UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 OR 15(d) of The Securities Exchange Act of 1934

Date of Report (Date of earliest event reported)	April 26, 2010

Spherix Incorporated

(Exact name of registrant as specified in its charter)

(State or other jurisdiction of incorporation)	(Commission File Number)	(I.R.S. Employer Identification No.)
Delaware	0-5576	52-0849320

(Address of principal executive offices)	(Zip Code)
6430 Rockledge Drive, Suite 503, Bethesda, Maryland	20817

Registrant's telephone number, including area code	301-897-2540

(Former name or former address, if changed since last report.)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

[ ] Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

[ ] Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

[ ] Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

[ ] Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 7.01 Regulation FD Disclosure.

On April 27-28, 2010, Dr. Robert A. Lodder, President, and Mr. Robert L. Clayton, CFO, of Spherix Incorporated (the "Company"), will deliver a company presentation to various prospective investors in New York, NY. The presentation is available on the Company's website at www.spherix.com, is attached hereto as Exhibit 99.1, and is incorporated herein by reference.

Section 9 – Financial Statements and Exhibits

Item 9.01 Financial Statements and Exhibits

Exhibits

99.1 Spherix Incorporated Overview Presentation, April 2010

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Spherix Incorporated
(Registrant)

By:

/s/ Robert L. Clayton
Robert L. Clayton
CFO

Date: April 26, 2010

SPHERIX
INNOVATIONS FOR HEALTH

Spherix Incorporated Overview Presentation

April 27, 2010

Robert Lodder, Ph.D., President
Robert Clayton, Chief Financial Officer
Leisa Dennehy, MBA, Corporate and Commercial Development Advisor

SPHERIX
INNOVATIONS FOR HEALTH

Forward-Looking Statement

This presentation contains forward-looking statements that involve risks and uncertainties, including those described in the Company's Annual Report for the year ended December 31, 2009 filed on Form 10-K.

SPHERIX
INNOVATIONS FOR HEALTH

Today's Objectives

- Provide background on Spherix and tagatose development
- Explore the Company's short-term and long-term options for funding sources and partnering strategies
- Learn more about your Company's experience and service capabilities

Agenda

- Spherix Company Overview
- Diabetes Market and Unmet Needs
- Tagatose Rationale for Use in Diabetes
- Tagatose Clinical Development Plan
- Status of “Market Readiness” Activities
- Company Financials

Spherix Highlights

- Spherix is a public company (NASDAQ: SPEX; since 1967)
- Core expertise began as chiral chemistry of carbohydrates - applied to NASA missions, food uses and pharmaceuticals
- Company has two subsidiaries:
  - Biospherics: Pharmaceutical development division
  - Spherix Consulting: Scientific consulting on food and drug approvals for US and overseas clients
- Biospherics is focused on development of tagatose and related pipeline agents for the treatment of diabetes and metabolic disorders

Spherix Pharmaceutical Development

- Lead product, D-tagatose, currently in global phase 3 clinical trial as monotherapy treatment of “mild” Type 2 diabetes (HbA1c between 6.6 -9.0%)
- D-tagatose patented as a pharmaceutical agent for glycemic control in diabetes
- Designation of GRAS (Generally Recognized as Safe) by US FDA; evaluated for safety by WHO/JECFA (ADI not specified)
  - originally being developed as a sweetening agent for foods and beverages when medical benefits were observed
- Spherix primarily self-funded development of D-tagatose
- Corporate objective to sell or license commercial rights to tagatose as an Rx therapy in US and Europe

Experienced Senior Management Team

- **Claire L. Kruger, Ph.D., DABT, Chief Executive Officer**
  Toxicologist with 20 years of consulting experience; primary area of expertise is in pharmaceuticals, consumer products and foods, where she provides scientific, regulatory, and strategic support to clients in both the US and international regulatory arenas
- **Robert A. Lodder, Ph.D., President**
  Founder of InfraReDx, Inc. and Prescient Medical, Inc., Professor of Pharmaceutical Sciences at the College of Pharmacy, University of Kentucky Medical Center
- **Robert L. Clayton, CPA, Chief Financial Officer**
  16 years of experience in finance and accounting, including 5 years in public accounting; previously served as Director of Finance and Controller for Spherix
- **Leisa Dennehy, M.B.A., Commercial and Corporate Development Advisor**
  >20 years in pharma commercial roles; previously with PandG, Glaxo/GW, IntraBiotics, Peninsula, Protez, Talecris. Experience in new product market planning, product launches , asset valuation, and pharma partnering
- **Randy Brown, B.S., Chief of Operations**
  20 years in the pharmaceutical industry; previously with Pfizer, Eli Lilly and Genentech; experience in managing global trials in roughly 30 different countries including new emerging areas such as India
- **Ram Nimmagudda, Ph.D., Director of New Business Development**
  15 years of experience in business development, nutrition and nutraceutical industries, with particular expertise in novel food ingredients; previous positions of Director of New Business Development for South Asia at DSM Functional Foods, Director and Sr. Principal Technologist, External Technologies at Wm. Wrigley Jr. Co. and Vice President of Technology Growth at Char. Hansen, Inc.

