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)	January 10, 2012

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 January 10, 2012, Dr. Robert A. Lodder, President, of Spherix Incorporated (the "Company"), will deliver a company presentation to various prospective investors at OneMedForum SF 2012 in San Francisco, CA. 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, January 10, 2012

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: January 10, 2012

Exhibit 99.1: Spherix Incorporated Overview Presentation, January 10, 2012

SPHERIX
INNOVATIONS FOR HEALTH

Spherix Incorporated (NASDAQ: SPEX)
January 10, 2012

SPHERIX
INNOVATIONS FOR HEALTH

Forward-Looking Statements

This presentation contains forward-looking statements made pursuant to provisions of Section 21E of the Securities Exchange Act of 1934. Investors are cautioned that such statements, including statements relating to planned clinical study design, regulatory and business strategies, plans and objectives of management and growth opportunities for existing or proposed products, constitute forward-looking statements which involve risks and uncertainties that could cause actual results to differ materially from those anticipated by the forward-looking statements. The risks and uncertainties include, without limitation, risks that product candidates may fail in the clinic or may not be successfully marketed or manufactured, we may lack financial resources to complete development of D-tagatose, the FDA may interpret the results of studies differently than us, competing products may be more successful, demand for new pharmaceutical products may decrease, the biopharmaceutical industry may experience negative market trends, our continuing efforts to develop D-tagatose may be unsuccessful, our common stock could be delisted from the Nasdaq Capital Market, and other risks and challenges detailed in our filings with the U.S. Securities and Exchange Commission. You are cautioned not to place undue reliance on any forward-looking statements that speak only as of the date of this presentation. We undertake no obligation to publicly release the results of any revisions to these forward-looking statements that may be made to reflect events or circumstances that occur after the date of this presentation or to reflect the occurrence of unanticipated events.

Company Description

- Core expertise in scientific and technical aspects of drug and food development
- Operates two subsidiaries
  - Biospherics: Pharmaceutical development of D-tagatose and pipeline products
    - Dyslipidemias
    - Atherosclerosis
    - Metabolic Syndrome and Diabetes
  - Spherix Consulting: Scientific consulting on food and drug approvals for clients worldwide

SPHERIX
INNOVATIONS FOR HEALTH

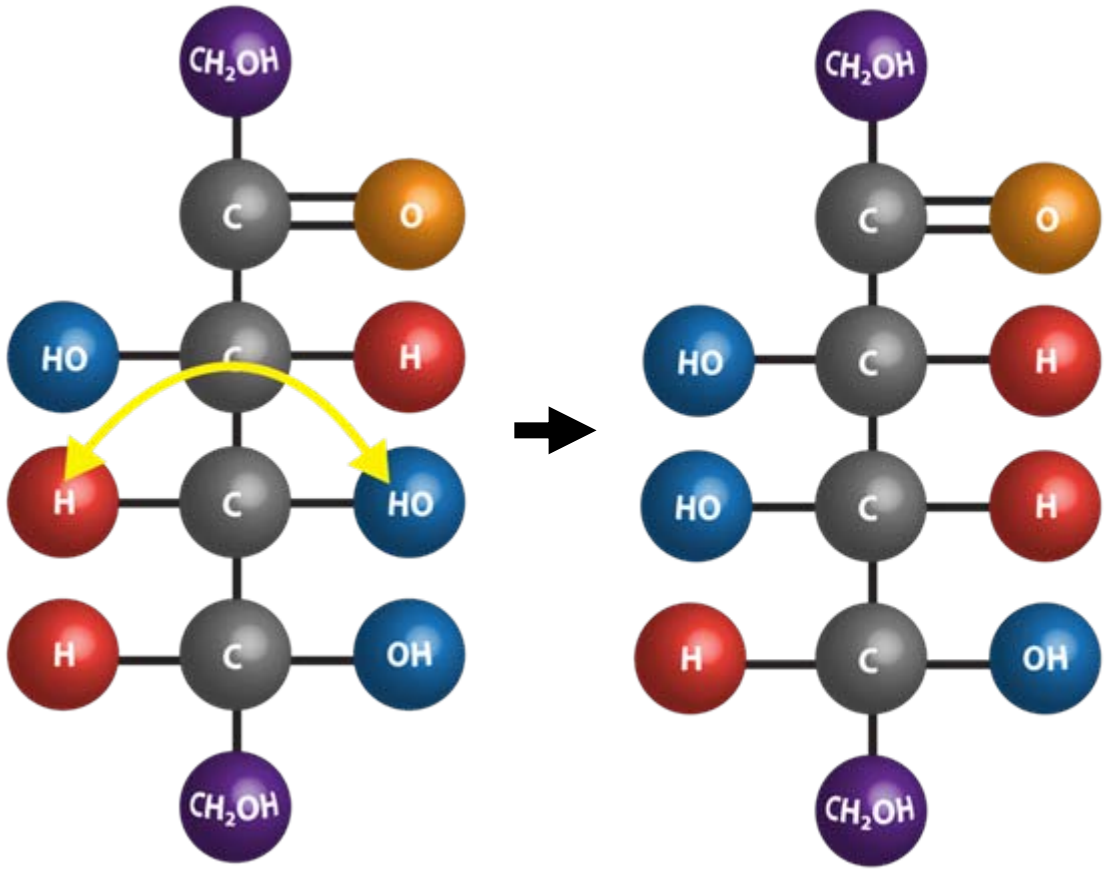
Investment Highlights

- D-tagatose and SPX-106 show promise in multiple clinical applications
  - Hypertriglyceridemia ($26 billion treatment market)
  - Diabetes ($175 billion treatment market)
- Preclinical and Phase 2 data show significant lowering of triglycerides
  - Much faster and less expensive development pathway vs. diabetes
  - Clinical development program initiated
- Cash position sufficient to fund initial triglyceride studies
- Phase 3 study demonstrated statistically significant reductions in HbA1c in patients with mild Type 2 diabetes
  - Pursuing partnership(s) for further clinical development

SPHERIX
INNOVATIONS FOR HEALTH

What is D-tagatose?

