Enabling Next Gen Biologics

CORPORATE PRESENTATION

Tom Isett, Chairman & CEO

Forward-Looking Statements

Certain statements in this presentation constitute "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1195, as amended. Words such as "may," "might," "will," "should," "believe," "expect," "anticipate," "estimate," "continue," "predict," "forecast," "project," "plan," "intend" or similar expressions, or statements regarding intent, belief, or current expectations, are forward-looking statements. These forward-looking statements are based upon current estimates. While the Company believes these forward-looking statements are reasonable, undue reliance should not be placed on any such forward-looking statements, which are based on information available to us on the date of this presentation. These forward-looking statements are subject to various risks and uncertainties, many of which are difficult to predict that could cause actual results to differ materially from current expectations and assumptions from those set forth or implied by any forward-looking statements. Important factors that could cause actual results to differ materially from current expectations include, among others, the Company's ability to obtain regulatory approvals for commercialization of its product candidates, including its COVID-19 vaccines, or to comply with ongoing regulatory requirements, regulatory limitations relating to its ability to promote or commercialize its product candidates for specific indications, acceptance of its product candidates in the marketplace and the successful development, marketing or sale of products, its ability to maintain its license agreements, the continued maintenance and growth of its patent estate, its ability to establish and maintain collaborations, its ability to obtain or maintain the capital or grants necessary to fund its research and development activities, competition, its ability to retain its key employees or maintain its NYSE American listing, and the other factors discussed in the Company's most recent Annual Report on Form 10-K and the Company's subsequent filings with the SEC, including subsequent periodic reports on Forms 10-Q and 8-K. The information in this presentation is provided only as of today, and we undertake no obligation to update any forward-looking statements contained in this presentation on account of new information, future events, or otherwise, except as required by law. This presentation shall not constitute an offer to sell, or the solicitation of an offer to buy, nor will there be any sale of these securities in any state or other jurisdiction in which such offer, solicitation or sale would be unlawful prior to the registration or qualification under the securities laws of such state or jurisdiction.

Overview

Transformation: Dec 2019 → Dec 2020

From a Manufacturing Services-Only [CDMO] Business to a ***Biotech + CDMO*** *with Multiple Potential Value Drivers*

Therapeutics

- Innovating in pulmonology, fibrotic diseases, and oncology

Vaccines

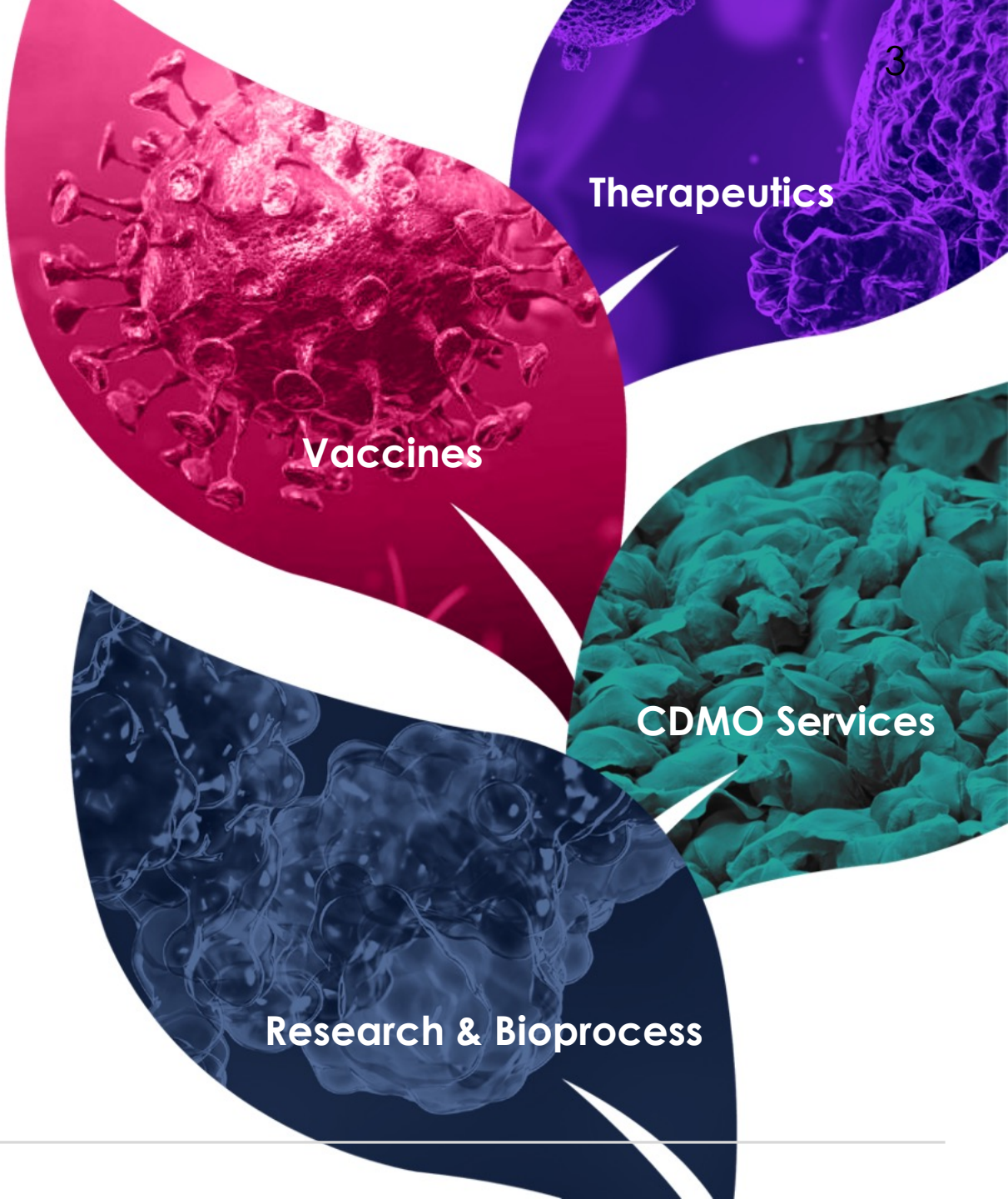
- Addressing Human & Animal Health segments

