

# MOLTEN SALT SOLUTIONS



## ***Lithium for Advanced Nuclear Power and Fusion***

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# *The Next Generations of Nuclear Power Require Lithium Isotope Enrichment*



## Molten Salt Reactors

- Molten fluoride salts as the coolant
  - LiF – BeF<sub>2</sub> (FLiBe)
- Avoid generating tritium from <sup>6</sup>Li
- 99.995+% <sup>7</sup>Li



## Fusion Reactors

- Lithium blanket breeds tritium fuel
- A 1.1 TBR will require 30% to 90% <sup>6</sup>Li

# ***Lithium Isotope Enrichment Key Technology***

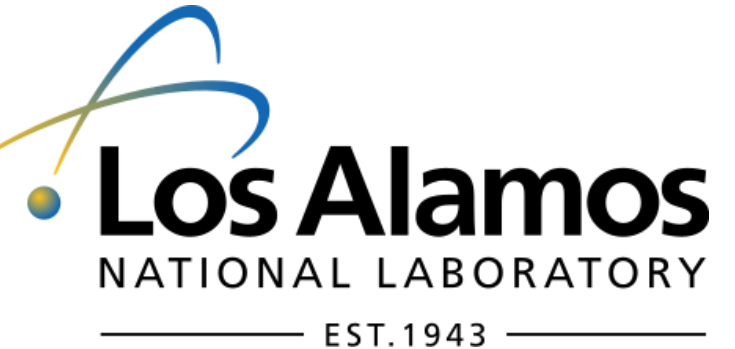
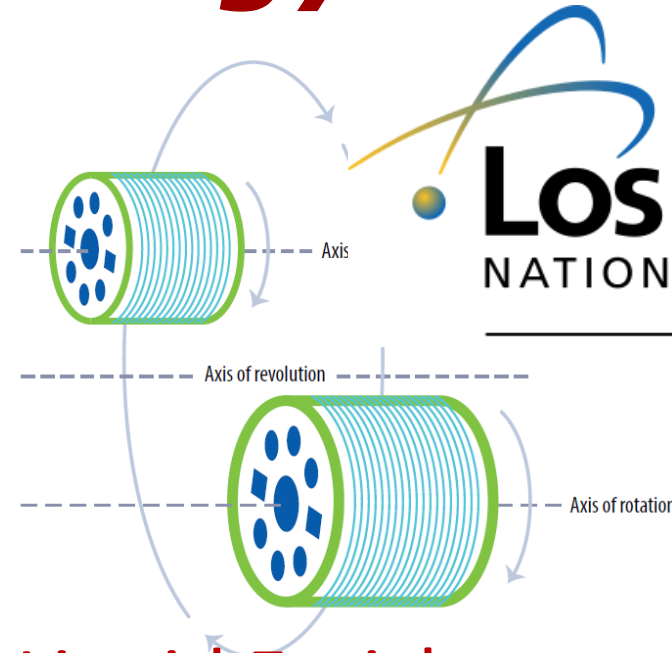
- **Proprietary, Efficient Chromatography**

- Developed in collaboration with Los Alamos National Laboratory

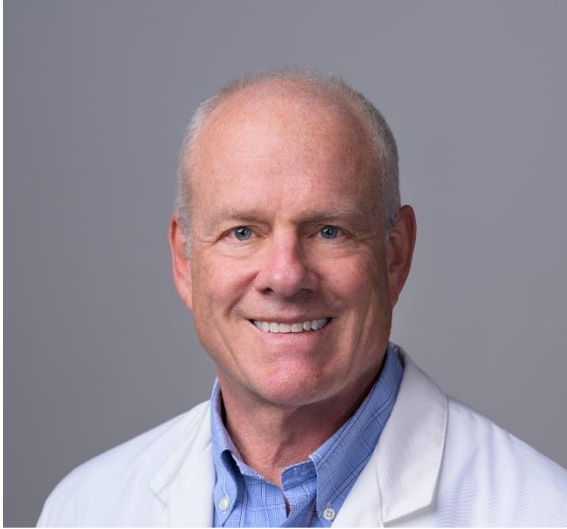


- **Proprietary Liquid-Liquid Enrichment Chemistry**

- Novel solvent exchange system
- Environmentally-friendly

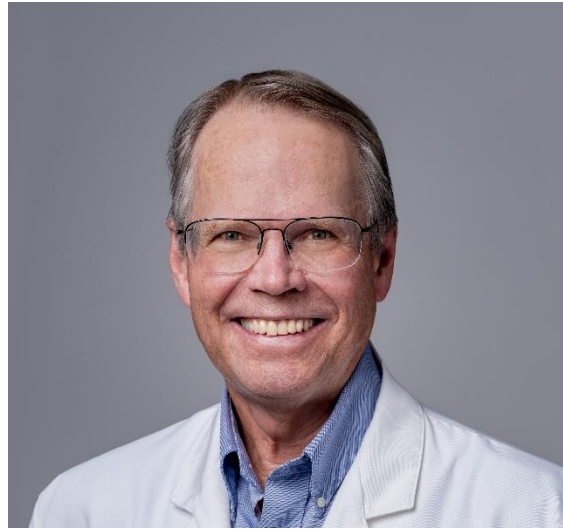


# ***Molten Salt Solutions' Team***



***John Elling, CEO***

- Analytical Chemist @ LANL
- Experienced Entrepreneur



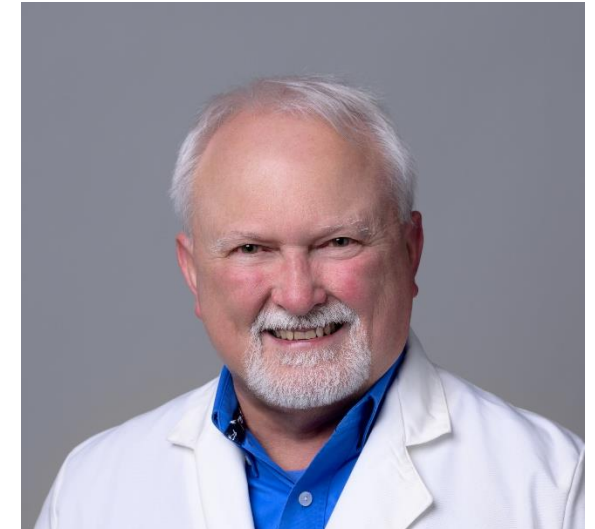
***Gordon Jarvinen, PI***

- Chemist
- 39 Years at LANL
- Seaborg Institute



***Steve Yarbrow, Consultant***

- Chemical Engineer
- 35 Years at LANL
- Division Leader



***Joe Gatewood***

- Physics
- 11 years at LANL
- Experienced Entrepreneur

# ***New Mexico Fusion Economy***

- **Locus of High Energy Science**

- Technology and Expertise and Resources at SNL and LANL

- **Startup Environment**

- Angel Tax Credit, SBIR matching
- LEEP, NMSBA, TRGR, User Facilities (LANSCE, CINT, etc.)

- **Dual Use of the Supply Chain**

- LANL and SNL, US government customers

- **State Support and Industry Advocacy**

- NM Fusion Industry Working Group, [www.nmfwg.org](http://www.nmfwg.org), [info@nmfwg.org](mailto:info@nmfwg.org)
  - R&D fund, Advanced Energy Award
  - More matching of fusion-related federal funding (20% match)
  - Speed and expertise in state government execution



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