Translational Medicine Institute
Colorado State University

History, Progress and Future…
TMI Timeline

2013

Funding

2019

Organization, Strategic & Operational Planning

Building Construction
Introduction, Idea & Genesis

Funding
Philanthropists John and Leslie Malone propel regenerative medicine with $42.5M gift, 29 Dec, 2014

Philanthropists John and Leslie Malone, fascinated by the healing power of stem cells, have committed a record $42.5 million to Colorado State University to develop regenerative medical therapies for animals and people.
Abigail Kawananakoa, a racehorse breeder, has donated $20 million to Colorado State University to build a state-of-the-art regenerative medicine research facility, fulfilling a $65 million matching challenge from lead donors and fellow horse aficionados John and Leslie Malone.
New Components

- Personnel
  - 6 Faculty Positions Funded
  - 1 of 3 Directors Funded

- Building
  - Fully Funded

- Research/Operating Funds
  - $10M over 5 years
The Building
TMI Timeline

Building & Program...

- Strategic Planning Workshops

2 Workshops

Organization, Strategic & Operational Planning

2019
Public Private Partnership (PPP, 3P, P3)
TMI Timeline

- 2013
  - Building Groundbreaking
    - June 2017

- 2019
  - Building Construction
TMI Timeline

Building Construction

Building Open
Nov 2018

2013

2019
TMI Timeline

Grand Opening Spring 2019

Building Construction

Grand Opening Spring 2019
The Program
Strategic Planning

Organizational Structure

Advisory Group Formation

Vision / Mission Creation / Values

Primary Pillars Identification

Purpose & Audience

Foundational Elements - Ongoing...

Organizational Structure

Strategic Planning
Advisory Group Formation

TMI Strategy Creation Process

**Workshop Participants:**
- Dave Frisbie
- Chris Kawcak
- Wayne McIlwraith
- Lynsey Bosch
- Christian Puttlitz
- Tammy Donahue
- Bob Sah
- Brian Cole
- Mark Stetter
- Wayne Jensen
- Tim Hackett
- Thom Hadley
- Mike Hooker
- Alan Rudolph
- Mark Wdowik
- Ross Palmer
- Jeremiah Easley
- Howard Seim
- Dave Twedt
- Mike Lappin
- Steve Dow
- Eric Monnet

**Steering Committee:**
- Dave Frisbie
- Sue VandeWoude
- Candice Hastings
- Thom Hadley
- Chris Kawcak
- Mike Lappin
- Jeremiah Easley
- Ajay Menon
- C. Wayne McIlwraith
- Christian Puttlitz
- Dave Twedt
- Lynsey Bosch
Vision:
Innovate medical discovery paradigms and solutions leveraging nature’s healing capacity

Mission:
Create novel biologic therapies and learning opportunities uniquely focused on improving the lives of both animals and humans by fostering diverse collaborations of leading scientific minds in a state-of-the-art facility that encourages entrepreneurial models and optimizes innovation timelines

TMI Values:
- Founded in Principles of Character
- Innovative
- High Energy
- Solution-Oriented
- Bold
- Inclusive
Advisory Group Formation

Vision / Mission Creation / Values

Primary Pillars Identification

TMI Primary Pillars:
- Research
- Commercialization
- Education

TMI Strategy Map

TMI Pre-Clinical Assessment

Basic Science Technology

Veterinary Clinical Trials

Human Clinical Trials

Commercialization

Education
Advisory Group Formation

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Primary Pillars Identification

Purpose & Audience

TMI Strategy Map
# TMI Strategy Map

## Those We Serve

<table>
<thead>
<tr>
<th>Primary Purposes</th>
<th>TMI Researchers</th>
<th>Health Care Practitioners (Veterinary and Human)</th>
<th>Patients / Community</th>
<th>Students</th>
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<tbody>
<tr>
<td><strong>Research</strong></td>
<td>State of the Art – focus on ensuring that the facility and equipment remain current</td>
<td>Collaborate – partner with the Veterinary and Human Medicine communities to identify opportunities for meaningful scientific inquiry, translational opportunities</td>
<td>Transformational Biologic Solutions – build biologic solutions that alleviate pain, prevent injury / disease, and improve quality of life</td>
<td>Exposure – offer opportunities for exposure to this science for UG / G Students</td>
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<td></td>
<td>Incubate Ideas and Talent – Facilitate and support innovation</td>
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<td><strong>Commercialization</strong></td>
<td>Business Savvy – facilitate all through the commercialization pipeline</td>
<td>Access – access to all or any portion of the pipeline</td>
<td>ASAP – solutions to those in need as quickly as is safely possible</td>
<td>Science to Solution – expose UG / G students to the pipeline process of science to solution</td>
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<td><strong>Education</strong></td>
<td>Engage and Facilitate – engage as many TMI Researchers as possible in “sharing the message” and facilitate their efforts</td>
<td>Share – share scientific innovations with all who may be able to use them</td>
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<td>Come One, Come All – create innovative learning opportunities for students of all ages, from elementary school through post-doctoral candidates</td>
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## TMI Strategy Map

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**Primary Purposes**

- **Research**
  - State of the Art – focus on ensuring that the facility and equipment remain current
  - Incubate Ideas and Talent – Facilitate and support innovation

- **Commercialization**
  - Business Savvy – facilitate all through the commercialization pipeline

- **Education / Impact**
  - Engage and Facilitate – engage as many TMI Researchers as possible in “sharing the message” and facilitate their efforts
  - Share – share scientific innovations with all who may be able to use them
TMI Strategy Map