CDMO Services

- FastPharming® plant-based biologics manufacturing system

Research & Bioprocess Products

- Developing a new catalog of high quality proteins using the ***FastPharming***® System



New Management Team

	Experience
 **Tom Isett** CEO & Chairman	GE Healthcare, Lonza, BD, commence bio, i.e. Advising
 **Randy Maddux** COO	Aptevo Therapeutics, gsk, HGS, Biogen
 **Robert Erwin** President	NOVICI, ICON Genetics, Large Scale Bioprocessing Corp
 **John Delta** Principal Accounting Officer	TechCXO, Deloitte., McKinsey & Company, Nasdaq
 **Sylvain Marcel**, Ph.D. VP, Protein Expression Sciences	CALIBER biotherapeutics, Texas A&M University
 **Peter Kipp**, Ph.D. VP, Translational Medicine	KLUS PHARMA, Champions Oncology, NOVASTREAM, Lexicon pharmaceuticals
 **Matt Parker**, MBA VP, Operations	Catalent., Kite A GILEAD Company, J&J | Centocor
 **Brian R. Berquist**, Ph.D. VP, Process Development	CALIBER biotherapeutics, Texas A&M Health Science Center
 **Melissa Berquist**, Ph.D. Head of Animal Health Programs	The Texas A&M University System, Texas A&M University, Bayer

New Board Members & Advisory Teams

Dr. Linda Armstrong
Board Director
Novartis

Dr. Alexandra Kroptova
Board Director
Teva

Gary Sender
Board Director
Nabriva Therapeutics

Steve King
Oncology
Artius Consulting

Corey Casper
Medical
IDRI

Leslie Marlow
Securities Counsel
Gracin & Marlow

Steve Kilmer
Investor & Public Relations
Kilmer Lucas

Ernie Brittingham
Talent Acquisition
Russell Reynolds

Charles Morton
General Counsel
Venable

Nabriva THERAPEUTICS

NOVARTIS

teva

IDRI

Artius Consulting

Kilmer Lucas INVESTOR RELATIONS

Gracin & Marlow, LLP

Russell Reynolds ASSOCIATES

VENABLE LLP

New/Expanding Biopharmaceutical Pipeline

Human Health Programs

Program	Indication	Pre-clinical	Phase I	Phase II	Upcoming Milestones
IBIO-100	Systemic Scleroderma[1]				IND-Enabling Studies
	Idiopathic Pulmonary Fibrosis				IND-Enabling Studies
IBIO-200	COVID-19 VLP Vaccine				Optimization
IBIO-201	COVID-19 Subunit Vaccine				Toxicology Study

Animal Health Programs

Program	Indication	POC	Pre-clinical	Clinical Dev	Upcoming Catalysts
IBIO-400	Classical Swine Fever Vaccine				Safety Study

(1) Received Orphan Drug Designation [ODD] from U.S. Food and Drug Administration

New/Expanding Product & Service Portfolio

CDMO Services

- Process Development
- cGMP Manufacturing
- Aseptic Fill-Finish
- Bioanalytics
- Factory Solutions

New in FY20 *Glycaneering™* Dev. Service

New for FY21 Multi-Attribute Bioanalytics

CREATED WITH FastPharming®

Products

New for FY21 ***FastPharming*** Research Reagents
- Vectors

New for FY21 Equipment for Factory Solutions
- Infiltrator

New for FY21 Research & Bioprocess Proteins
- Growth Factors
- Cytokines

Dynamic, Continuing IP Development

98
Issued Patents
(30 U.S.)

20
Active Applications
(7 U.S.)

→

More Applications
progressing to filing

Technology and Product Patents (U.S.)

- Virus-induced gene silencing in plants
- Transient expression of foreign genes in plants
- Production of foreign nucleic acids and polypeptides in sprout systems
- Production of pharmaceutically active proteins in sprouted seedlings
- Systems and method for clonal expression in plants
- Recombinant carrier molecule for expression, delivery and purification of target polypeptides
- Influenza antigens, vaccine compositions, and related methods
- Plague antigens, vaccine compositions, and related methods
- Influenza therapeutic antibodies
- Trypanosomiasis vaccine
- Anthrax antigens, vaccine compositions, and related methods
- Production in plants of endostatin peptides for treating fibrosis

Pending Technology Patent Applications (U.S. and International)

- Activation of transgenes in plants by viral vectors
- Transient expression of proteins in plants
- Thermostable carrier molecule
- *In vivo* deglycosylation of recombinant proteins in plants

Pending Product Patent Applications (U.S. and International)

- Antibodies
- Influenza vaccines
- Influenza therapeutic antibodies
- Anthrax vaccines
- Plague vaccines
- HPV vaccines
- Trypanosomiasis vaccine
- Malaria vaccines
- Endostatin fragments and variants for use in treating fibrosis
- COVID-19 vaccines

Investment Highlights

iBio is positioned for growth with multiple shots-on-goal

1 *FastPharming* Platform drives CDMO Services and new biologics development

- Potential to accelerate internal and 3rd party development programs
- Advanced glycan engineering capability can deliver increased molecule quality and potency
- Operated within a 130,000 sf cGMP production facility constructed as part of Defense Advanced Research Projects Agency's ("DARPA") "Blue Angel" initiative

2 Large market opportunities associated with fibrotic and infectious diseases

- IBIO-100 for systemic scleroderma received Orphan Drug Designation; potential with other indications, such as pulmonary fibrosis – a possible sequella of COVID-19
- Global Idiopathic pulmonary fibrosis market: $4.5 billion by 2025[1]
- iBio seeking assets for in-licensing and production on the ***FastPharming*** Platform, including oncology targets optimized with *Glycaneering™* Technologies

3 Promising preclinical data and ability to cost-effectively mass produce vaccine candidates

- DARPA facilities designed for ability to rapidly produce medical countermeasures against pandemics
- Preclinical data demonstrated IBIO-201's potential as a COVID-19 vaccine
- ***FastPharming*** System capable of cost-effectively producing a large number of vaccine doses