- Naturally occurring L-epimer of D-fructose with an inversion at C4
- Spherix used chiral carbohydrate research to create L-sugars that are not metabolized, but retain sweetness
- Blocks lipid formation from carbohydrates
- Does not stimulate insulin production



SPHERIX
INNOVATIONS FOR HEALTH

The D-Tagatose Difference

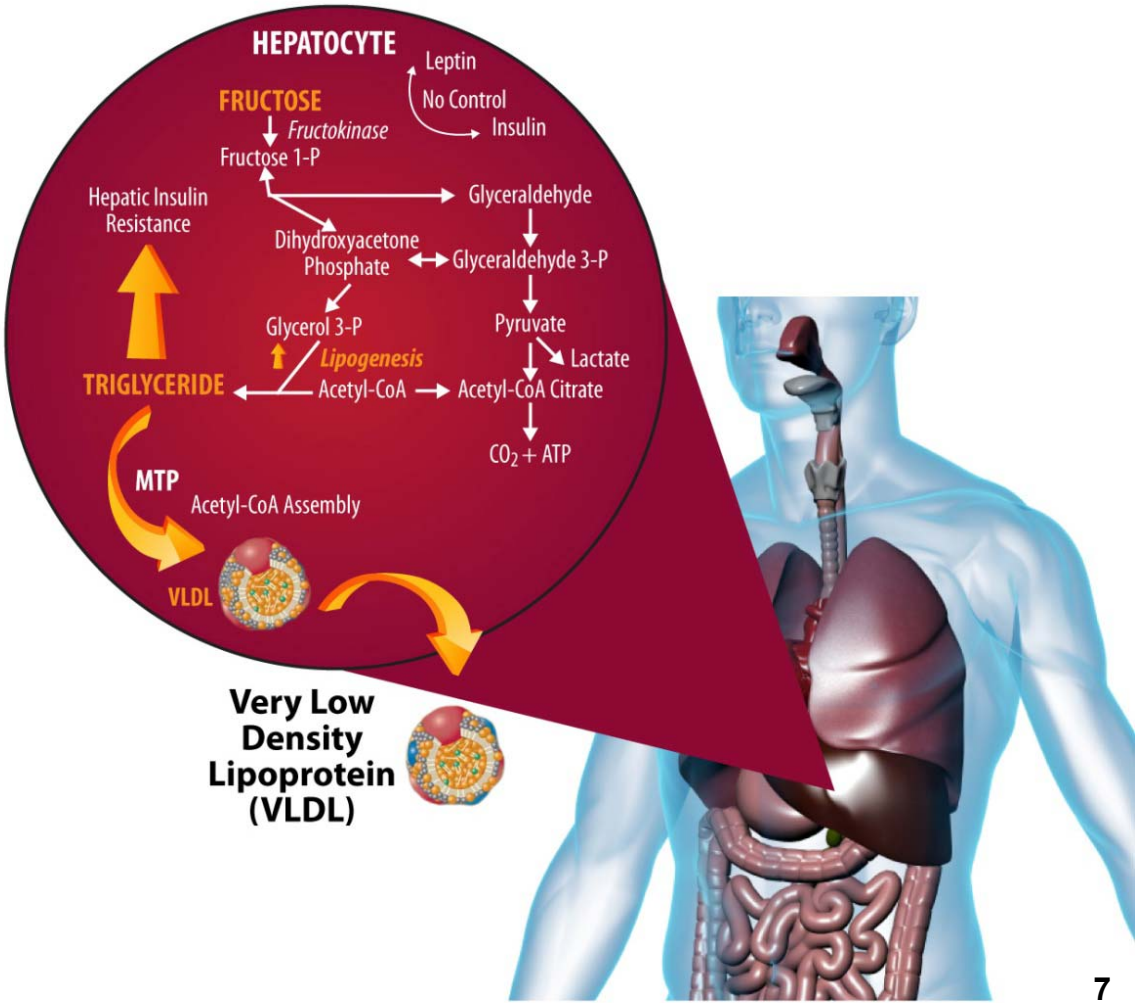
- **May provide a safety advantage over current agents**
  - **Approved as GRAS by FDA; approved as Novel Food in EU; ADI "not specified" by JECFA**
- **Provides lipoprotein and glycemic control through a mechanism of action unlike any agent currently marketed in the U.S.**
  - **"Sugar blocker" with potential fat, liver and gut mechanisms that may modify blood lipid and post-prandial glucose levels**

