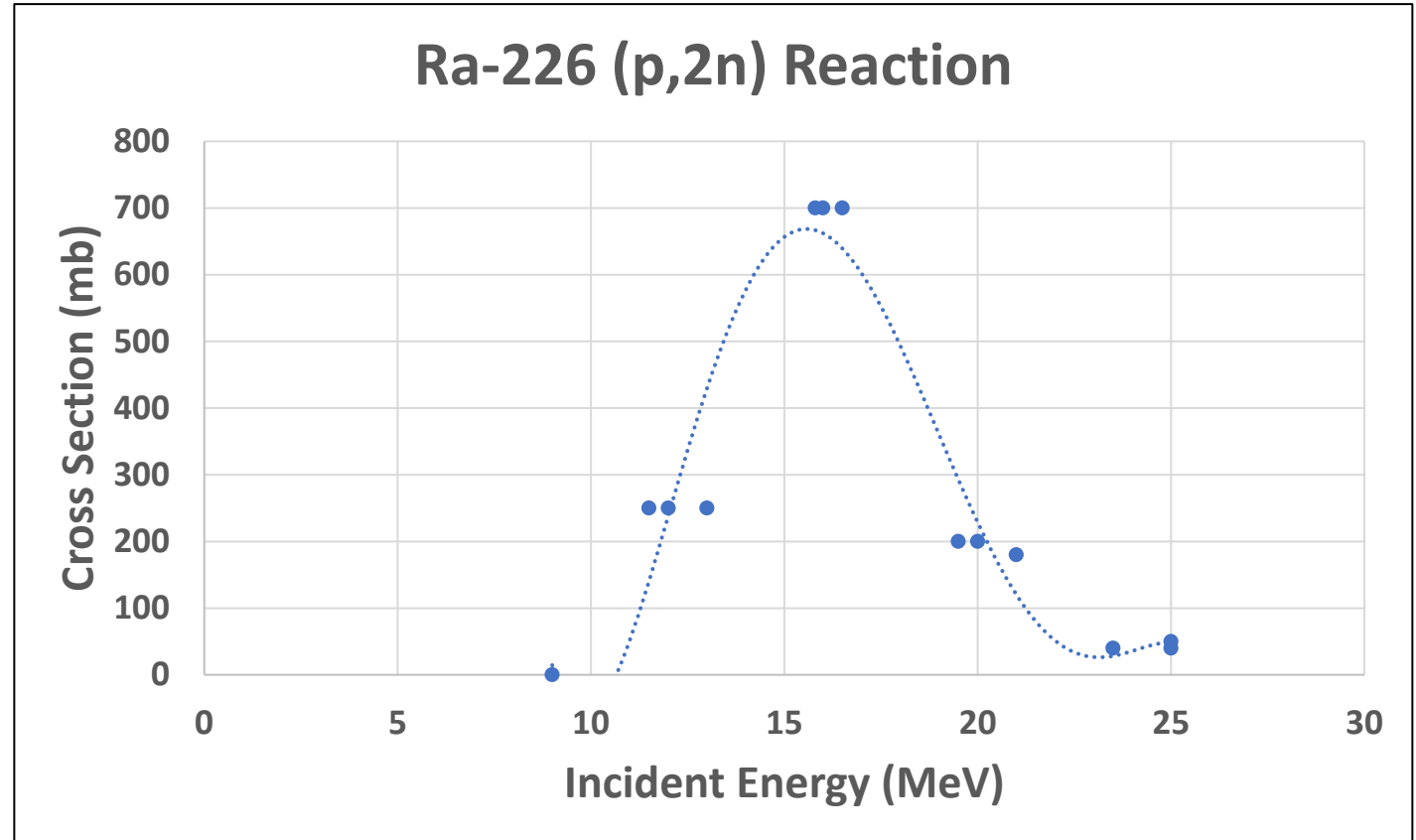
# SpectronRx Experience with Ra-226

# Why Does SpectronRx want Ra-226?

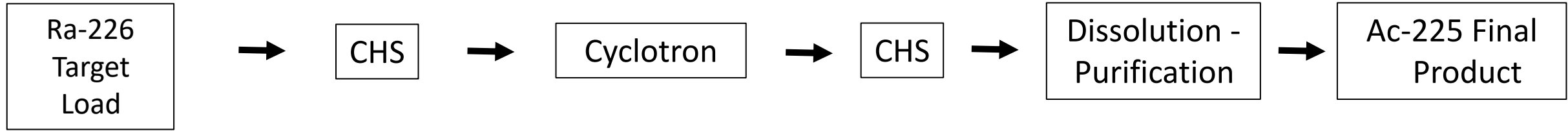
- Starting material for Ac-225 production via  $^{226}\text{Ra}(p,2n)^{225}\text{Ac}$
- Ac-225 is needed to support radiopharmaceutical production at SpectronRx
- Radiopharmaceutical research with Ac-225 is very active
- SpectronRx desires to increase world's Ac-225 supply