4 "Fast-to-market" new product opportunities for Research & Bioprocess uses

- iBio is manufacturing proteins using the ***FastPharming*** System for a client's bioprocess; select cytokines and growth factors to be sold as part of a catalog of Research & Bioprocess products
- Certain products applicable to biofabrication; bioprinting market is expected to be 4.2 billion[2]

[1]iHealthcare Analyst: *Global Idiopathic Pulmonary Fibrosis Treatment Market (2019)*

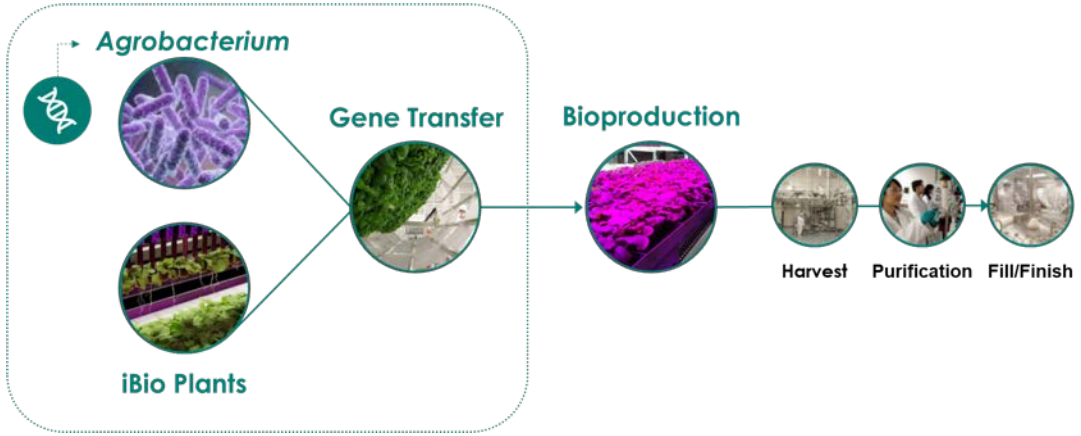
[2]BIS Research: *Global Bioprinting Market - Analysis and Forecast, 2018-2025*

CDMO Services

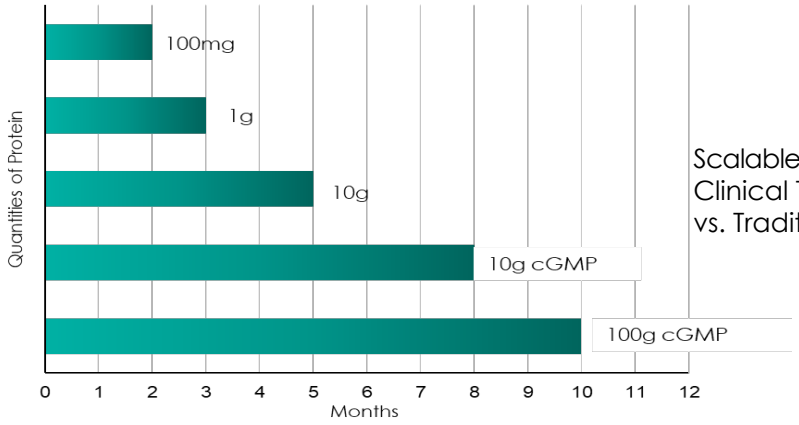
Overview

The FastPharming® System

Process



Time-to-Candidate/Clinic



iBio

Scalable Product: **3-8 Weeks**
Clinical Trials Product: **Months**
vs. Traditional Methods: >1Year

CDMO SERVICES

ADVANTAGES

- **Faster:** Greater speed-to-clinic by shaving months off of traditional mammalian-cell development times
- **Safer:** Less contamination risk since mammalian viruses and prions can't grow in plants
- **Eco-Friendly:** Avoids plastic single-use disposables widely used with mammalian-cell biologics production
- **Easier:** Avoids scaling issues moving to large bioreactors – just grow more plants
- **Better:** Powerful, proprietary glycosylation controls for better performance and higher quality

Versatility: FastPharming®

- Monoclonal antibodies
- Antigens for subunit vaccines
- VLPs
- Lysosomal enzymes
- Growth factors and cytokines
- Proteins for 3D bioprinting

CDMO SERVICES

The *FastPharming* Technology in Practice

Financial Sponsor	Tech Platform	Indication	Advancement
DARPA	Subunit + Alum	**H5N1/H1N1 Influenza Vaccine**	Phase 1
NIH National Institute of Mental Health	Subunit + Alum	**Anthrax Vaccine**	Phase 1
Bill & Melinda Gates foundation	VLP + Alum (blocking strategy)	**Malaria Vaccine**	Phase 1
SABIN Vaccine Institute	Soluble Antigen	**Hookworm Vaccine**	Phase 1
CC-PHARMING	Monoclonal Antibody	**Oncology**	Preclinical
Institute for Infectious Animal Diseases	E2 subunit vaccine	**Classical Swine Fever Vaccine**	Challenge study/Animal trials
Fiocruz Fundação Oswaldo Cruz	Subunit + LicKM + Alum	**Yellow Fever Vaccine**	Animal Efficacy demonstrated
CC-PHARMING	Factory Solutions	**Pilot-Facility Design**	Construction
AzarGen Biotechnologies	Monoclonal Antibody	**Oncology**	Pre-clinical
United Therapeutics Corporation	BioInks	**Pulmonology**	Pre-Clinical

CDMO SERVICES

Glycaneering Development Service™

Power, Speed and Control Needed for

Next-Gen Monoclonal Antibodies, Biobetters & Fast-Followers

1. **Consistency**

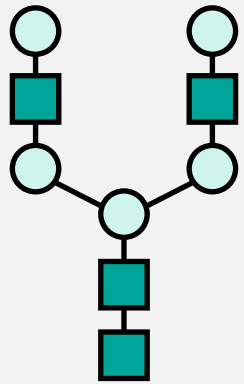
   iBio's plant-based expression system delivers products with inherently greater homogeneity versus traditional platforms