SPHERIX
INNOVATIONS FOR HEALTH

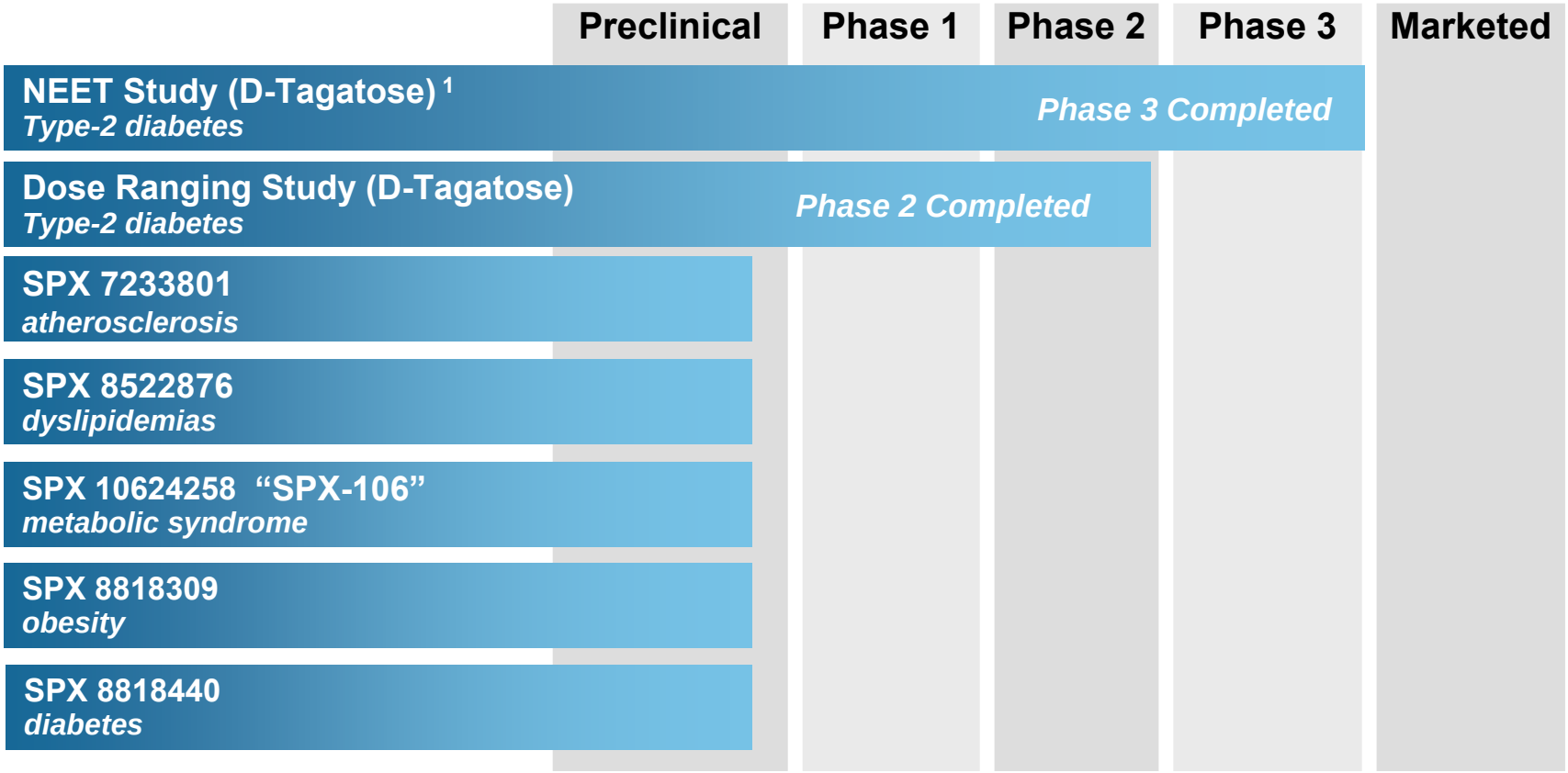
Proposed Mechanism of Action in Lowering VLDL and Triglycerides

- D-Tagatose lowers blood lipoprotein and glucose levels
  - Triglycerides reduced
  - VLDL reduced
  - LDL reduced
  - HDL essentially unchanged
  - TC reduced
- D-Tagatose does not cause myopathy / rhabdomyolysis
- D-Tagatose does not stimulate insulin secretion

Tagatose follows fructose pathway in the liver



Pharmaceutical Pipeline Compounds Formulated with D-Tagatose



1. Proceeded directly from phase 1 to 3 due to FDA GRAS approval

SPHERIX
INNOVATIONS FOR HEALTH

In-Licensing for the Pipeline

- Biospherics' goal to diversify pipeline by licensing in new drug candidates
- The Company has preclinical cardiovascular and metabolic drug candidates licensed from UKRF
- The Company is seeking and examining:
  - Later, clinical-stage compounds:
    - Phase 1 and Phase 2
  - Orphan drugs:
    - Developed specifically to treat a rare medical condition
    - 7 years of data exclusivity in addition to patent life in US
    - In the US and EU, may be easier to gain marketing approval

SPHERIX
INNOVATIONS FOR HEALTH

The Metabolic Syndrome

Metabolic syndrome **is a combination of medical disorders that increase the risk of developing cardiovascular disease and diabetes. It affects one in five people, and prevalence increases with age.**

US National Cholesterol Education Program Adult Treatment Panel III (NCEP ATP) **(2001) requires at least three of the following:**

- ✓ **central obesity: waist circumference ≥ 102 cm or 40 inches (male), ≥ 88 cm or 36 inches (female)**
- ✓ ***dyslipidemia: TG ≥ 1.7 mmol/L (150 mg/dl)***
- ✓ **dyslipidemia: HDL-C < 40 mg/dL (male), < 50 mg/dL (female)**
- ✓ **blood pressure ≥ 130/85 mmHg**
- ✓ **fasting plasma glucose ≥ 6.1 mmol/L (110 mg/dl)**

