



**An Integrated Healthcare
Holding Company
(GNBT:OTCQB)**

January 2019

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Generex Presents A “New” Vision For Healthcare

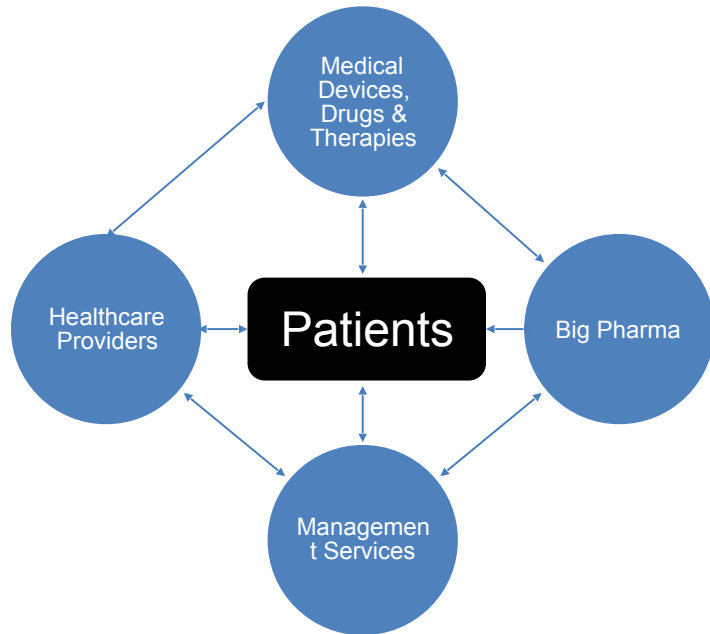
An Integrated Pharmaceutical Healthcare Company

CORPORATE MISSION:

To provide physicians, hospitals, and all healthcare providers with an end-to-end solution for patient centric care from rapid diagnosis through delivery of personalized therapies, streamlining care processes, minimizing expenses, and delivering transparency for payers.