# How is SpectronRx using Ra-226?

- Low energy cyclotron irradiations
- Small quantity Ra-226 target loading
- Many irradiations for longer times



# Process for Ac-225 Production via Ra-226



Loading Cell



CHS Cell



Cyclotron



Chemistry Cell



Final Product Vial

Ra-226 Recycling

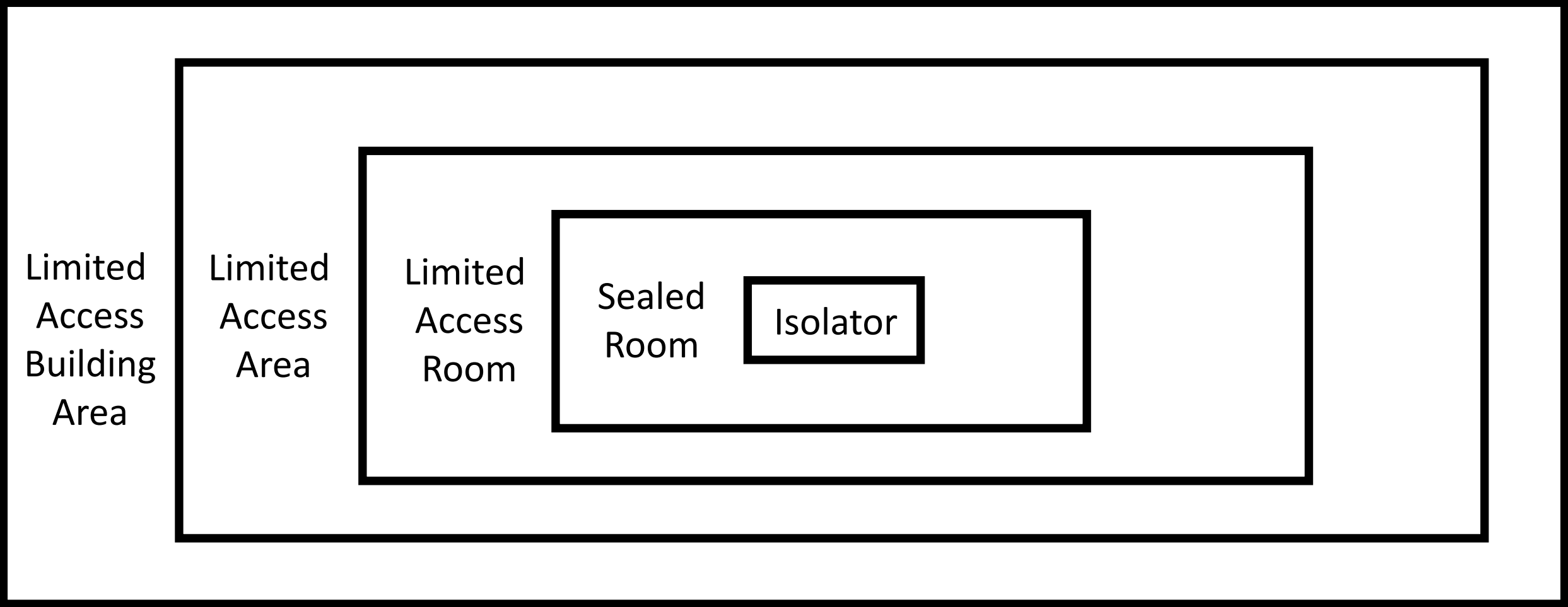




# Safety Concerns

- Ra-226 half-life = 1600y
- Radon daughter is a gas
- Radium/Beryllium neutron production
- Risks of irradiating Ra-226 in new target
  - Target integrity specs and testing
- Safe irradiated target transfer
- Poorly defined chemical forms of Ra-226
- Employee safety practices required
- Exhaust design, airflow cascade
- Preparation for contamination events
- Waste handling, storage
- Charcoal filter management
- Facility cleanliness practices with Ra-226
- Proper training for employees
- Long grow-in period for Ra-226 daughters
- Appropriate exhaust monitoring
- Quantitation of Ra-226 in working isolators
- Workflow for transporting Ra-226
- Impurities in Ra-226 incoming material
- Anecdotal information
  - Unexpected contamination overtime
  - Ra-226 background increase on wipes

# Initial Ac-225 Production Environment





Thank You!