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INNOVATIONS FOR HEALTH

Diabetes is a Major and Growing Health Crisis Worldwide

Diabetes:

- Affects more than 24 million people in the US and ~285 million adults worldwide and growing significantly[1,2]
  - 90-95 percent of those affected have Type 2 diabetes
- Is the fifth leading cause of death by disease in the US
- Costs ~$174B/year in direct and indirect medical expenses[3]
- Is poorly controlled even with aggressive intervention
  - ~60% of diabetics don't achieve target blood sugar levels with their current treatment[4]
- Has multiple co-morbidities:
  - 85% obesity, cardiovascular problems, renal disease, ophthalmic complications, etc.
- Up to 57 million Americans have "pre-diabetes"

[1] International Diabetes Federation Diabetes Atlas. http://www.diabetesatlas.org/content/some-285-million-people-worldwide-will-live-diabetes-2010
[2] Diabetes Statistics. American Diabetes Association. http://www.diabetes.org/diabetes-basics/diabetes-statistics/
[3] Direct and Indirect Costs of Diabetes in the United States. American Diabetes Association. http://www.diabetes.org/how-to-help/action/resources/cost-of-diabetes.html
[4] Saydah SH, Fradkin J and Cowie CC. Poor control of risk factors for vascular disease among adults with previously diagnosed diabetes. *JAMA*. 2004;291:335-42.

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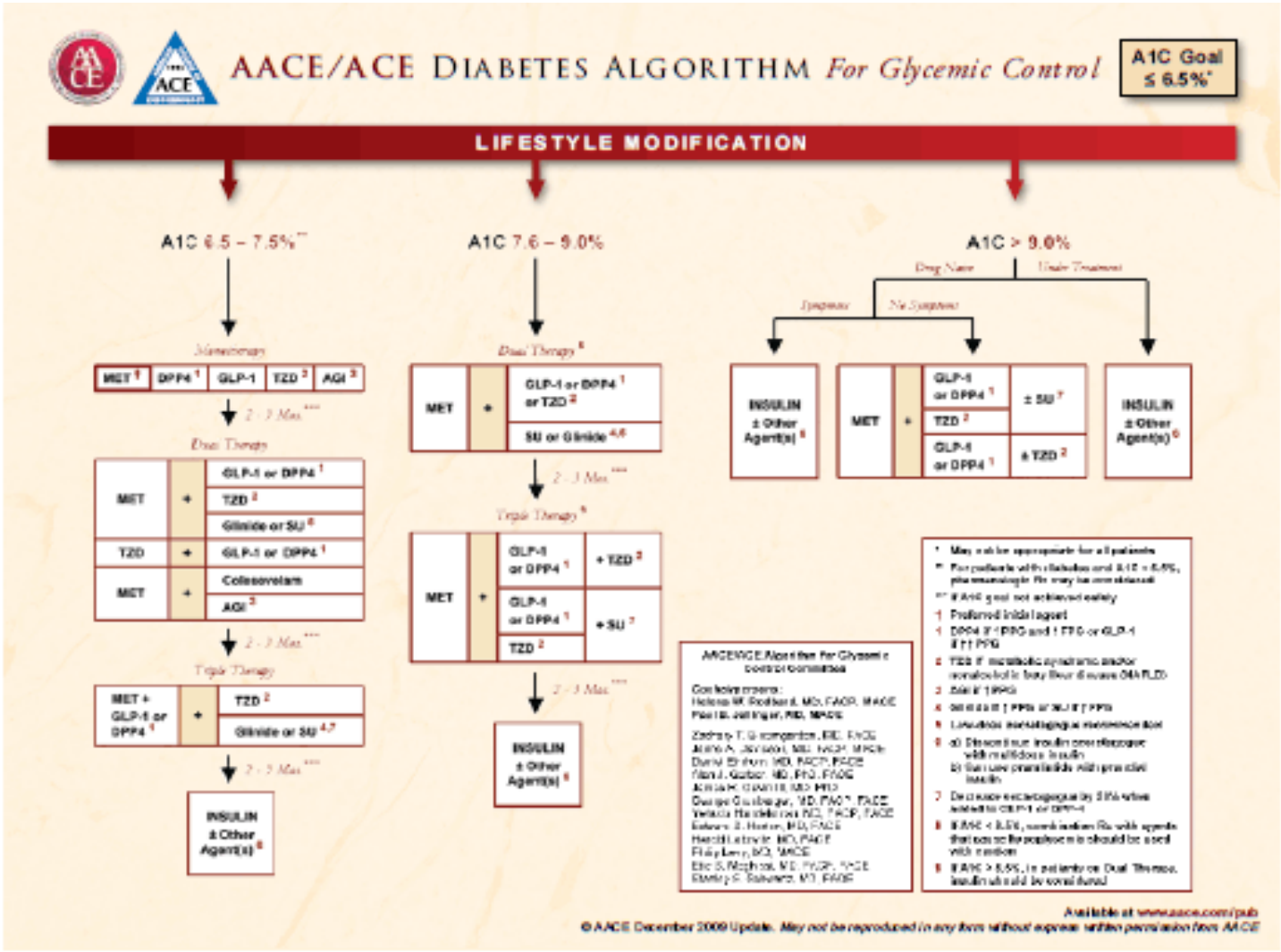
Complex and Aggressive Treatment Pathway Suggests High Medical Need