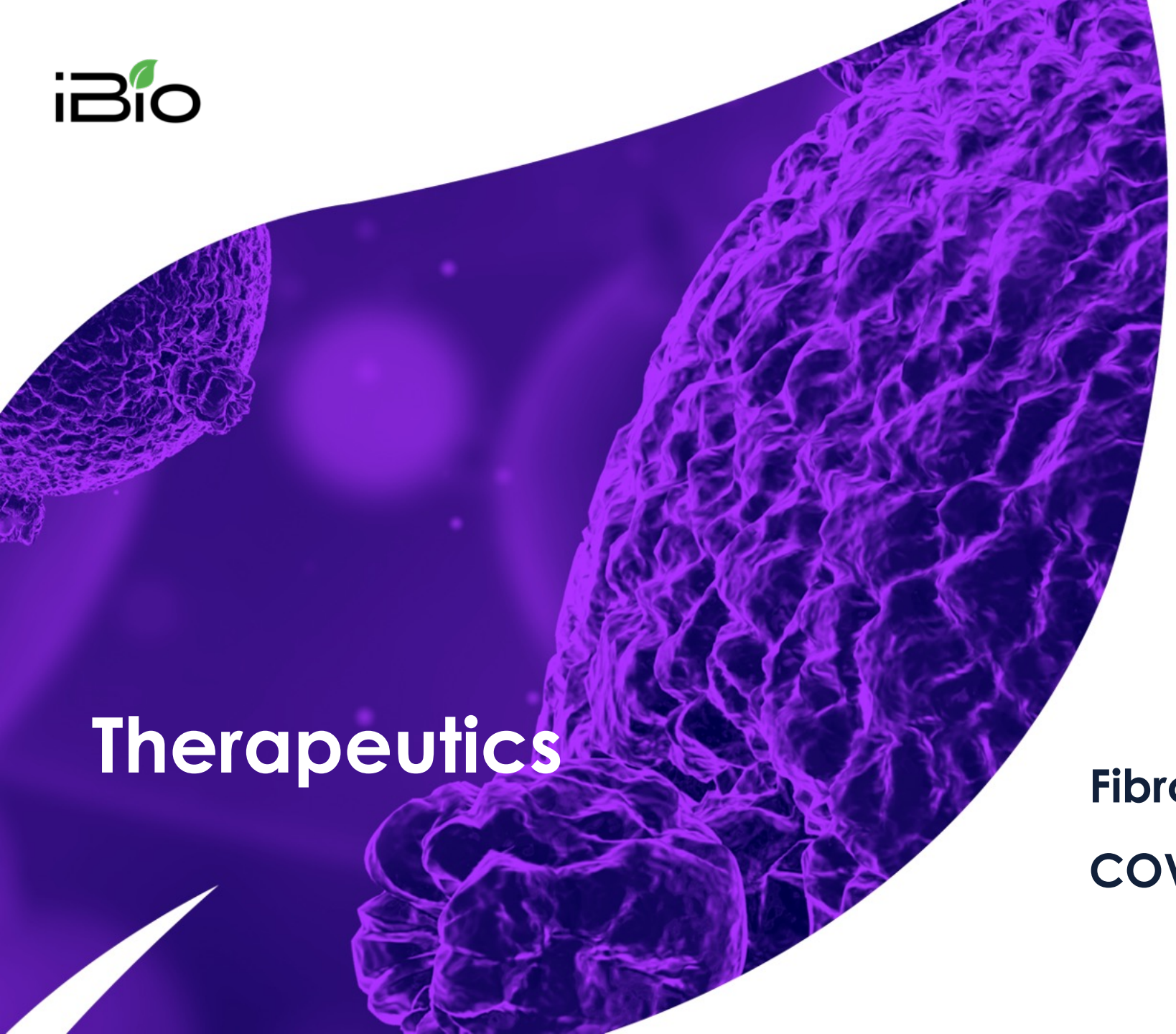
2. **Afucosylation/Oligomannose Modification**

   Desirable afucosylated side chains can be engineered with the addition of terminal β1,4-galactose residues to enhance effector functions, especially antibody-dependent cell-mediated cytotoxicity [ADCC]

3. **Results**

   Glycaneering enables development of potent glycoproteins without expensive technologies required with most traditional mammalian cell platforms





Therapeutics

Fibrotic Disorders

COVID-19

IBIO-100: Anti-Fibrotic Therapeutic

Description

Endostatin E4 peptide that reduces fibrosis by impacting extracellular matrices

Pre-clinical data shows reduced fibrosis in scleroderma/IPF models & human lung explants

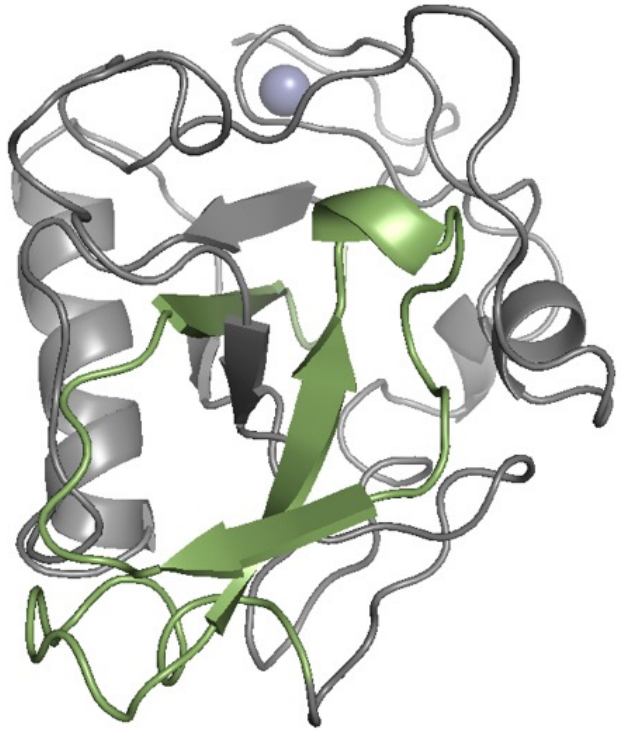
Optimally produced in iBio's ***FastPharming*** System