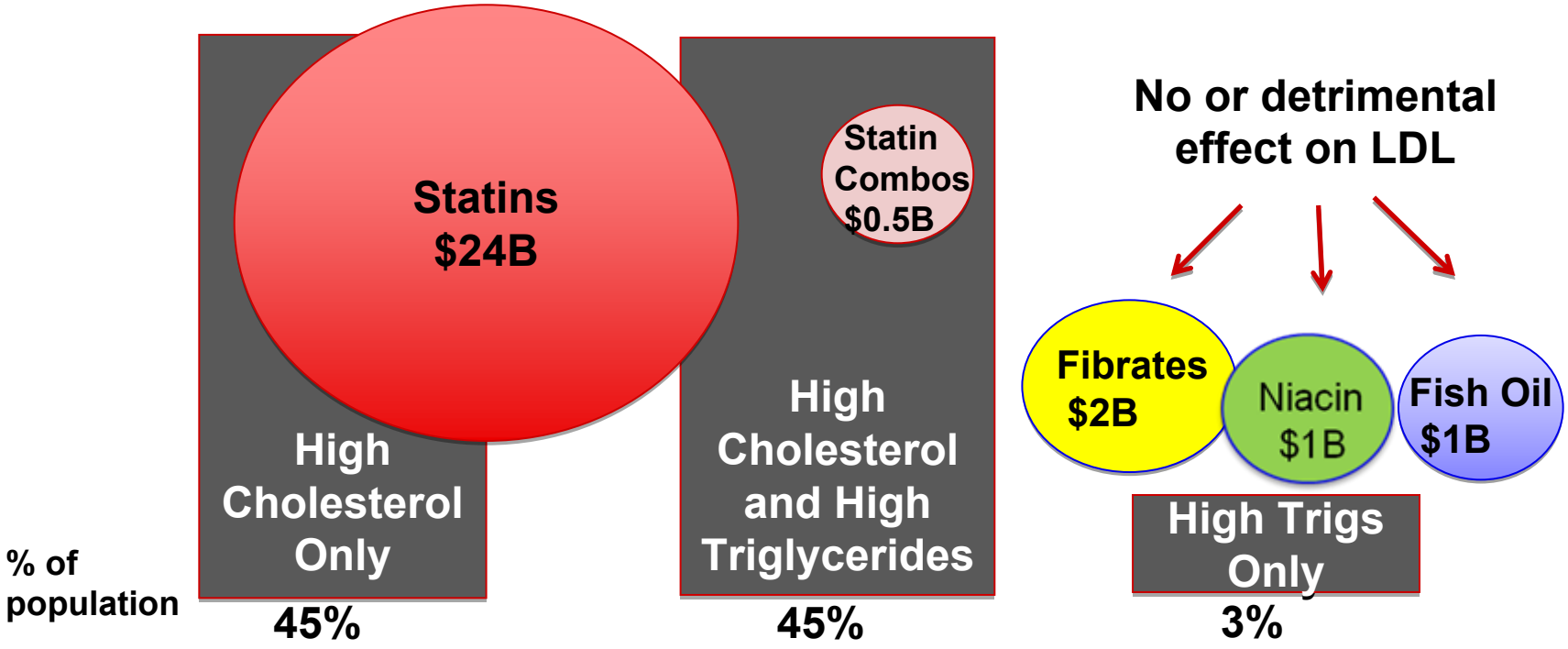
SPHERIX
INNOVATIONS FOR HEALTH

Hypertriglyceridemia

- In the U.S. alone, more than 100 million people have elevated triglycerides, defined as more than 150 mg/dl
- Approximately 10 million are poorly served by current drug regimens
- The U.S. market for triglyceride-lowering drugs is in excess of $4 billion
- The path to commercialization is shorter than for an oral antidiabetic drug

Large and Growing Triglyceride Market Opportunity

- A growing epidemic of metabolic syndrome and dyslipidemia supports blockbuster products in an area with limited competition
- Unmet needs still exist due to: adverse events with niacin, lack of robust cardiovascular benefit with fibrates, and unwanted lipid effects of raising the bad LDL cholesterol (fish oils) or decreasing the good HDL cholesterol (fibrates)
- Need new safe agents for use in patients with both high cholesterol and high triglycerides



