Boston E-Net, April 17, 2018
Martha Farmer, President & CEO
NSIV – Sparking Innovation

• **What we do:** Develop young biotech & cleantech companies through excellent mentoring, first-class lab facilities and a vibrant business-focused community.

• **What we have:** 13,000 sq. ft. of well-equipped labs, conference and office space, a deep mentor and advisor pool, a deeper network, and a commitment to our clients.

• **Where we are:** 45 minutes outside Boston on commuter rail line in a growing cluster of technology businesses and service providers

• **Impact!** 54 companies created 285 jobs & secured $250M in investment and grants, 215 patents filed.

www.nsiv.org
New Facilities - Big Improvement

Lots of Natural Light

Colorful!

Great Community Space
Failure Fuels Success – Eventually, maybe…

The Saga of Blood Substitutes or Hemoglobin Based Oxygen Carriers (HBOCs)
The Need — a blood-type free, shelf-stable, safe and effective alternative to blood for rapid resuscitation from traumatic hemorrhagic shock

Many attempts:

• First paper published on synthetic red cells in 1957
• I started work on the problem at the Naval Research Lab in DC in 1982
• Collaborated with Northfield Labs in Chicago in 1983 (went public)
• Baxter Healthcare in Chicago started a program in 1983
  • Bought Somatogen - genetically engineered HBOC (went public)
• Biopure started up in Cambridge in 1984 (went public)
• Abbott Labs got into it in 1986 – and out in 1987
• Hemosol started in Toronto in 1990 (went public)
• Sangart in 1992 (went public)
• Etc., etc.
History cont’d

Many Failures:

• All the startups that went public got into clinical trials – and never got a product approved for human use in the US.
• All of the products met the requirements in preclinical studies.
• All of them failed to meet the FDA requirements in the clinic.
• Baxter had a catastrophic failure in its 2nd Phase III clinical trial in 1997 and the division was dissolved in 1998.
• Collectively the field lost $2-3Billion.
• I worked for the Naval Research Lab, Abbott Labs, Baxter Healthcare, (including Somatogen), Hemosol and Biopure. Gave up in 2005.
What’s New?

• In 2016, I got a call from a former colleague (Naval Research Lab and Biopure), looking for lab space in our incubator.

  **For an HBOC startup.**

  **(Some ideas just won’t die.)**

• VirTech Bio is now in preclinical studies – looking good!
• The team has people from Baxter, Hemosol, Biopure and Sangart – all former competitors who were once very sure that their own product was the best.
• We have all lost our arrogance. As has everyone else in the field.
• And we have all want to see a product come out of our decades of work.
• Biggest lessons:

  **Don’t believe your own hype**

  **Question your assumptions**