
# Facilitating Collaborations at the National Lab/University/Industry Interface

## Legislative Finance Committee

**JULY 18, 2018**

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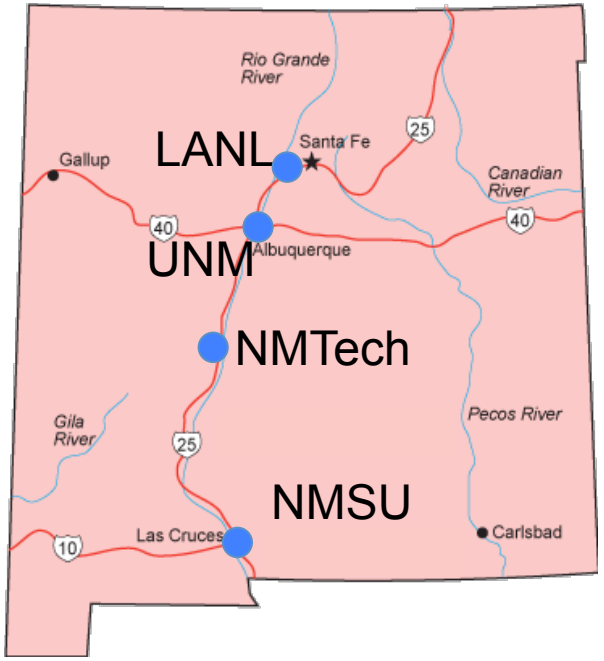
**Director/CEO**
**New Mexico Consortium**

# NMC – Background

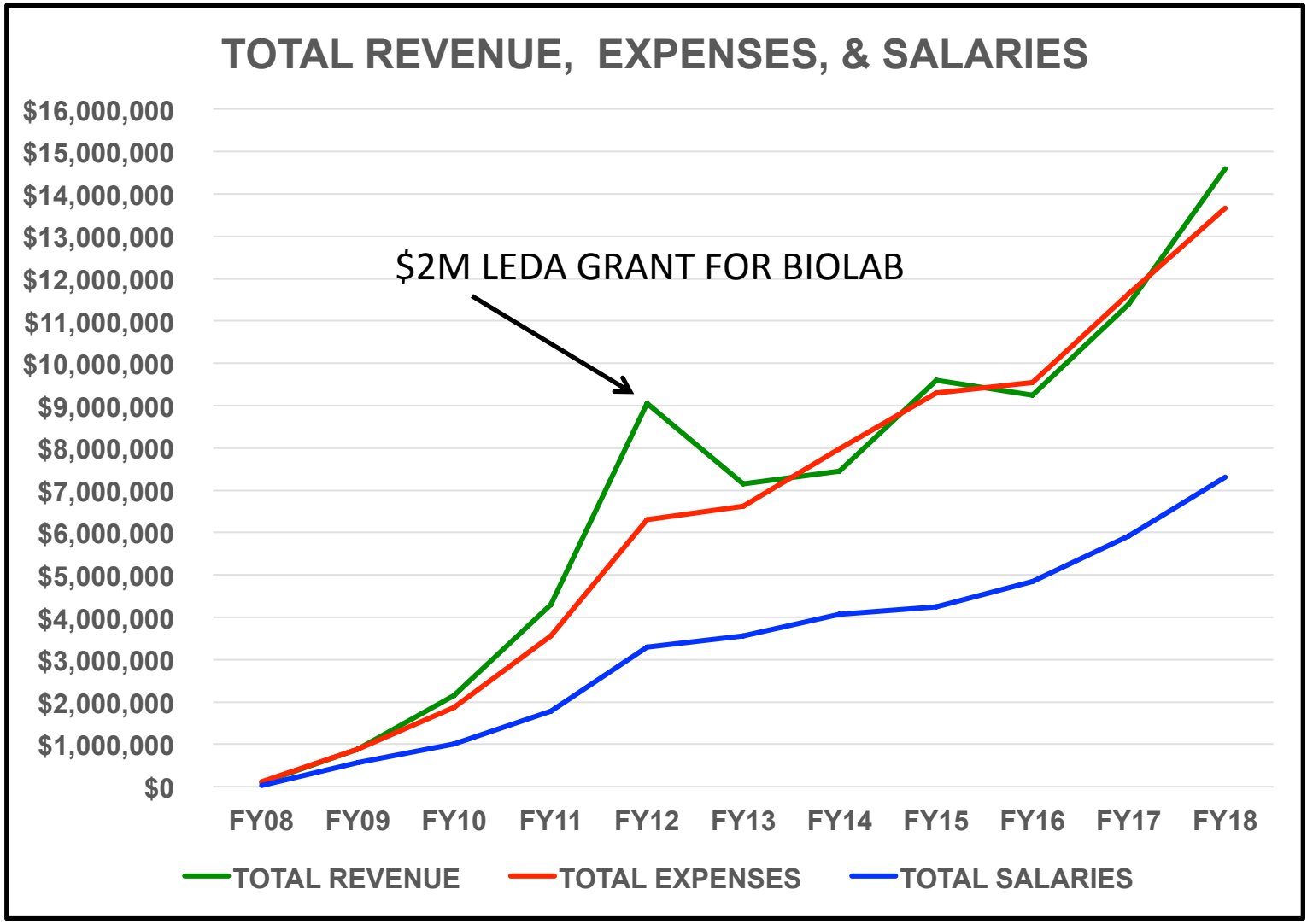
- **Initiated by a Teaming Agreement between the University of California and the three New Mexico Research Universities to enhance research and education collaborations.**
  - University of New Mexico
  - New Mexico Institute of Mining and Technology
  - New Mexico State University
- **Incorporated in 2006 as a non-profit 501(c)(3).**
  - Board Of Directors - 2 members form each University and 2 non-voting members from LANL.
  - Financial support provided by Los Alamos National Laboratory(LANL).
- **Institutional Agreement signed August, 2010 formalizing relationship, renewed January, 2014, and again for 5 years in March 2018.**