Connecting the Healthcare Industry

Generex is Reorganized as a Multi-Disciplined Healthcare Holding Company

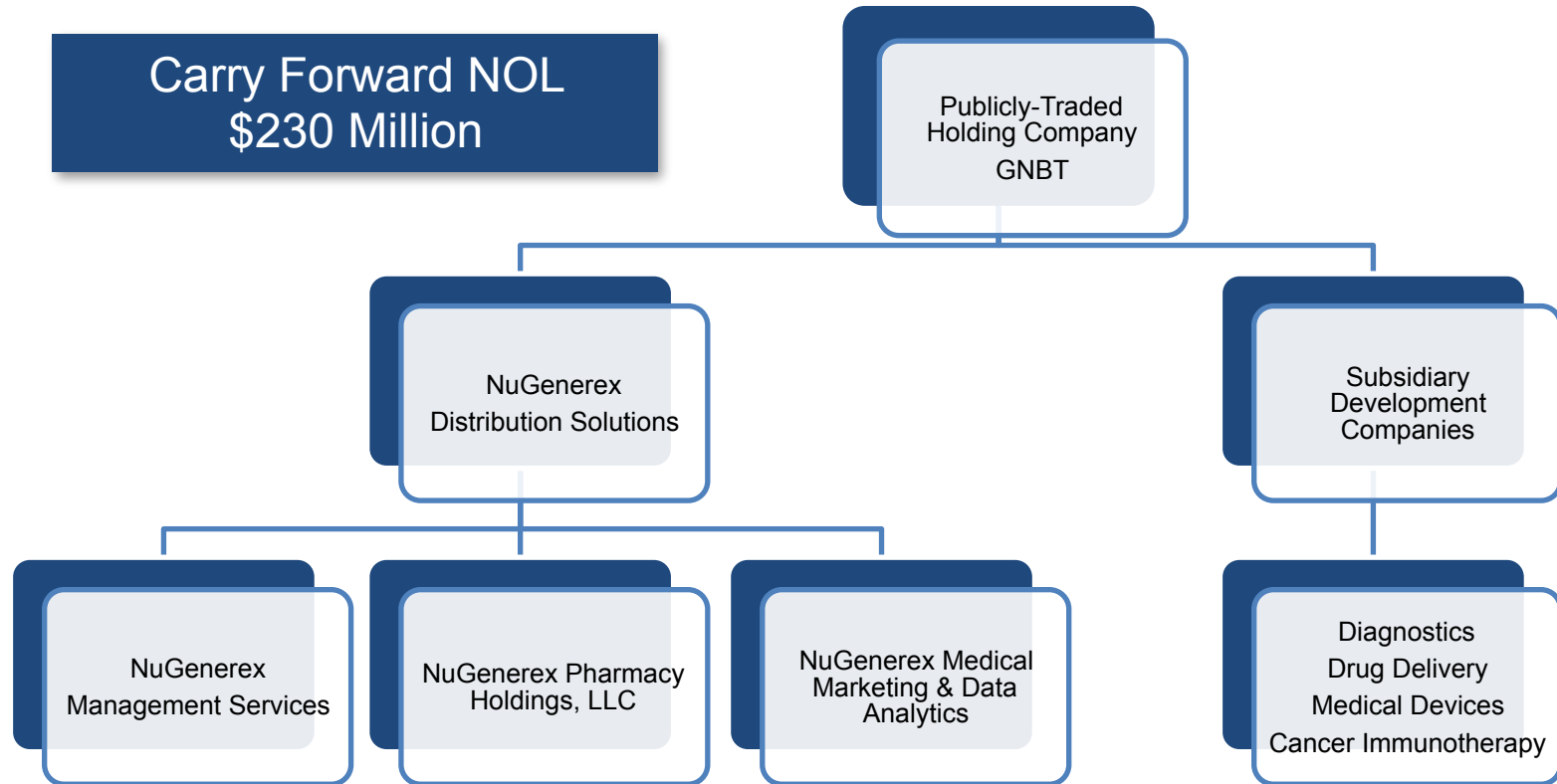


EXECUTE on Strategy

- Strategic acquisitions
- Synergistic alliances
- Commercial development
- Revenue-generating licensing agreements
- Long-term portfolio value through diversification

Building Value for Investors, Shareholders, and Partners

Generex Biotechnology Holding Corporation Is Structured To Optimize Revenue For Shareholders



The NuGenerex Organizational Structure Combines **Revenue Generating** Healthcare Management Services and Distribution Organizations with **Value Driving**, Cutting-edge R&D Companies

NuGenerex Distribution Solutions Generates Significant Revenues, Profit, And Value For Investors



NuGenerex
DISTRIBUTION SOLUTIONS LLC

Publicly-Traded
Holding Company
GNBT

NuGenerex
Distribution Solutions

Subsidiary
Development
Companies

NuGenerex
Management Services

NuGenerex Pharmacy
Holdings, LLC

NuGenerex Medical
Marketing & Data
Analytics

Diagnostics
Drug Delivery
Medical Devices
Cancer Immunotherapy

Revenue generating entities

NuGenerex Medical Marketing & Pharmacy Network Enhance the Capabilities Of the Rapport MSO



OUR CAPABILITIES

Pharmacy	Laboratory	Biologics	DME-IQ
<ul style="list-style-type: none">• Patient assistance programs• Prescription plans• Local Rx delivery• Community services	<ul style="list-style-type: none">• Pharmacogenetic testing• Toxicology assistance• Extensive pathology testing• Allergy tests	<ul style="list-style-type: none">• AATB certified products• Human tissue based biologic treatment	<ul style="list-style-type: none">• Deep vein thrombosis• Cardiac