Orphan Drug Designation for systemic scleroderma received

Intrinsic properties enable an oral route-of-administration

IBIO-100

Collagen Derivative



Fibrotic Disorders

- Involved in ~45% of U.S. deaths from all diseases
- No cures: organ transplants undertaken in some late-stage diseases
- Limited number of palliative treatments for most indications
- Many patients forego currently available treatments due to poor tolerability
- Market for idiopathic pulmonary fibrosis alone expected to reach $4.5B by 2025*

THERAPEUTICS

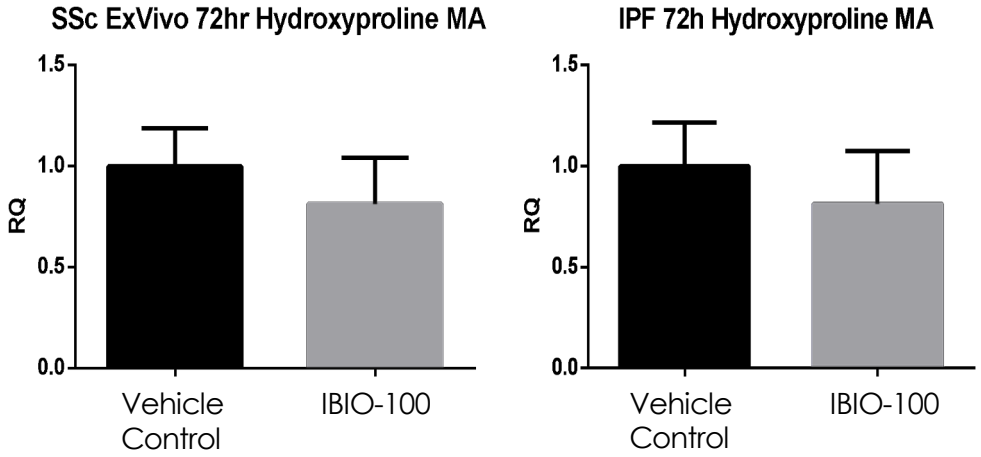
iBio

** iHealthcare Analyst (2019)*

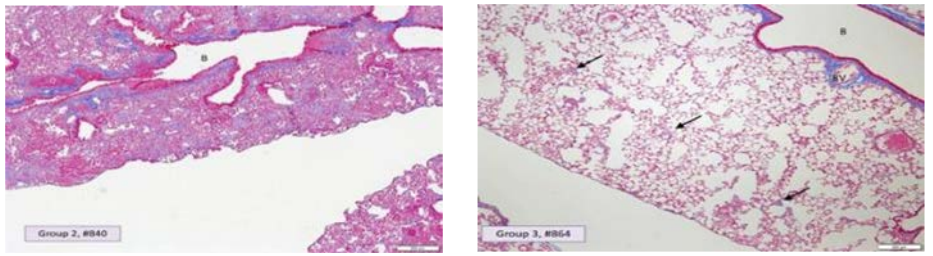
IBIO-100 Advancement

1. New patent issued in November
   - Materials and Methods for Producing Endostatin Fusion Polypeptides in Plant Cells
   - Novel expression cassette
2. Improved manufacturing and controls
3. Compelling pre-clinical data
   - **Human lung explants**:
     - Demonstrates efficacy in Systemic Scleroderma [SSc] and Idiopathic Pulmonary Fibrosis [IPF] diseased human tissue
     - Note that explant tissue is so far compromised by disease that it needs to be removed for transplant
   - **Bleomycin mouse model**: Significant reduction of fibrotic tissue

Human Lung Tissue From End-Stage Disease at Transplant



Bleomycin Pre-Clinical Model



Fibrotic Tissue

100µg iBIO-100 3x/week

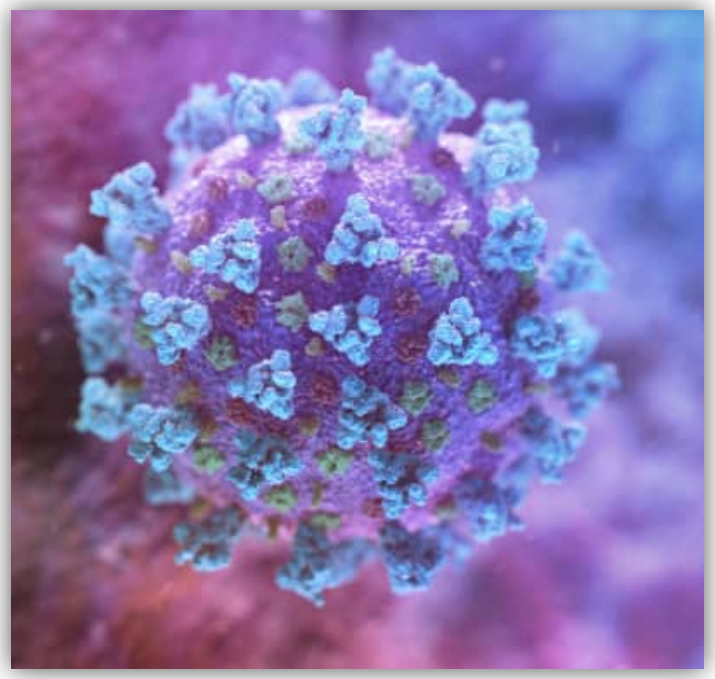
THERAPEUTICS

iBio and Planet Biotechnology

Development of a COVID-19 Therapeutic Candidate: ACE2-Fc Molecule

iBio In-Licensed Worldwide Rights for Coronaviridae

- ACE2-Fc is a recombinant protein comprised of human angiotensin converting enzyme 2 (ACE2) fused to a human immunoglobulin G Fc fragment (Fc).
- Molecule targets the coronavirus virions by using the ACE2 extracellular domain to bind the spike protein and block infection of healthy cells, while the fused Fc domain prolongs the life of the protein in circulation
- Benefits of a traditional neutralizing antibody, while prospectively limiting the potential for "viral escape"
- Planet's *in vitro* studies demonstrated that ACE2-Fc blocks SARS-CoV-2 virus from infecting Vero E6 cells