AACE/ACE Consensus Panel for Type 2 Diabetes *Endocrine Practice* 2009;25:540-559

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Many Diabetes Therapies, but None Ideal

Class	A1C Reduction	Fasting vs PPG	Hypo-glycemia	Weight Change	Dosing (times/day)	Other safety issues
Metformin	1.5	Fasting	No	Neutral	2	GI, lactic acidosis
Insulin, long acting	1.5 - 2.5	Fasting	Yes	Gain	1, Injected	
Insulin, rapid acting	1.5 - 2.5	PPG	Yes	Gain	1-4, Injected	
Sulfonylureas	1.5	Fasting	Yes	Gain	1	Allergies, secondary failure
Thiazolidinediones	0.5 - 1.4	Fasting	No	Gain	1	Edema, CHF, bone fractures
GLP-1 agonists (short)	0.5 - 1.0	PPG	No	Loss	2, Injected	GI, ?pancreatitis, ARF
Repaglinide	1 - 1.5	Both	Yes	Gain	3	
Nateglinide	0.5 - 0.8	PPG	Rare	Gain	3	
α-Glucosidase inhibitor	0.5 - 0.8	PPG	No	Neutral	3	GI
Amylin mimetics	0.5 - 1.0	PPG	No	Loss	3, Injected	GI
DPP-4 inhibitors	0.6 - 0.8	Both	No	Neutral	1	?pancreatitis
Bile acid sequestrant	0.5	Fasting	No	Neutral	1-2	GI
Bromocriptine	0.7	PPG	No	Neutral	1	GI
Long-acting GLP-1 agonist	~1.5	Both	No	Loss	1 or less, Injected	GI, ?pancreatitis, ?MTC, ?ARF

Adapted from: Nathan DM, et al. *Diabetes Care.* 2007;30:753-759. Nathan DM, et al. *Diabetes Care.* 2006;29:1963-1972. Nathan DM, et al. *Diabetes Care.* 2009;32:193-203. ADA. *Diabetes Care.* 2008;31:S12-S54. WelChol PI. 1/2008. Cycloset PI. 5/2009. Buse, et al. Lancet 2009

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Significant Unmet Market Need Demands New Therapeutic Options

- Managing disease progression from ‘pre-diabetes’ to diabetes
- Managing disease progression from Type 2 to Type 1
  - Beta-cell sparing approaches
- Greater clinical efficacy from pharmacotherapy
  - Fewer than ½ of patients are well controlled (NHANES study)
- Better glycemic control, especially post-prandial hyper- and hypoglycemia
- Improved long-term safety and risk/benefit
- Increased patient compliance and adherence to therapy