Powerful Synergies & Add-ons Drive Future Performance



PATIENT DATABASES

- Increase patient engagement
- Relationship management

PHARMACY NETWORK

- Rx home-delivery
- Low-cost specialty and generic Rx

MEDICAL MARKETING

- Patient Acquisition & MSO Support

INTRA-COMPANY MEDICARE REFERRALS

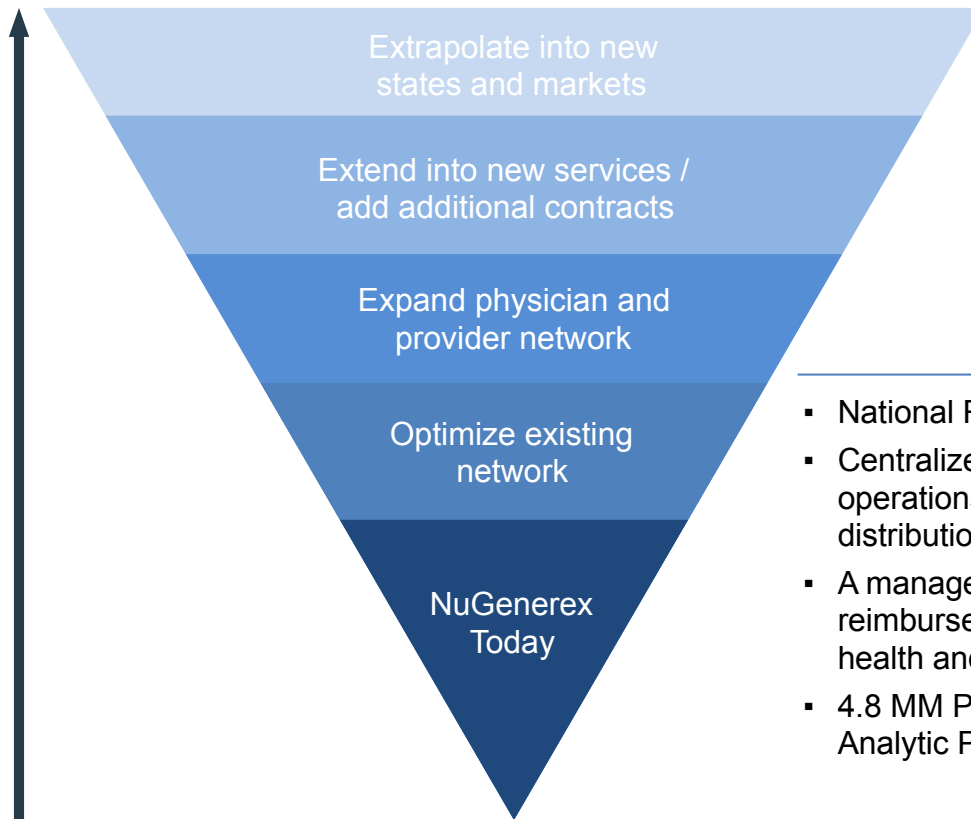
- Increased patient convenience
- Continued financial performance

CHRONIC CARE AND MEDICATION THERAPY MANAGEMENT

- Additional business opportunities

Synergies Drive Value

Multiple Avenues For Near And Longer-Term Sustainable Growth



MSO

- Current operations in TX, OK, AR CO NM



- Near-term expansion to SC, LA, and TN
- Longer-term expansion in up to 27 states

PHARMACY DISTRIBUTION

- National Rx distribution
- Centralized marketing and operations with local distribution
- A managed care platform with reimbursements from private health and Medicare 60/40
- 4.8 MM Patient Database & Analytic Platform