Source: NEXU Science Communication | Reuters

Vaccines

COVID-19 Vaccines

Classical Swine Fever Vaccine

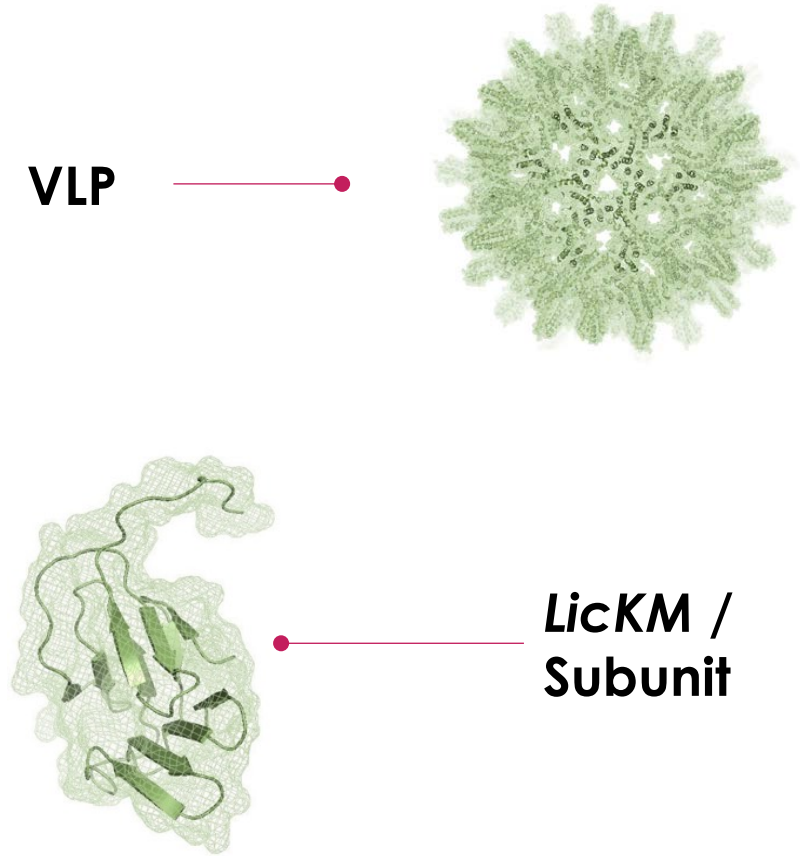
IBIO-200 & IBIO-201: COVID-19 Vaccine Candidate Development

11 March 2020
iBio files four provisional patent applications for COVID-19 development

18 March 2020
VLP vaccine program [IBIO-200] announced

4 June 2020
Announced second candidate, a *LicKM*™ - subunit vaccine [IBIO-201]

9 September 2020
Announced selection of IBIO-201 as lead COVID-19 vaccine candidate



VACCINES

COVID-19 Vaccine Development Consortium

iBio
Antigens & Manufacturing

Infectious Disease Research Institute (IDRI)
Clinical Trials & Adjuvant Technologies

Texas A&M University (TAMUS)
Immunization Studies & Characterization

MRI Global
Pre-clinical Testing

IBM Watson Health
Clinical Trials Management System

The Beck Group
Facility A&E

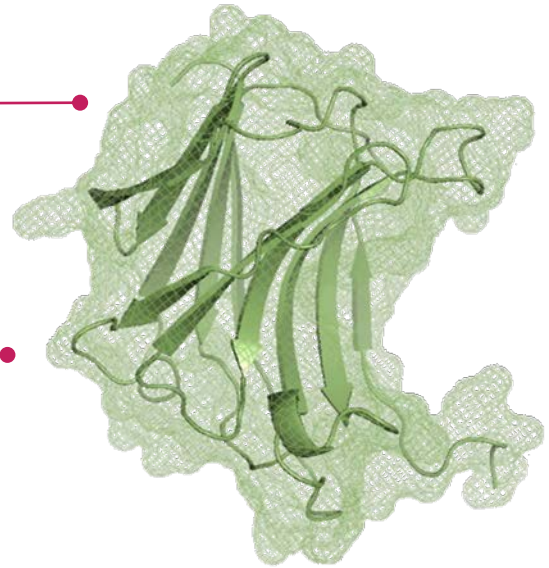
IBIO-201: LicKM Subunit Vaccine Platform

Description

Combines antigens derived from the SARS-CoV-2 spike protein fused with iBio's patented lichenase booster molecule ("LicKM")

The addition of the LicKM booster to a subunit antigen has the potential to improve the likelihood of achieving single-dose, prolonged immunity while also increasing manufacturing capacity through increased potency

IBIO-201



LicKM Background

Previously published peer-reviewed data demonstrated that an iBio lichenase-based vaccine candidate:

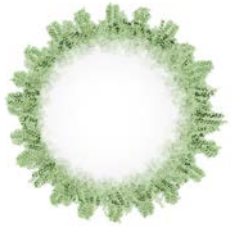
- Provided full protection against aerosolized pneumonic plague in non-human primates
- Has applications for vaccines targeting both anthrax and yellow fever virus

VACCINES

iBio's Display-Ready VLP Platform

Potential 'Plug-and-Play' Vaccine Development System

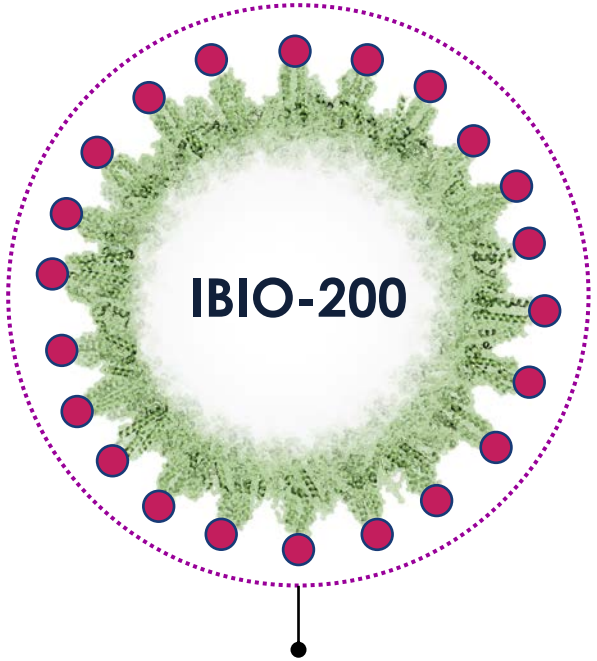
Hepadnavirus Core Structure



Antigen Design & Display Strategy

Antigen

Self-assembly Into Nanoparticles



Multivalent Particle Displaying High-density Antigens to the Immune System in a Highly Structured Format