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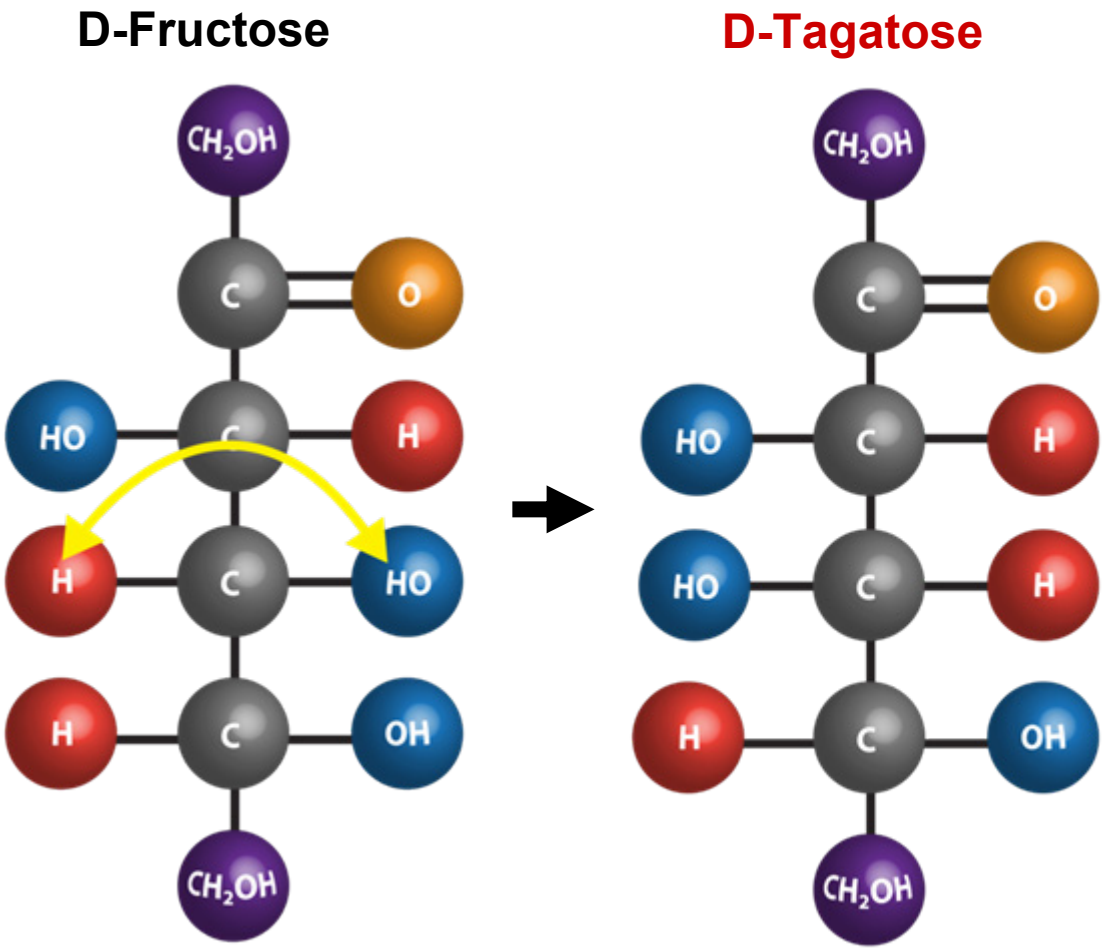
What is D-Tagatose?

- Naturally occurring L-epimer of D-fructose with an inversion at C4
- Spherix Inc. used chiral carbohydrate research to create L-sugars that are not metabolized, but retain sweetness