Advisory Group Formation

Vision / Mission Creation / Values

Primary Pillars Identification

Purpose & Audience

Foundational Elements - Ongoing…
# TMI Strategy Map

## Foundational Elements / Ongoing Points of Focus and Continuous Improvement

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<th>Facilities</th>
<th>Organization Development</th>
<th>Financial Practices</th>
<th>Communications and Marketing</th>
<th>Relationship Building</th>
<th>Business Development &amp; Entrepreneurial Advancement</th>
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<td><strong>State of the art</strong></td>
<td><strong>Pygmalion</strong> – all structures, policies, processes, and procedures built to the highest common denominator, not the lowest</td>
<td><strong>Ethical</strong></td>
<td><strong>Communicate for Impact</strong> – with internal and external audiences</td>
<td><strong>New / Build / Maintain</strong> – identify new relationships, build the strength of current relationships, put in the time to maintain all relationships with Students, Peers, Collaborators, Donors</td>
<td><strong>Eye on the Horizon</strong> – identify upcoming “hot topics”</td>
</tr>
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<td><strong>Community</strong> – build / maintain / continuously improve the culture of the organization</td>
<td><strong>Sustainable</strong></td>
<td><strong>Sell the Shit Out of It</strong> – market all products and services with alacrity, pride, and savvy</td>
<td></td>
<td><strong>Seize the Day</strong> – be prepared to leverage any situation</td>
</tr>
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<td><strong>Profitable</strong></td>
<td><strong>Be Prepared</strong> – thoughtful PR campaigns at the ready, and with nimble and timely responsiveness</td>
<td></td>
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<td><strong>Open Minds / Open Hearts</strong> – be open to new, potentially or apparently absurd ideas</td>
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**Institute**

**TRANSLATIONAL MEDICINE INSTITUTE**
Advisory Group Formation
Vision / Mission Creation / Values
Primary Pillars Identification
Purpose & Audience
Foundational Elements - Ongoing...
Organizational Structure

Steering Committee
- Primary Administrative
  - Director
  - Associate Director - Operations
- Secondary Administrative
  - Assistant Director - Imaging/Surgery
  - Assistant Director - Wet Laboratories
  - Assistant Director - Entrepreneurial Advancement
  - Assistant Director - Continuing Education

IBTT
- Bioengineering
- Imaging
- Biologic
- Surgical
Director

Associate Director – Research (FY19)

Associate Director – Business Development (FY18)

Associate Director – Education (FY18)

Operations

Steering Committee

Entrepreneurial Board

Scientific Board

Other Expected Positions
- Bioengineering – FY18
- Biostatistics – FY19
- Regulatory Affairs – FY20
- Imaging/Surgery – FY20
Strategic Planning

Advisory Group Formation

Vision / Mission Creation / Values

Primary Pillars Identification

Purpose & Audience

Foundational Elements - Ongoing...

Organizational Structure

Strategic Planning
TMI Strategic Planning

Completed
- SWOT analysis
- Business Model Canvas Creation
- Market Analysis

In Process
- TMI Citizenship Criteria
- Internal Communication Plan
- TMI Continuing Education Program
- TMI Culture Building Program

Upcoming/Ongoing
- Operational Planning
- TMI Onboarding Program
- TMI Business Development Program
- TMI Culture Building Program
Completed

- SWOT analysis
- Business Model Canvas Creation
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Upcoming/Ongoing

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Upcoming/Ongoing

- Operational Planning
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- TMI Business Development Program
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Translational Medicine Institute
Colorado State University

Education – David Twedt DVM, DACVIM
Transitional Medicine Institute
Transitional Medicine Institute

Christopher Chamness
Global Consultant in Education

David Twedt
Interim Associate Director of Education
TMI – Center For Medical Education

Education Center for Medical, Surgical and Bioskills Training

2- 40 seat classrooms
150 seat auditorium

12 Station Teaching Laboratory
TMI – Center For Medical Education

Education Center for Medical, Surgical and Bioskills Training

2- 40 seat classrooms
12 station teaching lab
Locker room
Lunch/break room
Freezer/refrigeration
Surgical Laboratories

2 KARL STORZ Integrated Operating Rooms
Preclinical surgical research
Endoscopy training

Compatible with C-arm fluoroscopy for interventional radiology training
Surgical Laboratories

2 Arthrex Integrated Operating Rooms
Preclinical surgical research
Arthroscopy training
From the Classroom to the World

Fully integrated media production studio capable of sending videos and lectures internally and to outside subscribers for distance learning
Incorporation of Virtual Anatomy

A way to teach anatomy and surgical approaches
Partners in Education

- KARL STORZ Veterinary Endoscopy
- Arthrex
- Medtronic
- Sound
- ACVS
- AAEP
- ACVIM
- Infinity Medical
- Boston Scientific
- 3D Systems (Simbionix)
- NAVC
- CSU Annual conference
Our Education Vision

• Minimally Invasive Surgical Training (Endoscopy/Arthroscopy/ Other Surgical)
• Medical courses
• Interventional radiology training
• Specialized group courses (Asia, South America and Europe)
• Endoscopic product development and testing (vet & human)
• Contract projects
  – Associations
  – Industry
  – Human medicine
Our Education Vision: All Species
CSU Online

- They administer credit and non-credit online courses
- Will partner with TMI in:
  - Course advertising
  - Web-sites
  - Course registration
  - Getting registrants to the door
  - Administration of TMI online courses and course material
Our Education Vision; Projections Year 1

- At least 25 courses for first year:
  - Endoscopic courses (small animal, ACVS)
  - Equine courses (arthroscopy/AAEP)
  - Interventional radiology courses (Infinity)
  - Non-lab educational courses (ACVIM, Annual Conference)
  - International course (China/Japan)
  - Human endoscopic/surgical courses
  - CSU Annual Conference

- Projected budget: ?
Thank you

www.TMI.colostate.edu