- Portfolio expansion
 - Specialty drugs
 - Medical devices,
 - Orphan drugs

Rapport Services Pre-Generex Acquisition

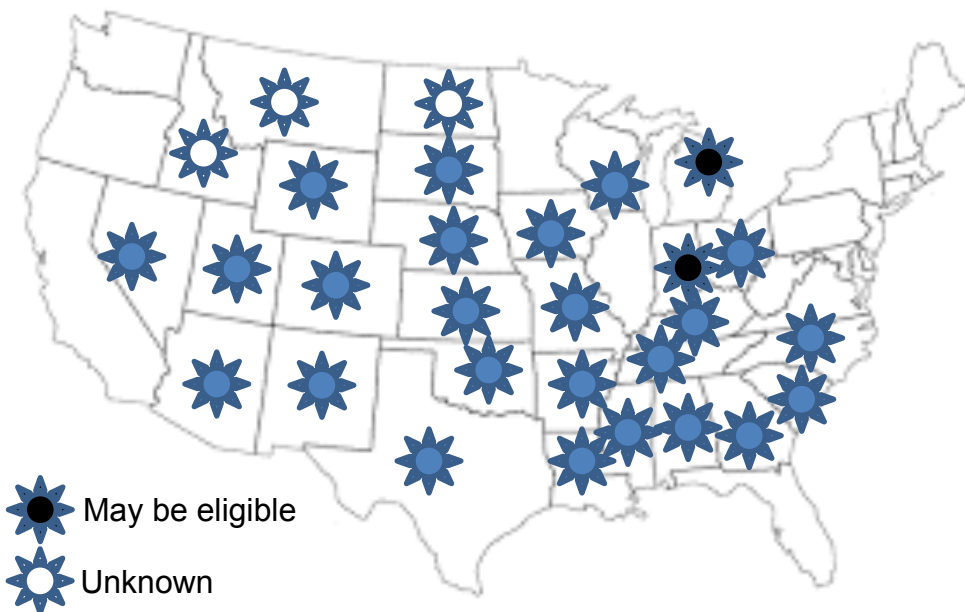


Podiatrists
Orthopedics & Spine,
Internal Medicine
Family Practice

- 5 states
- Multiple MSO's
- Focus on Non Opioid Topical Creams (scar, migraine, anti-fungal, and wound creams)
- Declining Reimbursements
- No tradeable securities
- Cloud of Investigation

Rapport Services Post-Generex Acquisition

Increasing the Value of the Rapport Network



- One Large Fully-compliant MSO
- Expansion into a total of 27 states with the Rapport model
- Adding specialty MSOs to expand Rapport service offerings
- Expanded laboratory services
- Specialty product pricing for Rapport network

Generex Acquisitions:

Drug & Device Products for Rapport

DMEiq – Orthopedic Products & Services

Olaregen – Excellagen for Wound Healing

Regentys - Extracellular Matrix for Ulcerative Colitis

Generex Subsidiaries Provide Opportunities For Substantial Longer-Term ROI



NGenerex subsidiaries develop life-changing products including medical devices, therapeutics, and diagnostics that can complement MSO services and product offerings and drive corporate value.



NuGenerex Has Reorganized its Asset Portfolio Targeting High-Growth Fields of Diabetes, Immunotherapy, and Infectious Disease



NuGenerex Immuno-Oncology

- Vaccines built on li-Key technology
- Focusing on stimulating CD-4 and CD-8 T-Cells
- Planned Phase II trial with AE37 and Keytruda combination for TNBC
- Partnership with Shenzhen BioScien to develop and commercialize AE37 for prostate cancer
 - \$700k up-front license fee
 - Up to \$4 MM milestone payments
 - 10% royalty on commercial sales



NuGenerex Therapeutics

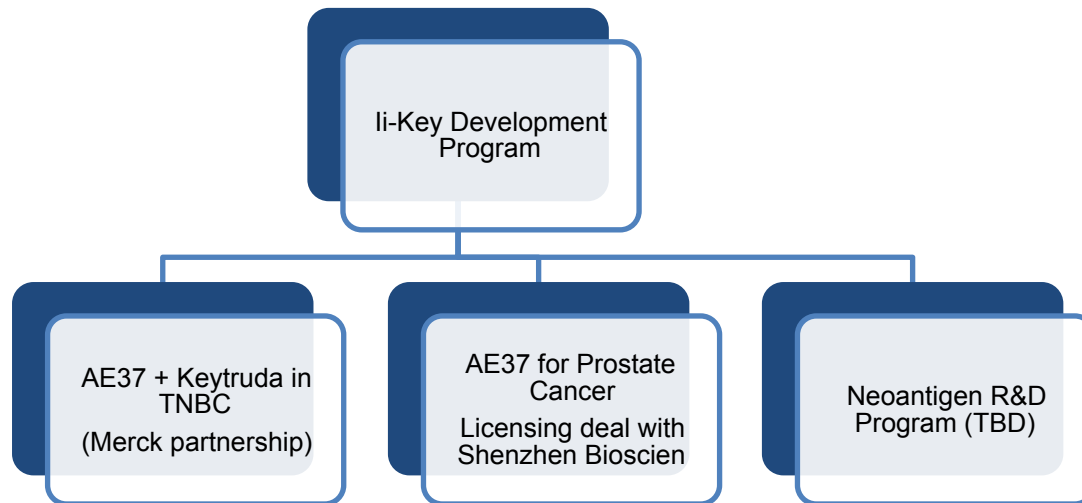
- Developing next-gen drugs for diabetes, oncology and infectious diseases
- Oral-lyn, buccal insulin delivery system, for the treatment of type 2 diabetes
- RapidMist buccal delivery system – exploring other applications for the technology
 - Partnership with Scientus Pharma for cannabis administration