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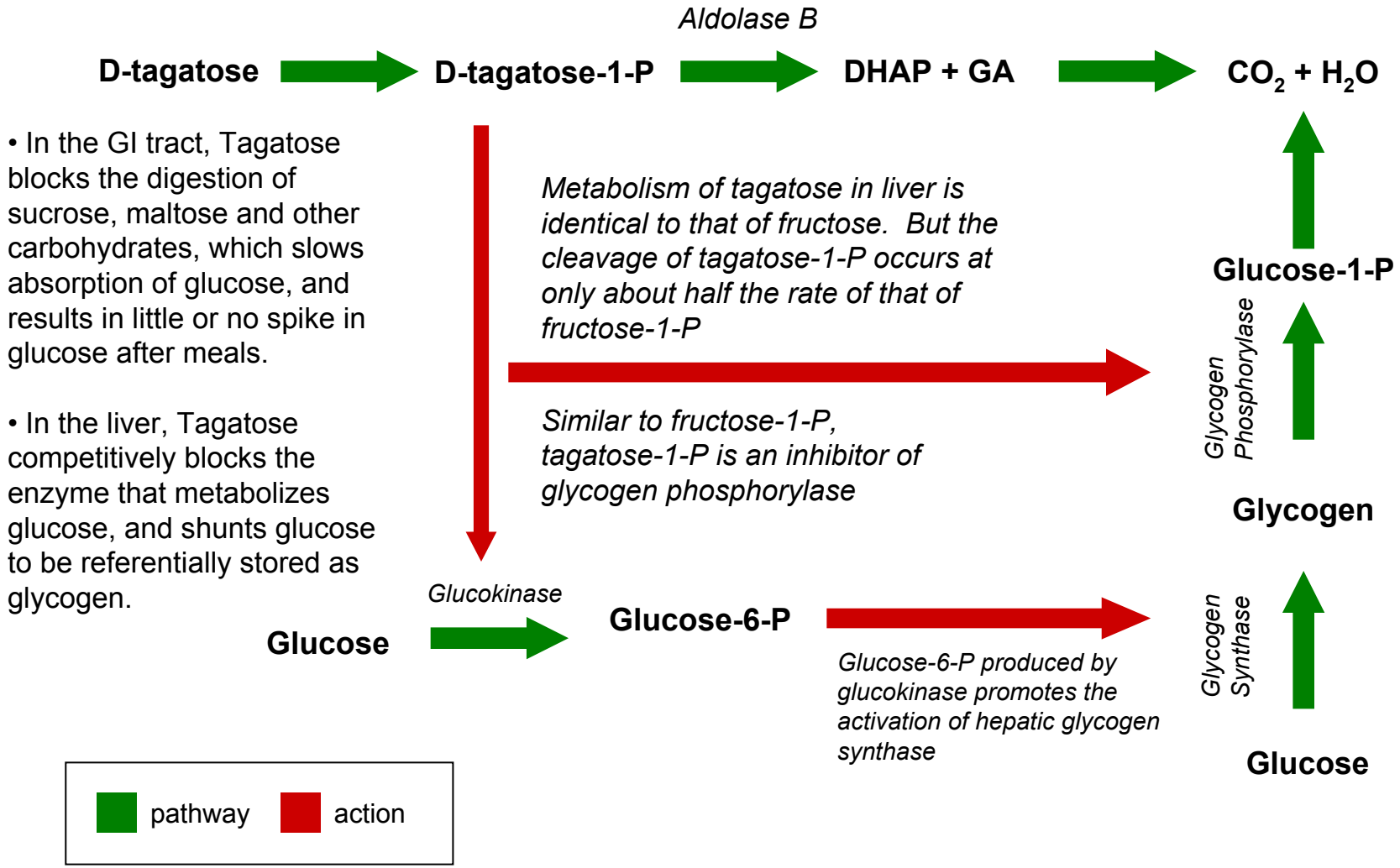
Overview of Tagatose

- Originally developed as reduced calorie sugar substitute
  - 92% as sweet as sucrose with only 38% of the calories
- Manufacturing economics not efficient for food industry
- D-tagatose was approved as safe for use in foods
  - Approved for use as a low calorie sweetener in foods
  - Approved in the US as an excipient in non-chronic OTC drugs (throat lozenges, cough syrup), toothpaste, mouthwash and cosmetics
  - US FDA (GRAS) since 2001
  - WHO JECFA since June 2004
  - EU since 2006
- Beneficial health effects discovered during pre-clinical studies
- Currently being evaluated in Phase 2 and Phase 3 clinical trials as a new diabetic treatment

Mechanism of Action for Glycemic Control



Mechanism of Action for Glycemic Control

In other words….