Stable non-enveloped VLP

Standard purification process

Ease of manufacturing

Design Strategy

- Core VLP structure fused to specifically designed antigens
- Fusion partner self-assembles into a portentous nanoparticle devoid of membrane components to provide higher expression and purity

IBIO-400: Classical Swine Fever Vaccine

Unmet Need

Classical swine fever [CSF] is a contagious, often fatal, disease affecting both feral and domesticated pigs

Outbreaks in Europe, Asia, Africa, and South America; recently in Japan (Oct 2020)

Adjuvented, insect cell-produced vaccines can be effective, but "unfortunately remain expensive at manufacturing scale[1]"

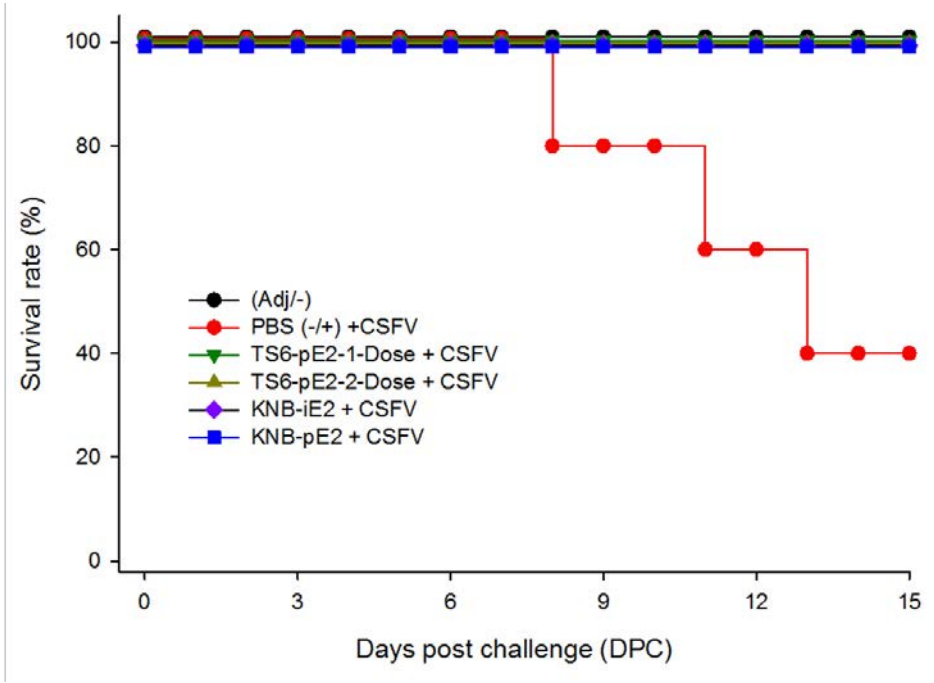
iBio's Approach

In collaboration with the Institute of Infectious Animal Diseases at Texas A&M University and Kansas State University, iBio used the ***FastPharming*** System to develop a potentially safe and protective (DIVA)-capable subunit vaccine formulated in cost-effective oil-in-water emulsion adjuvants

Results[1]

- Single-dose vaccination studies showed that adjuvanted, plant-made CSF E2 subunit vaccine provides complete protection in challenged swine
- Strong virus neutralization antibody responses

FastPharming-produced E2 glycoprotein single-dose vaccine protects pigs against classical swine fever



Adj: TS6 adjuvant control
PBS: Phosphate-buffered saline
TS6-pE2-1: TS6 adjuvanted *FastPharming-produced* E2 vaccine; Single dose
TS6-pE2-2: TS6 adjuvanted *FastPharming-produced* E2 vaccine; Two dose regimen
KNB-iE2: KNB-adjuvanted insect-derived KNB-E2 vaccine
KNB-pE2: KNB-adjuvanted *FastPharming* E2 antigen formulated with KNB-E2 emulsion adjuvant

