OTCQB: AMBS

Amarantus Bioscience

Developing clinical-stage products in neurology, psychiatry and orphan indications

BUSINESS UPDATE CONFERENCE CALL

April 9, 2015

Forward-Looking Statements

This presentation contains "forward-looking statements" within the meaning of the "safe-harbor" provisions of the Private Securities Litigation Reform Act of 1995. Such statements involve known and unknown risks, uncertainties and other factors that could cause the actual results of the Company to differ materially from the results expressed or implied by such statements, including changes from anticipated levels of sales, future international, national or regional economic and competitive conditions, changes in relationships with customers, access to capital, difficulties in developing and marketing new products and services, marketing existing products and services, customer acceptance of existing and new products and services and other factors. Accordingly, although the Company believes that the expectations reflected in such forward-looking statements are reasonable, there can be no assurance that such expectations will prove to be correct. The Company has no obligation to update the forward-looking information contained in this presentation.

Agenda

- **INTRODUCTION**
- **FINANCIAL REVIEW AND OUTLOOK**
- **THERAPEUTICS DIVISION REVIEW**
- **DIAGNOSTICS DIVISION REVIEW**
- **2015 EXPECTED MILESTONES**
- **Q&A**

Focused Execution Delivers Rich Pipeline

Asset	Pre-Clinical	Phase 1	Phase 2	Phase 3	Value Driving Milestone
Amarantus DIAGNOSTICS					Potential strategic transaction in 2015
Eltoprazine: PD-LID					Phase 2b program clinical data in 2016
ESS*: 50+% TBSA Severe Burns					Phase 2 clinical data in 2016
MANF: Retinitis Pigmentosa (Orphan)					Potential PoC in orphan ocular in 2018

*** = upon exercise of exclusive option to acquire Cutanogen Corporation from Lonza**

A Year of Building Solid Fundamentals

Executed our strategy to assemble undervalued clinical-stage assets and incubate to significant value inflections

Therapeutics Division

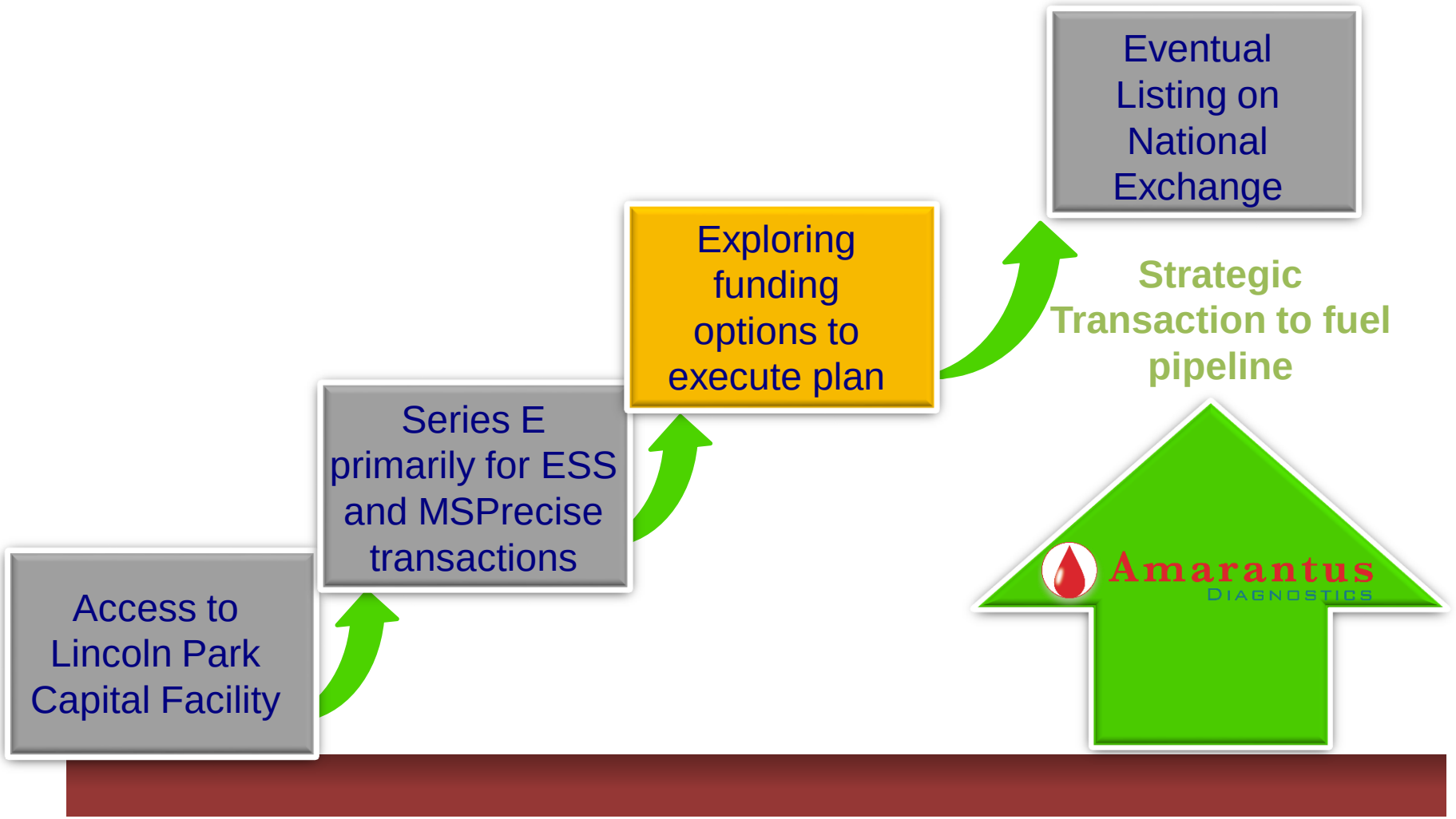
- Eltoprazine platform establishes neurology/psychiatry pipeline
- Opportunistic potential acquisition of Cutanogen Corporation diversifies pipeline with clinical-stage, ultra-orphan program
- MANF orphan ocular strategy establishes fastest path to market