NuGenerex Diagnostics

- Point of care diagnostic tests for HIV, tuberculosis, malaria, hepatitis, syphilis, and other infectious diseases
- Rapid immunochromatographic diagnostics can produce results in as little as 10-15 min
- Developing a new and novel multiplex assay designed for Sepsis and SIRS

NuGenerex Immuno-Oncology (Formerly Antigen Express) Capitalizes on the Growth of Cancer Immunotherapy



Acquisitions:

- AI Platform
- Neo-Antigen Peptides
- Checkpoint Inhibitors

Partnerships:

- **Merck**
- **Shenzhen Biosciences**
- **U Minnesota, Dr. Keith Knutson**
- *TapImmune**
- *Neon Therapeutics**

The Cancer Immunotherapy Market was \$45 Billion in 2015, and is estimated to reach \$117 Billion by 2022

Cancer Immunotherapy Is A High-Value Business Opportunity with \$45 Billion In Sales In 2015

The Total Valuation of the Top 10 Cancer Immunotherapy Deals in 2018 is \$35.5 Billion

**AE37 + Merck's Keytruda in TNBC
NuGenerex Immuno-Oncology Revenue Opportunity**

Treatment Cost of \$50k / year	Year	Market Share	Breast	TNBC	Metastatic TNBC
Independent 3rd party analysis for New TNBC Treatment*	1	2.0%	\$470M	\$188M	\$89M
	2	7.0%	\$1.48B	\$592M	\$281M
	3	14%	\$3.13B	\$1.25B	\$592M
	4	24%	\$3.38B	\$1.35B	\$1B
	5	39%	\$8.45B	\$3.38B	\$1.6B

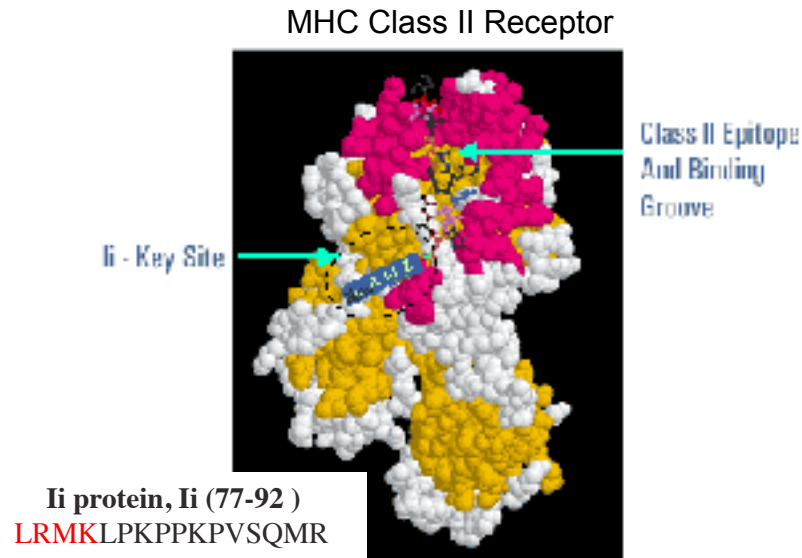


BMS reported yearly sales of \$4.9bn from Opdivo and \$1.2bn from Yervoy while Merck generated \$3.8bn from Keytruda - GEN