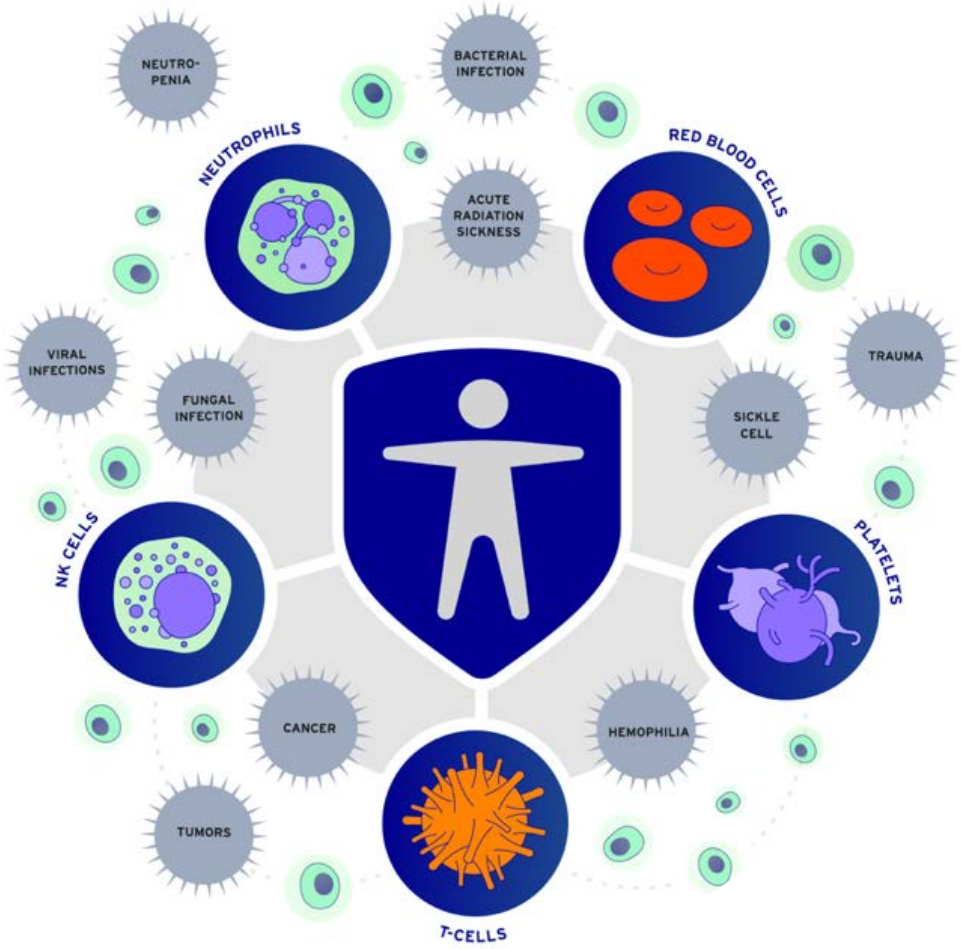
VACCINES

[1] Richard C. Laughlin et al, 2018. *Plant-made E2 glycoprotein single-dose vaccine protects pigs against classical swine fever.*

Research & Bioprocess Products

iBio and Safi Biosolutions
Development of Growth Factors and Cytokines

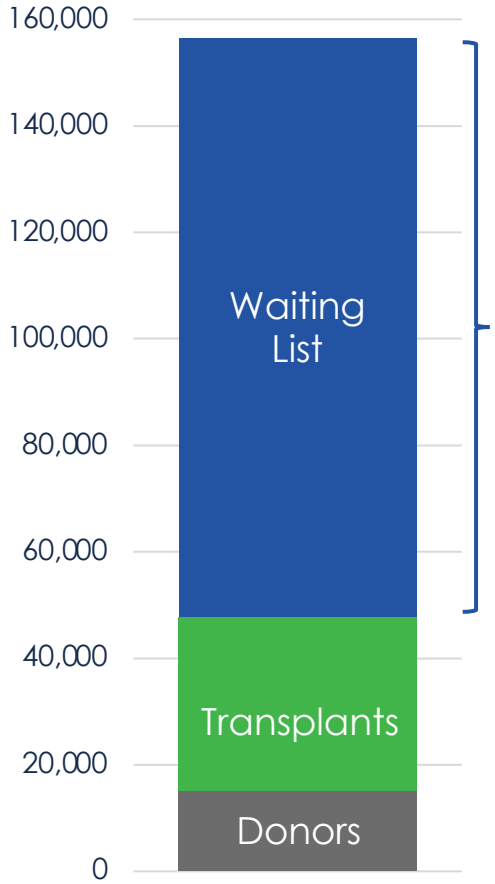
- iBio is manufacturing 10 key proteins using the ***FastPharming*** System for Safi
- Supports Safi's lead role in developing lab-produced cells as part of the Dept of Defense's "On-Demand Blood" program
  - Initial efforts focused upon red blood cells for trauma
  - Neutrophils in-scope
- Any proteins not designated by Safi as "custom" to their bioprocess can be sold by iBio for "research" and "further manufacturing" uses



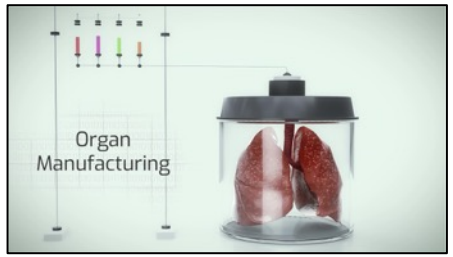
PROTEINS

iBio and United Therapeutics – Protein BioInks

U.S. Organ Shortage



Demand gap creates market for 3D-Bioprinted tissues and organs…



Courtesy of United Therapeutics

>$2B industry

>$1B supplies

by 2025

FastPharming is uniquely suited to advanced bioink mfg

- **Safer:** Mammalian viruses don't grow in plants
- **Quicker:** Shortened time-to-market
- **Better:** Easier to scale-up to large quantities for whole organs

United Therapeutics (Aug 2019)

Multi-year bioink development and supply agreement

PROTEINS

Source: US Health & Human Services (5 Dec 2020)

Summary

Financial Overview

Publicly traded on the NYSE American since January 2008

Approximately $83 million in cash and investments in securities as of 30 Sep 2020

Approximately 182 million common shares and 3.8 million options and restricted stock units to purchase shares of common stock outstanding as of 16 Nov 2020

No current debt

Value Drivers

FastPharming®

Platform speeds time-to-candidate/clinic vs. traditional approaches	Powerful glycan engineering tools can increase product potency and quality	Easy, consistent scale-up facilitates faster time-to-clinic	Intellectual property portfolio enables CDMO services & proprietary products

Vaccines

- IBIO-201 emerged as iBio's COVID-19 vaccine candidate
- VLP platform remains as a potential 'plug-and-play' vaccine development system
- Pursuing opportunities in Animal Health with lead classic swine fever [CSF] vaccine

Over 65 Million COVID-19 Cases[1]

Continuing Outbreaks of CSF

Therapeutics

- Initially targeting fibrotic diseases with IBIO-100; toxicology studies planned for 2021
- U.S. Orphan Drug Designation for systemic scleroderma
- Fast follower strategy in oncology via leverage of new and novel ***Glycaneering***™ Technologies

Pursuing Large Markets in Oncology

Fibrotic & Infectious Diseases

Research/Bioprocess

- Contract manufacturing of "animal-free" bioinks used in 3D bioprinting and growth factors for stem cell therapies are catalyzing development of a new portfolio of proteins for research and bioprocess uses
- Launching new products in 2021

Cytokines/Growth Factors

3D-Bioprinting Supplies

[1] JHU Coronavirus Resource Center (4 Dec 2020)