D-Tagatose depresses elevations of blood sugar levels by increasing glycogen synthesis while decreasing glycogen utilization, resulting in effective control of blood sugar and modulation of HbA1c

Blood sugar

Glycogen synthesis

Glycogen utilization

=

Controlled Blood Sugar and HbA1c

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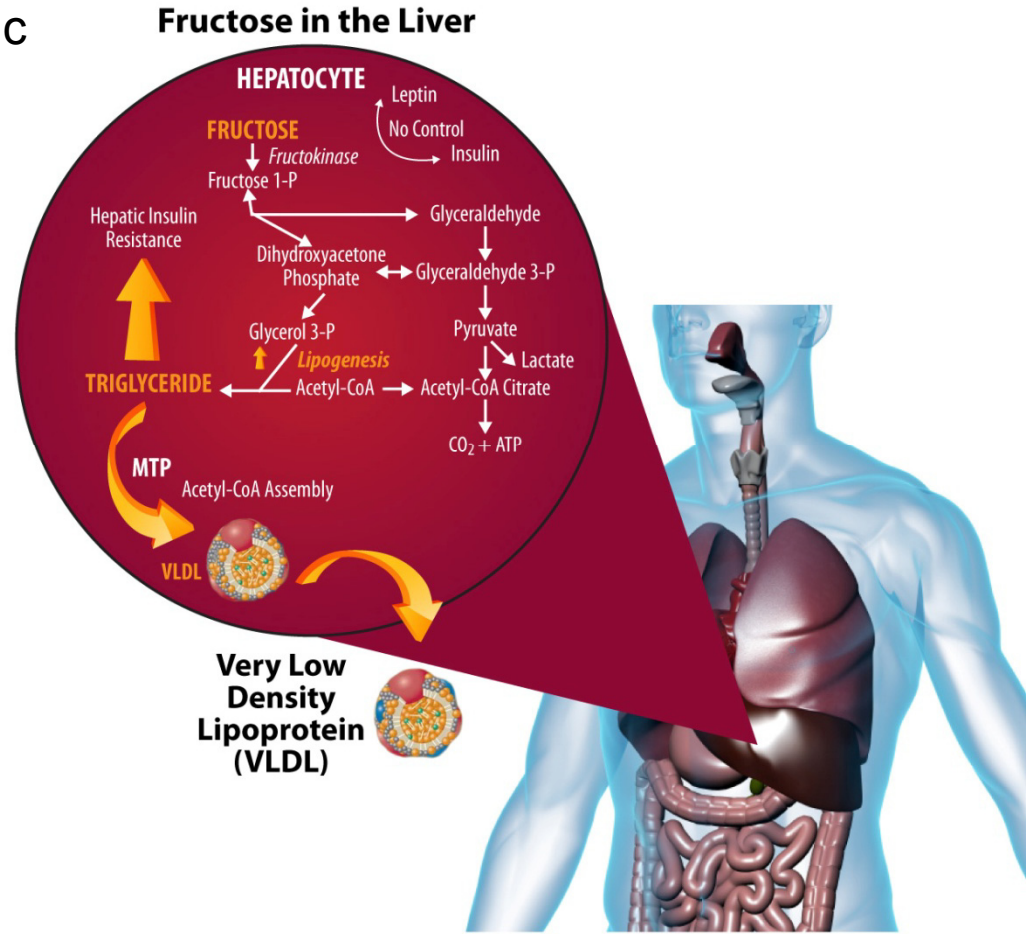
Tagatose Does Not Stimulate Insulin

- Most patients with Type 2 diabetes experience gradual loss of glycemic control, even with effective oral drugs
- Progressive failure of beta-cells ultimately responsible
  - Toxicity because of elevated glucose and/or lipid levels
  - Increased secretory demand because of insulin resistance
  - Amyloid deposition and altered levels of cytokines
- D-Tagatose does not stimulate insulin secretion
- D-Tagatose may lower lipid levels



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What Makes Tagatose Different?