NuGenerex li-Key Technology Platform: *First-in-class Self-Potentiating Active Immunotherapy*

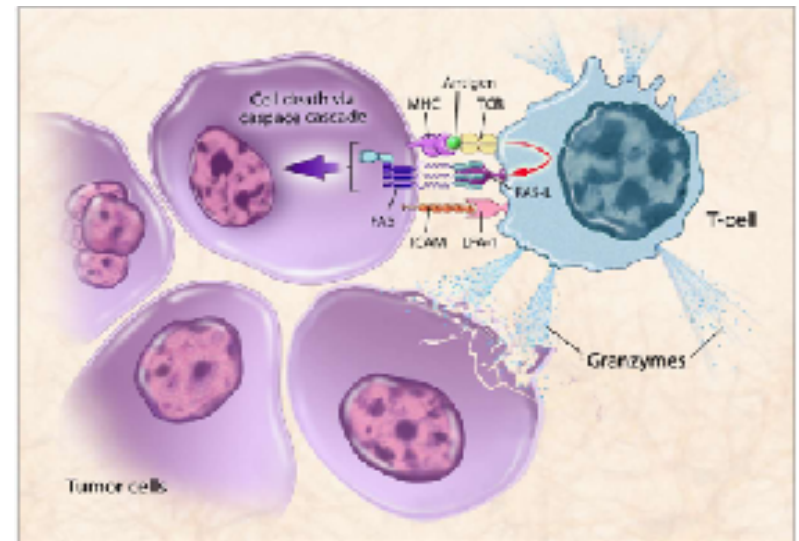


LI-KEY PEPTIDE STRUCTURE AND FUNCTION



li-Key Locks Antigenic Peptides
In MHC Class II Binding Site

AE37 MECHANISM OF ACTION

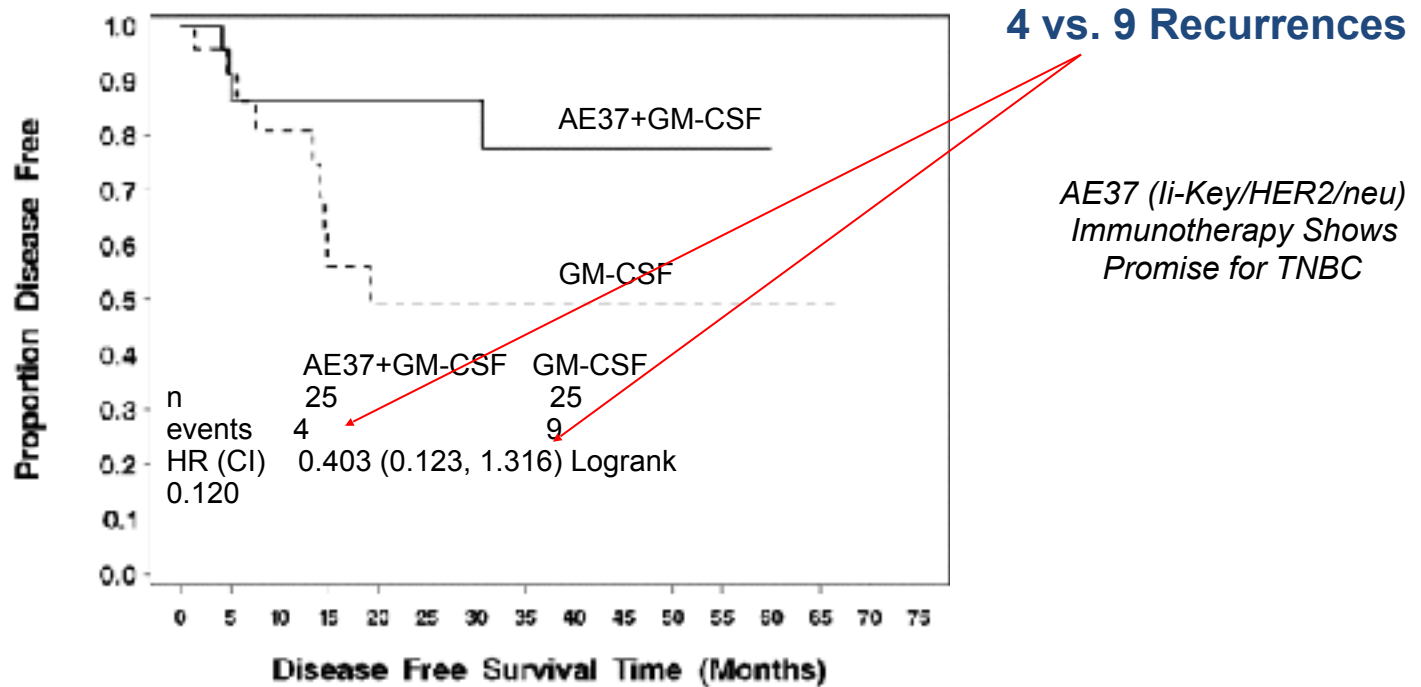


AE37 (li-Key/HER2/neu) li-Key immuno-therapeutic
peptide activates CD4⁺ T-Cells to target & kill cancer cells

Treatment With AE37 Immuno-therapeutic Vaccine Resulted In Increased Disease Free Survival In Patients With TNBC



Phase II Trial of AE37 – TNBC (ITT)



Mittendorf et al (2016) Ann Oncol, 27:1241-8

Key Value Drivers For NuGenerex Immuno-Oncology R&D

AE37 R&D Program - Checkpoint Inhibitors Reignite Development

- Phase II will evaluate AE37/Keytruda combination in triple negative breast cancer
 - Collaboration with Merck supplying Keytruda
 - Trial to be conducted through the National Surgical Adjuvant Breast and Bowel Project cooperative group
- Licensing agreement with Shenzen BioScien for rights in China