Diagnostics Division

- LymPro Test® IUO commercialization expands Alzheimer's diagnosis market
- MSPrecise® poised for staged near-term commercial opportunity
- Georgetown assays position company to control significant market share in the emerging AD IUO blood diagnostics market
- Premier suite of diagnostics creates optionality for exit strategy

Financial Review and Outlook

Path to Eventual Up-listing



Therapeutics Division Review

Therapeutics Division: Milestone Achievements

Eltoprazine

- ✓ Published Phase 2a clinical study results in BRAIN for the treatment of PD-LID
- ✓ Opened an IND application with the neurology division of the FDA to advance Eltoprazine into Phase 2b clinical studies

MANF

- ✓ Received Orphan Drug Designation (ODD) from the FDA for the treatment of RP
- ✓ Submitted an application to the FDA for ODD for the treatment of retinal artery occlusion (RAO)
- ✓ Announced positive preclinical data on the effects of MANF for the protection from vision loss in animal models of RP and RAO

ESS

- ✓ Entered into exclusive option agreement with Lonza Walkersville to acquire subsidiary Cutanogen Corporation, holder of certain licensing rights to intellectual property related to ESS for the potential treatment of severe burns
- ✓ Dismissed with prejudice the litigation that had previously encumbered ESS
- ✓ Amended the Lonza exclusive option agreement allowing for the extension of the option period through August 31, 2015

Eltoprazine Ready to Commence Phase 2b Program in PD-LID

Exceptional safety profile:

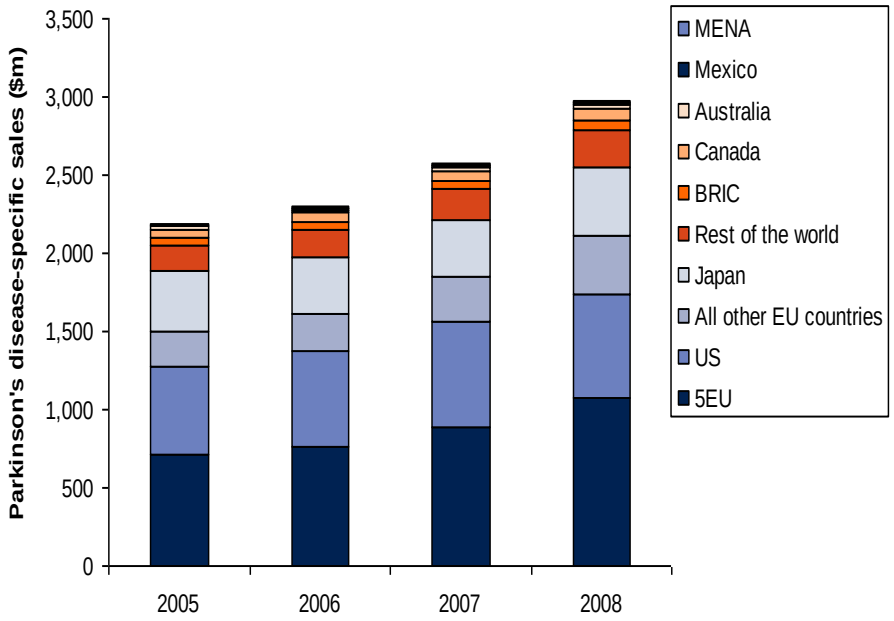
- Administered to 682 humans (volunteers and patients)
- Up to two years dosing studied by Solvay (now Abbvie)