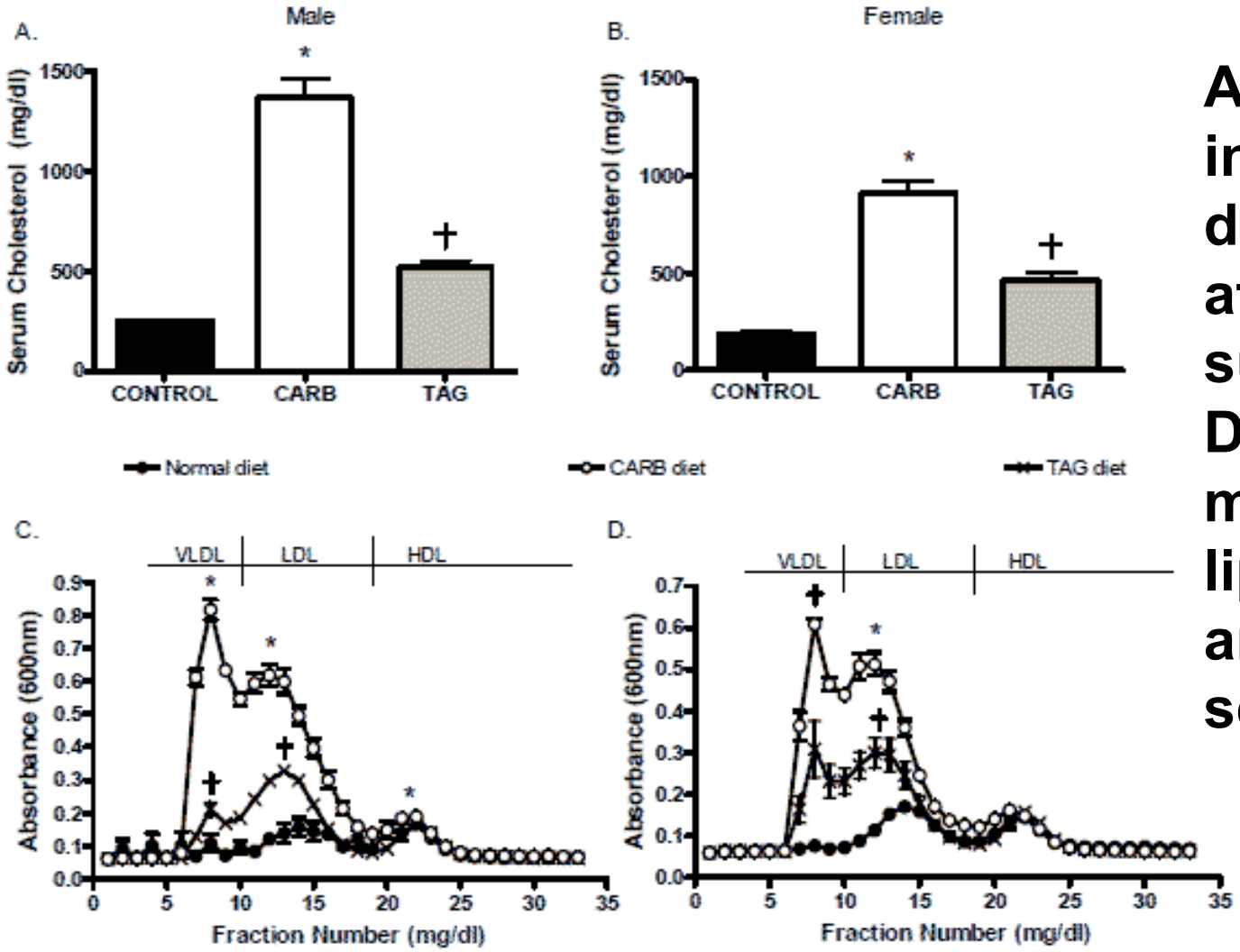
SPHERIX
INNOVATIONS FOR HEALTH

The Metabolic Diseases Crisis- Hypertriglyceridemia

- In the US alone, >100 million people have elevated triglycerides (> 150 mg/dl)
- Associated with other lipid abnormalities and the metabolic syndrome
  - abdominal obesity, insulin resistance, low high-density lipoprotein (HDL), and hypertension, which are linked to coronary artery disease
- Preclinical work and interim Phase 2 D-tagatose data support pursuit of this indication for development
- Good commercial opportunity! Large, but poorly-served market due to side effects of current products, with few competitors and low promotional intensity

SPHERIX
INNOVATIONS FOR HEALTH

Tagatose Effects on Triglycerides LDLr Knockout Mice



Animal studies in a model of diet-induced atherosclerosis suggested D-tagatose might reduce lipoproteins and athero-sclerosis.

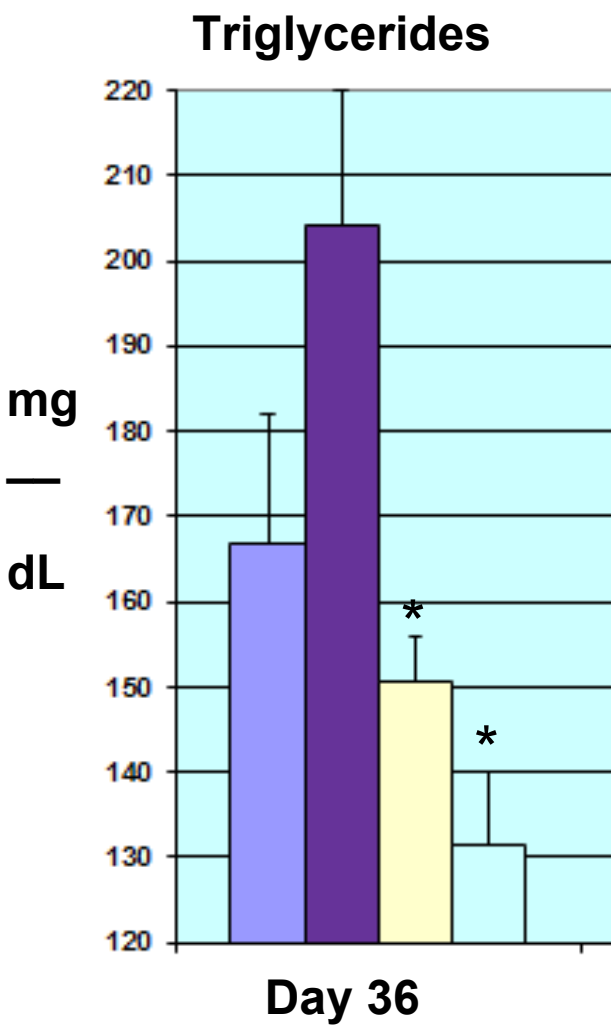
Tagatose Effects on Triglycerides LDLr Mice (2)

Tagatose administration reduced triglycerides, adiposity and body mass.