# NMC- Focus Areas

- **Research**
  - Advanced Computing
  - Modeling and Analysis
  - Bio Technology and Engineering
- **Education**
  - Mentored Research (Postdocs, Students, Interns)
  - Summer Schools  (15 LANL Programs)
  - Conferences/Workshops
  - Public Lectures
  - Facility Tours
- **Economic Development**
  - Incubator
  - Start-up Support
    - 8 start-ups

# NMC Steady Growth & Job Creation



# NMC-Current Status

- **Staffing**
  - 143 employees in 2018
  - 99 Full time equivalents
- **Facilities - 47,000 sq. ft. of lab and office space includes:**
  - 26,000 sq. ft. Biolab ($14M)
  - High Performance Computer Facility, 3,500 sq. ft. ($5.5M)
- **Funding**
  - LANL Institutional Agreement
  - 70 Active awards totaling over $53M
  - Diversified sponsor portfolio
    - Government: NSF, NIH, USDA, DARPA, DOE, AFOSR, NASA
    - Foundation: Gates, Moore, Google
    - Industry: Agro, Pharma
  - Conferences and Workshops
  - User Facilities Access Fees
    - Over 60 Researchers Pay to Use Facilities


# Economic Development: Start-ups and Partnerships

- **NMC facilitates the commercialization of LANL innovation**
- **NMC provides facilities, equipment, staffing, and financial support to start-ups**
- **Innovative models for collaboration allow new companies to get started faster and with lower risk.**

PEBBLELABS
UNLOCKING NATURE'S CODE

**Pebble Labs** is developing the transformational science of Transbiotics™ to improve how we grow our food and nourish ourselves for a healthier future. Transbiotics uses naturally occurring bacteria to produce double-stranded RNA that are designed to inhibit the expression of genes in only the targeted pathogens and pests, without harming the environment, the host organism or humans. It is inexpensive to produce at scale and can be easily applied safely by farmers, fish and livestock producers, or even by individuals in their gardens and fields.

Specifica

**Specifica** is focused on providing the next generation of human antibody engineering and discovery solutions. Specifica's discovery technology platform can deliver high-affinity human antibodies with desired characteristics. Their native human libraries can provide powerful and exclusive in-house discovery capabilities.

UbiQD
UBIQUITOUS QUANTUM DOTS

**UbiQD** is a development stage corporation that was founded in 2014 to commercialize low-cost and low-toxicity quantum dot technologies. UbiQD produces very bright quantum dots with a scalable low-cost process using environmentally friendly synthesis that is free of toxic heavy metals or other carcinogenic materials. Their dots also have stable optical properties that perform well under harsh environments such as high temperatures and moisture exposure.

Innate
IMMUNITY

**Innate Immunity** is working to strengthen the immune systems in humans and plants to fight deadly pathogens. Innate Immunity uses small *chimeric proteins* to kill bacteria. One section of the chimeric protein is designed to adhere to the surface of the bacteria while the second section is optimized to penetrate the outer membrane of the bacteria and kill it. Proteins, native to the host organisms, are identified and modified to increase their ability to adhere to and kill the pathogen.

# NMC –Builds Collaborations

- **Faculty/Staff Visits**
  - Identify possible collaborators
  - Arrange seminars and discussions
- **Workshop/Conference Support**
  - Faculty/Student travel &registration
  - Organization and logistics
- **Proposal Preparation**
  - Travel support for faculty
  - Faculty T&E and logistic support for large $ initiatives
- **Student visits & internships**
  - University faculty and LANL staff mentors
  - Seed projects for proposals
- **Faculty sabbaticals**
  - New faculty hires – 3 to 12 months at LANL before starting at University
  - Summer/ year-long sabbaticals
- **Curriculum Support and Development**
  - Course modules taught by LANL staff
  - New course content developed in collaboration
  - Design clinic support

# NMC - Contacts

**Visit NMC website**

http://newmexicoconsortium.org

**Contact Steve Buelow**

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