Clinical Indications

- Parkinson's disease (PD) L-Dopa Induced Dyskinesia (LID):
  - **Open IND with Phase 2b ready to commence 2Q 2015**
  - Retained Chiltern as CRO for US/EU clinical study
  - Clinical data published in Brain (2/15); no L-Dopa interference
  - Strong secondary endpoints achieved in psychiatric aspects of PD
- Alzheimer's aggression: Phase 2 being evaluated
  - Data package in aggression produced by Solvay (now Abbvie)
- Adult ADHD: Phase 2 complete
  - Positive Phase 2 data on attention & hyperactivity/impulsivity in adults

Eltoprazine: PD Market Opportunity

- 1M+ Americans patients have PD
- 60-80% diagnosed with PD-LID
- 60,000 new diagnoses annually
- 3M million by 2032
- Total cost to U.S.: $25B
- Key unmet medical need: LID
  - Other PD symptoms addressed: Cognition, other psychiatric measures
- Market opportunity: $750M in US*
- Patent pending: protection through 2031
  - New Chemical Entity (NCE) Regulatory Exclusivity Pathway



*Source: MJFF Foundation

MANF has "Blue-Sky" Potential

Preclinical Programs

- Potential paradigm shift in cell protection and restoration
- $Multi-billion opportunity
- Lead programs in orphan ocular indications
  - Retinitis Pigmentosa (orphan granted)
  - Retinal artery occlusion (potential orphan)
  - Wolfram's (potential orphan)
- Potential in other indications
  1. Parkinson's
  2. Diabetes
  3. Myocardial infarction
  4. Hearing loss (potential orphan)
  5. Wound healing
  6. Other apoptosis-related disorders

Cutanogen Acquisition Could Add Significant Value

- Autologous, skin graft replacement for 50+% TBSA severe burns
- Biologics/drug regulatory pathway in office of combination products
- Orphan Drug Designation received in 2012
- Active IND as of May 2014
- Partially funded by US Gov't grant: AFIRM
- Project has been partially funded by DoD for last 5+ years
- Patient Population: ~2000 average patients per year
  - Cost of treatment per patient: $1.6M, w/ complications: $10M+
- Secondary applications: pediatric burn 30%+ burns, diabetic foot ulcers, cosmetics
- 10 patient Phase 2 clinical trial once acquisition of Cutanogen is completed