Gender	Diet	Body weight (g)	Rate of body weight gain (g/week)	Tibialis anterior (mg)	Total triglycerides (mg/dl)	Adiposity index (%)
M	NORMAL	30.18 ± 0.36	0.28 ± 0.03	57.80 ± 3.50	110.3 ± 19.9	3.35 ± 0.27
	CARB	40.30 ± 1.78 *	0.97 ± 0.06	58.80 ± 2.73	822.4 ± 147.5 *	6.70 ± 0.77 *
	TAG	27.30 ± 0.42	0.17 ± 0.03	57.83 ± 2.20	162.3 ± 29.2	1.72 ± 0.13
F	NORMAL	24.43 ± 1.10	0.30 ± 0.05	35.25 ± 7.41	79.1 ± 15.5	2.71 ± 0.57
	CARB	30.56 ± 0.98 *	0.68 ± 0.05	43.14 ± 2.06	326.2 ± 37.3 *	5.39 ± 0.41 *
	TAG	24.06 ± 0.73	0.19 ± 0.02	42.40 ± 2.50	54.1 ± 8.0	1.60 ± 0.32

Data are mean ± SEM from N = 5/6 mice/group).

LDLr -/- Mouse Treated with Sugar and Drug Mixtures for Three Weeks



Water

Glu/Fruc

Glu/Fruc/Tagatose

Glu/Fruc/Tagatose / SPX-106

TRIGLYCERIDES

p=0.03 for tagatose vs. water

p=0.008 for tagatose vs. glucose / fructose

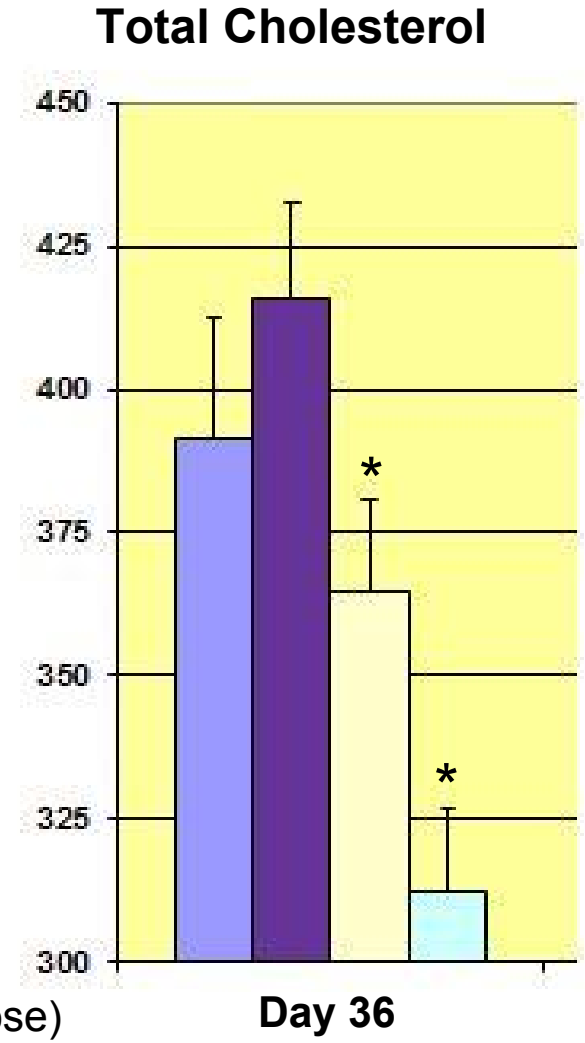
p=0.001 for tag/SPX106 vs. glucose / fructose

CHOLESTEROL

p=0.05 for gluc/fruc vs. tagatose

p=0.01 for gluc/fruc vs. tagatose / SPX106

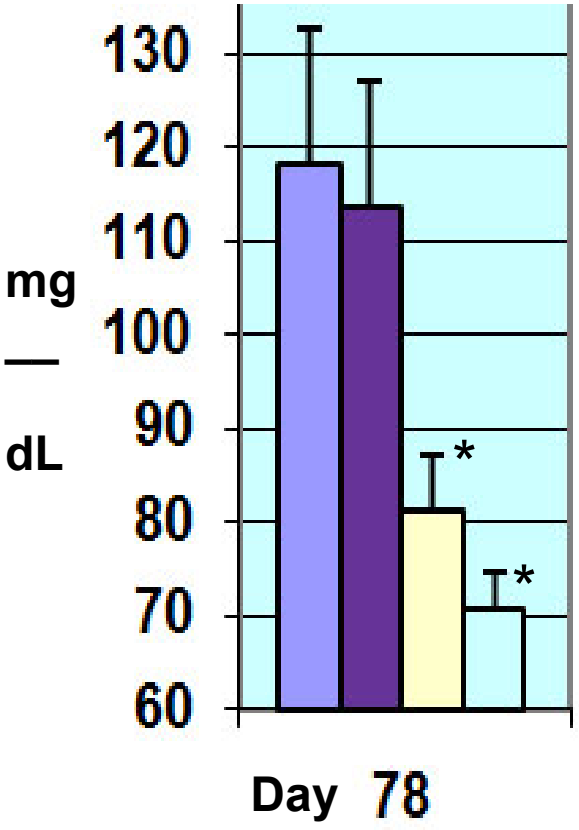
n=10 per group



(SPX-106T = SPX-106 in D-tagatose)