 - Phase II Trial to evaluate AE37 in Prostate Cancer
 - NuGenerex secures data rights & maintains market for ROW
- li-Key Hybrid Peptide Immunotherapeutic Vaccines
 - Melanoma: GP100 (48-58); Tyr (370-381)
 - Antigen Identification Program with Data Analytics – Rapid Pipeline Development
 - Multi-Valent epitope combinations

Developing Point-Of-Care Diagnostic Products to Meet Today's Challenges in Infectious Diseases



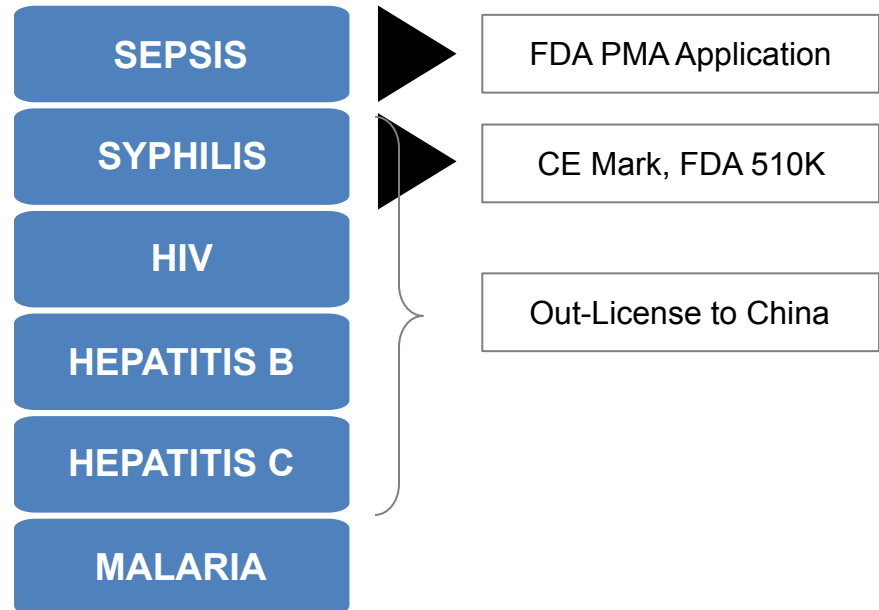
NuGenerex
DIAGNOSTICS

Advancing Diagnostic
Testing for Personalized
Medicine

NGDx-Express II™ Platform Value Drivers

- Needs only whole blood specimens taken via finger-stick, venipuncture, or processed serum
- No need to transfer blood to the device via pipette
- Test results available in 15-30 min
- Easy to use with only three operator steps
- Clear visual readout
- Can be used for multiple test analytes
- Designed to eliminate cross-contamination and are completely safe for home use
- Can be cheaply and efficiently manufactured