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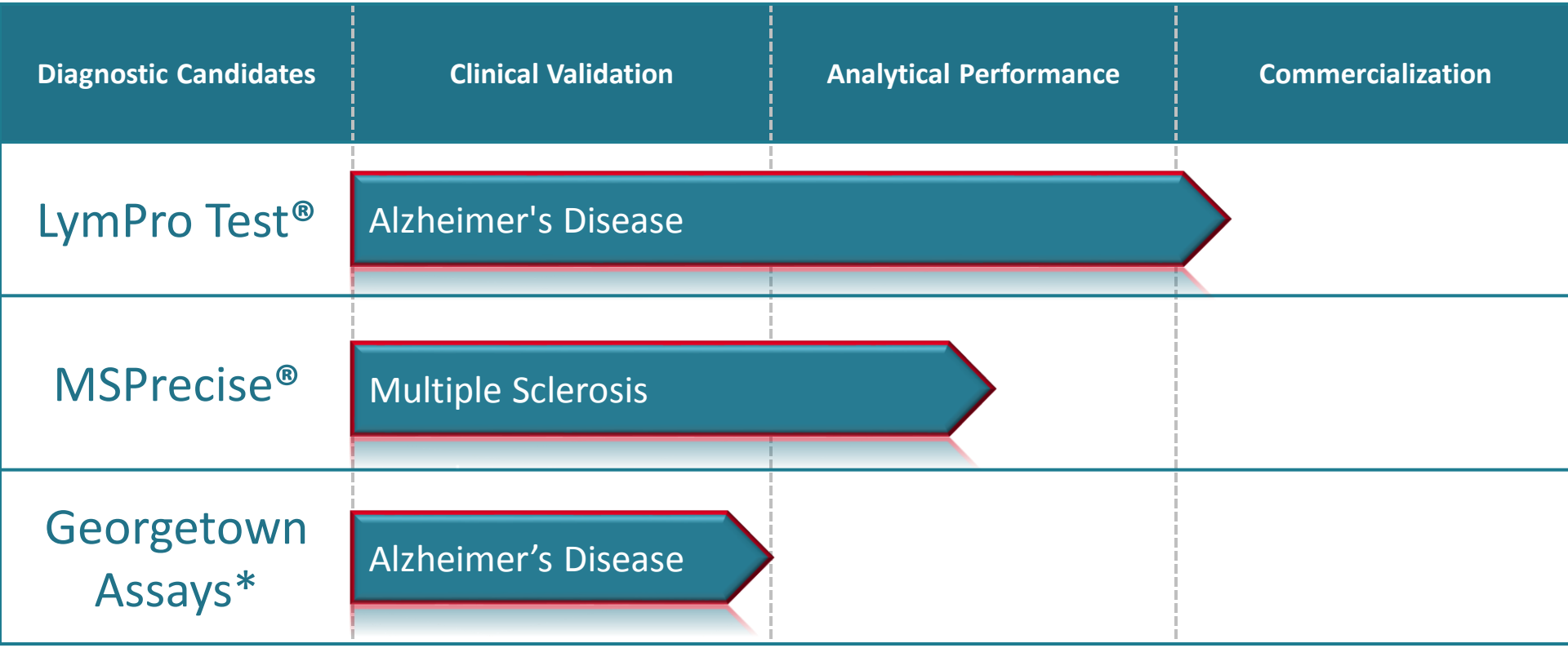
DIAGNOSTICS

Preparing for “Exit Strategy” to Unlock Value



Exploring Strategic Options for Monetization

*Upon exercise of exclusive option

Diagnostics Division: Pipeline Achievements

LymPro Test®

- Presented positive LymPro data at the 12th International Conference on Alzheimer's and Parkinson's Diseases and Related Neurological Disorders
- Established the Company's first Investigational Use Only (IUO) Alzheimer's biomarker services collaboration with Anavex Life Sciences Corp.
  - Entered into a Letter of Intent with Anavex to plan additional scope of further biomarker services for its next Alzheimer's clinical study (Phase 2/3)
- Announced the availability of LymPro Test biomarker services for use by the pharmaceutical industry for IUO

MSPrecise®

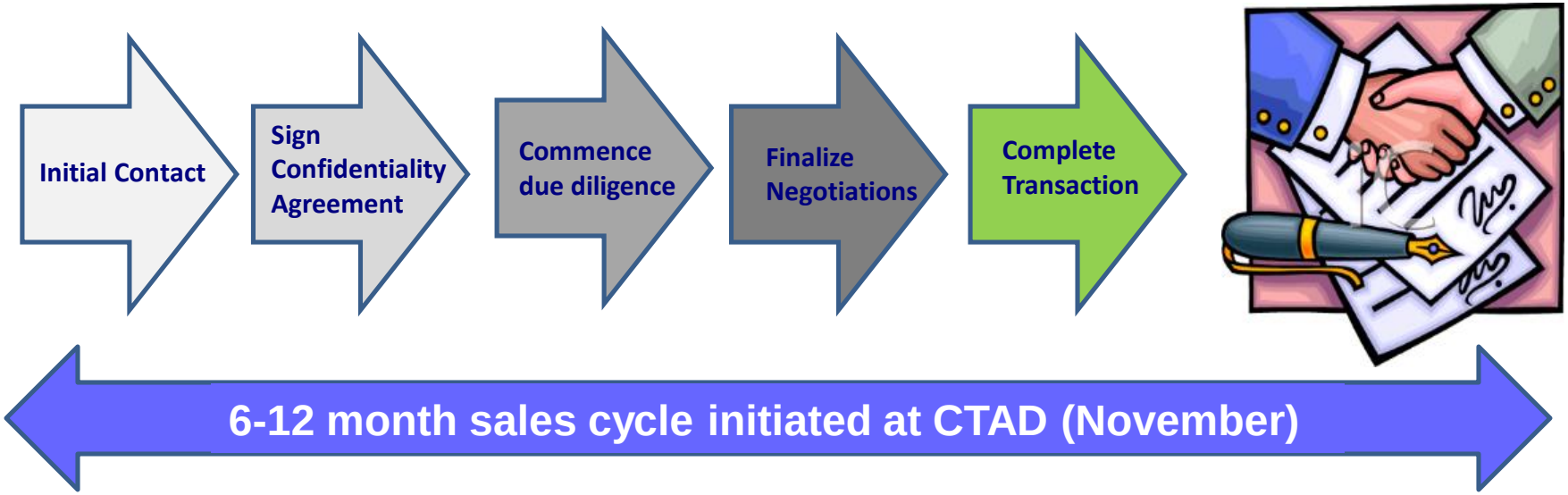
- Acquired MS diagnostics company Diogenix, Inc. to bolster near-term revenue
- Completed integration of Diogenix into Amarantus Diagnostics corporate infrastructure