LDLr -/- Mouse Treated with Sugar and Drug Mixtures for Nine Weeks

Triglycerides



- Water
- Glu/Fruc
- Glu/Fruc/Tagatose
- Glu/Fruc / SPX-106T

TRIGLYCERIDES

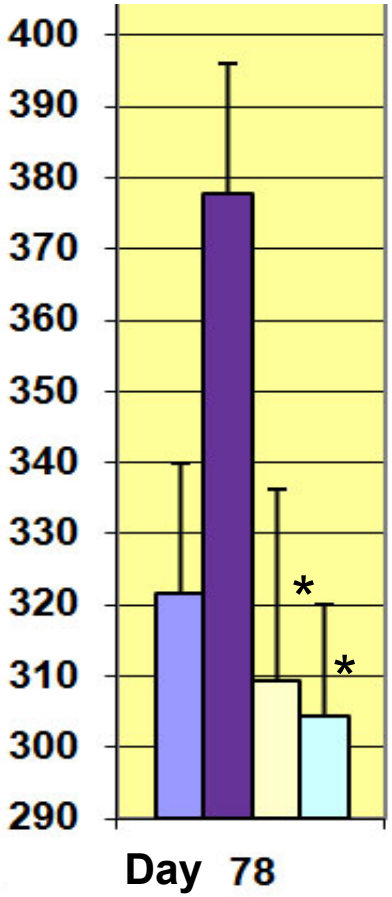
- *p*=0.035 for tagatose vs. water
- *p*=0.046 for tagatose vs. glucose / fructose
- *p*=0.009 for SPX-106T vs. water
- *p*=0.011 for SPX-106T vs. glucose / fructose

CHOLESTEROL

p=0.05 for gluc/fruc vs. tagatose
p=0.01 for gluc/fruc vs. SPX-106T

n=10 per group

Total Cholesterol



(SPX-106T = SPX-106 in D-tagatose)

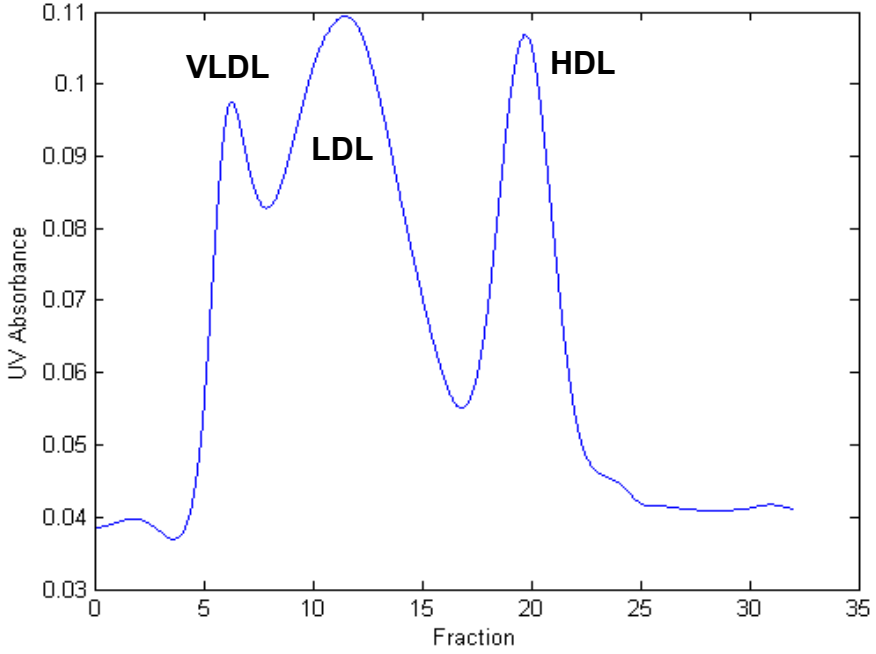
SPHERIX
INNOVATIONS FOR HEALTH

Peak Factor Analysis Results for the LDLr -/- Mice

- **The SPX-106T combination is the most effective of the treatments for lowering *triglycerides*.**
  - **The SPX-106 dose is responsible for lowering most of the triglycerides in the blood, followed by tagatose.**
  - **D-tagatose lowers triglycerides by -3.1 mg/dl per g/kg/dose of the sugar, while the SPX-106 lowers triglycerides by -372 mg/dl per g/kg/dose of the drug. Both glucose and fructose raise triglycerides.**
- **The SPX-106/tagatose combination is the most effective of the treatments for lowering *cholesterol*.**
  - **The SPX-106 concentration is responsible for lowering most of the cholesterol in the mice blood, followed by tagatose.**
  - **D-tagatose lowers cholesterol by -3.9 mg/dl per g/kg/dose of the sugar, while the SPX-106 lowers cholesterol by -629 mg/dl per g/kg/dose of the drug. Both glucose and fructose raise cholesterol.**