Tagatose

- May provide a safety advantage over current agents
  - Approved as GRAS substance by the FDA and WHO
- Provides glycemic control through a mechanism of action unlike any agent currently-marketed in the US
- Competitively inhibits metabolism of glucose; therefore, slows the “rush” of glucose from the GI tract into the liver and into the blood stream
  - “Sugar blocker”; modifies post-prandial glucose levels
- Does not cause stimulation of beta cells or insulin secretion
- May have prebiotic benefits and other metabolic benefits

Established Safety Profile of Tagatose May Provide Market Advantages

- **Preclinical Studies**
  - Acute: LD50 > 10 g/kg
  - Subchronic: 28 day, 90 day, 13-Week: NOAEL at 5% in diet
  - 2 Years: NOAEL at 5% in diet; no evidence of carcinogenicity
  - No maternal toxicity, embryotoxicity, or teratogenicity up to 20 g/kg/day
  - Not genotoxic

- **Clinical Studies**
  - Over 20 studies in healthy, diabetic, hyperuricemic or gouty individuals, at doses up to 25 g per eating occasion and 75 g per day reported gastrointestinal symptoms that were mild and transient; no adverse effects on clinical chemistries, hematological parameters or urinary endpoints; types and severity of gastrointestinal symptoms similar to other incompletely absorbed carbohydrates or polyols

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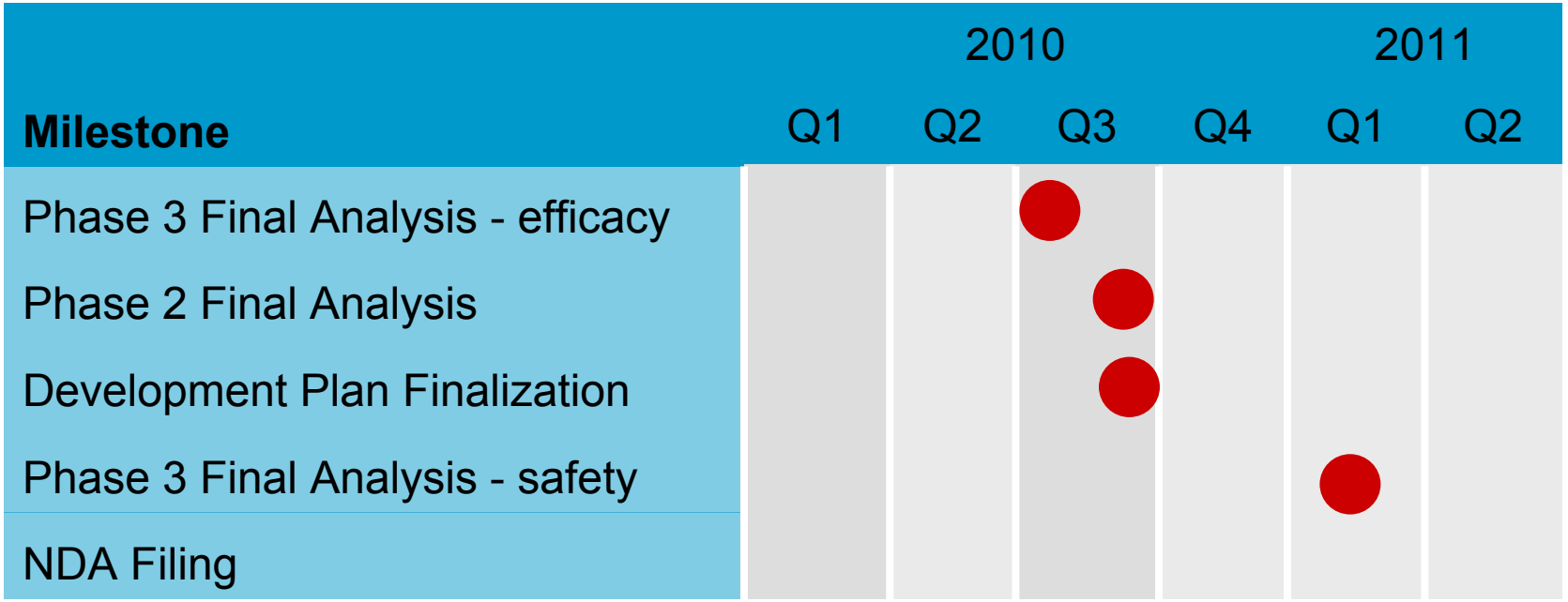
Tagatose is in Phase 3 Clinical Trials



Phase 2 Clinical Trial, Tagatose
(Protocol 70971-005)

- **Objective**
  - Evaluate dose-response effect of minimal doses of tagatose (2.5, 5.0, and 7.5 gram *t.i.d*. doses) on glycemic control in subjects with Type 2 diabetes not well controlled by diet and exercise
- **Design**
  - Multi-center, single-blinded, randomized, parallel group clinical study; 6 months duration
- **Clinical Endpoints**
  - Primary: HbA1c
  - Secondary: glucose, insulin, lipid profiles, body weight
- **Key Dates**
  - Unblinded interim data analysis completed - data to be provided under CDA
  - Trial expected to lock in 2Q2010