NGDx-Express II™ Development



Adding Target Acquisitions in Diabetes, Concussion Dx &
Clinical Laboratory For Pharmacogenomic Testing

NuGenerex's RapidMist technology is in development to improve current methods to deliver insulin and cannabinoids



Oral-Lyn for Buccal-Administered Insulin

- Evaluated in over 600 subjects with Type 1 & 2 diabetes and healthy volunteers
 - Shown to be efficacious and safe
- Collaboration with University Health Network to increase insulin bioavailability to reduce the number of puffs required to achieve effective prandial metabolic control



RapidMist Technology

- Uses a chemical propellant to aerosolize and administer compound for buccal absorption
- Collaboration with Scientus Pharma to develop a buccal cannabis spray using RapidMist technology
 - Scientus recently announced renewed focus on developing buccal cannabis having recently received authorization to produce cannabis soft-gel capsules and oils

Acquisitions of Companies with FDA Approved Products and Great Management Strengthens NuGenerex's Portfolio



NuGenerex Acquisition of Olaregen Therapeutix (Nov 2018)

- Access to Excellagen® advanced wound care management platform, FDA-approved for 17 indications including:
 - Surgical Incisions
 - Diabetic Foot Ulcers
 - Venous & Arterial Ulcers
 - Mohs Surgery
 - Wound Repair



Excellagen 2019 Product Launch

- Commercialization through NuGenerex Distribution Solutions' MSO & pharmacies network of podiatrists & diabetologists
- Existing contracts with two national wound care centers



Generex Aims to Acquire Advanced Technologies That Fill Gaps in Specialty Medical Care



Acquisition Target: Regentys

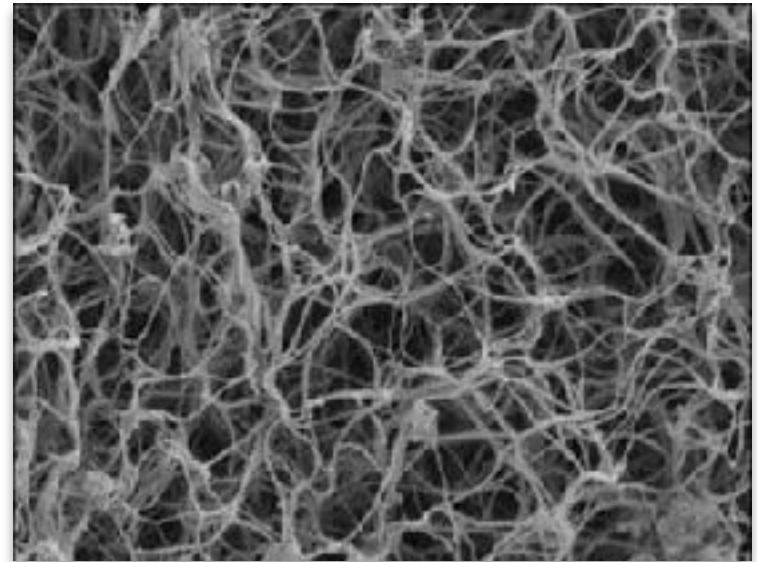
Regentys is developing a novel Extracellular Matrix Hydrogel product aimed at coating the intestinal layer in order to address a variety of GI-related diseases

Extracellular Matrix Hydrogel Targets

- Inflammatory bowel disease
- Ulcerative colitis
- Crohn's disease (>\$bn market opportunity
1.1mn US patients)

Clinical Development Pathway

- 1st indication: ulcerative colitis
- FDA 510K de novo pathway
- Clinical trials currently ongoing





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December 2018