Georgetown Assays

- Entered into a one-year, exclusive option agreement with Georgetown University to license patent rights for blood based biomarkers for AD and memory loss

LymPro Status and BD Strategy

- Currently available as IUO for clinical trials
- Completing multivariate analysis to support CLIA pathway
- Business development initiative commenced 4Q 2014
- **Moving forward with robust BD strategy**
  - Recent hiring of Ravi Kiron bolsters capabilities



MSPrecise: Compelling Commercial Opportunity

- Highly differentiated lead diagnostic that will significantly improve the diagnostic paradigm in MS as an adjunct to standard of care (oligloclonal banding)
- Peak sales potential in North America of ~$300M
- ~200 US MS clinics allowing for economical selling and marketing support
- Strong Intellectual Property protection: Issued US Patent
- Potential to transition into blood test
- Strong pharmacoeconomic reimbursement rationale for payers
  - Due to strong MS drug pricing and high misdiagnosis rate
- Initial regulatory pathway: LDT under CLIA
- Expected commercial launch 4Q 2015

Positioning Division as Potential Market Leader in Neurodiagnostics

- MSPrecise product ready to initiate commercialization process
  - Strong pharmacoeconomic rationale for reimbursement
  - CLIA commercialization pathway being prosecuted to deliver in 2015
  - $300 million peak sales potential in US
- Positioned as leading Alzheimer's blood-based biomarker service provider
  - LymPro Test, Exosome (amyloid & tau), Lipids
    - Screening of subjects to enrich clinical trial populations
    - Longitudinal comparison of pharmacodynamic activity
  - Distribution channel in place to support US/EU clinical trials
  - ~$150M IUO market for pharma trials / ~$3B commercial market

Significant Steps Taken to Prepare for "Exit"

- ✓ Retained an executive search firm to identify a Chief Executive Officer for the Diagnostics division
- ✓ Retained Ravi Kiron, Ph.D. as Senior Vice President of Business Development
- ✓ Promoted Colin Bier, Ph.D., to Chief Development Officer to oversee the commercialization of the Company's assays under CLIA
- ✓ Retained a consulting firm specialized in the sale of tax credits, to market the $7.5 million of New Jersey tax credits obtained in the Diogenix acquisition
- ✓ Established an Alzheimer's disease Diagnostics Scientific Advisory Board with three internationally-renowned AD and neurological disorder specialists, Paula T. Trzepacz, M.D., Jeffrey L. Cummings, M.D., Sc.D., and Robert A. Stern, Ph.D.

“Exit” Strategy Accelerated as a Priority

- Evaluating strategic options for the diagnostics business unit
- Potential options under consideration
  - Potential sale of the division for cash (and maintain a royalty)
  - IPO or RTO
  - License the technologies to a third party
  - Evaluate a combination of the above
- Intend to focus on maintaining a significant financial interest in the diagnostics business
- Will allow us to focus internal resources on Therapeutics division

Transaction expected to fuel advancement of Therapeutics pipeline

2015 Expected Milestones

- Initiate Phase 2b clinical study of Eltoprazine in PD-LID in 2Q 2015
- Complete enrollment of Phase 2b clinical study of Eltoprazine in PD-LID
- Complete acquisition of Cutanogen
  - Initiate Phase 2 study of ESS mid-year 2015
- MANF progression towards first-in-man:
  - RP ODD application in EU
  - Initiate GMP Manufacturing
  - RAO ODD applications from the FDA and EU
- Execute strategic transaction for Diagnostics division
- Pursuing National stock exchange up-listing

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