Phase 3 Clinical Trial, Tagatose NEET Study (Protocol 70971-004)

- Objective
  - Evaluate effect of 15-gram, *t.i.d* dose of D-tagatose on glycemic control in subjects with Type 2 diabetes not well controlled by diet and exercise
- Design
  - Multi-center, double blind, randomized, parallel group study
  - 443 patients randomized
  - 30 sites in US; 32 sites in India
  - Powered to detect 0.5 percentage point change in HbA1c
- Clinical Endpoints
  - Primary: HbA1c
  - Secondary: glucose, insulin, lipid profiles, body weight
- Key Dates
  - Blinded, interim data analysis done 4Q09; no statistical penalty
  - Efficacy portion of trial expected to close by 2Q2010
  - NDA could be filed as early as mid-2011

Phase 3 Blinded Interim Data Analysis

Blinded interim analysis done in November 2009 suggests:

- Statistical significance for the pre-specified change of 0.5% in HbA1c (the primary endpoint) can be achieved with the current sample size
- Favorable change in variability of HbA1c from baseline
- Results of the secondary variables, LDL, HDL, triglycerides, and body mass index in agreement with the HbA1c results
- Incidences of responders achieving an HbA1c target of less than 6.5% at 1, 2, 4 and 6 months of treatment were 4%, 13%, 19% and 18% respectively

Please refer to press release issued Nov 16, 2009 at http://www.spherix.com/pdf/press/pr111609_ia.pdf

At the time of the interim analysis, not all subjects had finished the entire treatment course of this trial; therefore

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Manufacturing at Full Scale with Commercial Capacity Secured

Inalco S.p.A. of Italy

- DMF 22715 and LoA
- One metric ton batches
- In use in phase 3 trial
- Supply agreement signed for full commercial scale quantities

Tagatose Should Have Up To 6.5 Yr Exclusivity Period in the US and Up To 7 Yrs in EU

- Patents include:
  - 5,447,917 D-tagatose as anti-hyperglycemic agent
  - 5,356,879 D-tagatose as anti-hyperglycemic agent
- New Chemical Entity Exclusivity (Hatch-Waxman) – US
  - 5-year exclusivity (no aNDA's accepted) usually granted to new drug products containing chemical entities never previously approved by FDA either alone or in combination
  - Essentially ~6 years year exclusivity (base case)
- New Chemical Entity Exclusivity – EU
  - 7 years exclusivity granted to NCE in European Union
- 6 months Pediatric Exclusivity – US
  - 6 months exclusivity for conducting studies in pediatric population
  - Added to end of all existing marketing exclusivity and patent periods

Market Planning for Tagatose Has Been Done with Pharma Partner in Mind

- Market Research
  - Exploratory and product profile research: 2007/2008
  - Product profile and key message testing: 2010
- Product Positioning
  - Early (“mild”) diabetes represents large market segment
- Product Valuation
  - Forecast to be developed from market input
- Medical Advisory Boards
  - Two advisory board meetings held: October 2009 and April 2010
- Trade name and other brand development activities
  - Minimal activity done, assuming pharma partner prefers to define brand
  - Not yet on critical path for launch
  - Plans being developed to pursue pre-launch activities if decision is made to go without a partner

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Financial Overview

Cash and Short-term Investments (12/31/09)	$9.4 million
Working Capital (12/31/09)	$7.7 million
Revenue (2009)	$1.4 million
Estimated Cash Burn (2010)	$9-11 million
Shares Outstanding	17.1 million
Warrants Outstanding @ $3.25	1.1 million
Warrants Outstanding @ $2.875	83,000

Market Cap at 3/31/10 **~$24 million**

Investment Highlights: Tagatose

- Agent previously approved by US FDA and other countries as GRAS listed food ingredient
- Medical use focused on large and growing Type 2 diabetes market
- Currently in global Phase 3 clinical trial
- Positioned for early use diabetes due to expected safety benefit with modest efficacy
- Manufacturing supply agreement in place which supports price point for pharma
- NCE market exclusivity: 6-1/2 years in US; 7 years in EU
- Potential for nutraceutical use in developing countries

For More Information, Please Contact:

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