VLDL, LDL and HDL at 9 Weeks by FPLC and Enzymatic Assay in LDLr -/- Mice

Glucose & Fructose

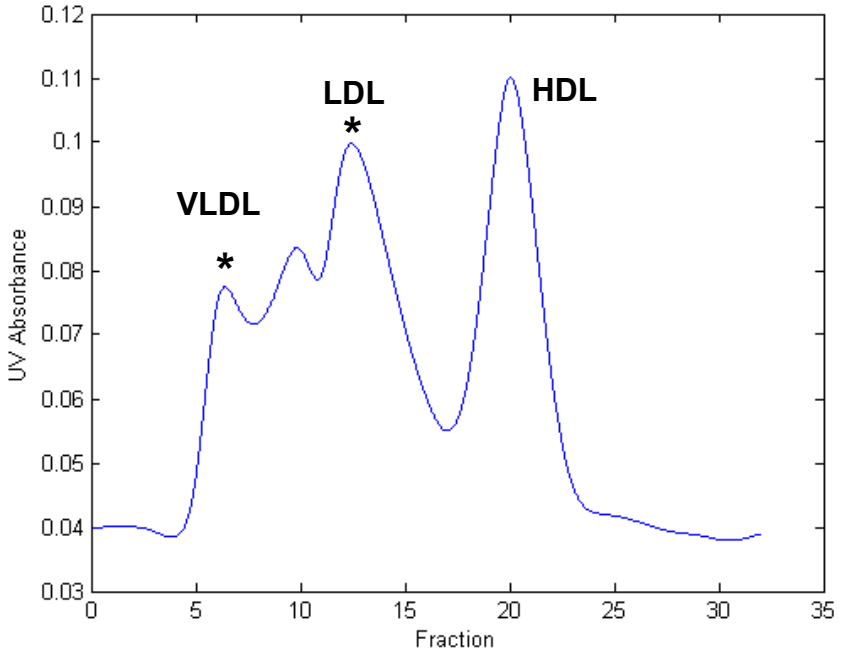


Mean VLDL=127, LDL=141, HDL=110 mg/dl

Mean TC=378 mg/dl

n=10

Glucose & Fructose & SPX-106T

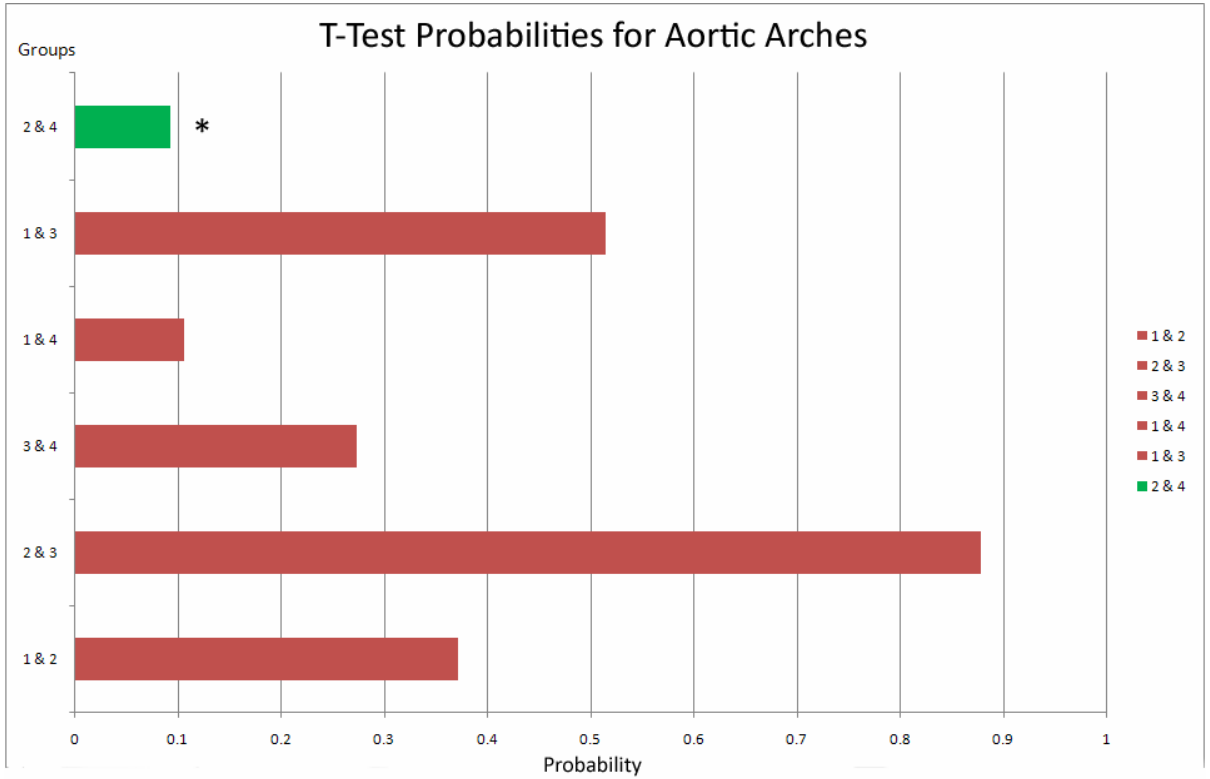


Mean VLDL=82*, LDL=116*, HDL=107 mg/dl

Mean TC=305* mg/dl

p<0.05, n=10

SPX-106T Reduces Atherosclerosis



Group 1: Water (- control)
Group 2: Glucose+Fructose (+ control)

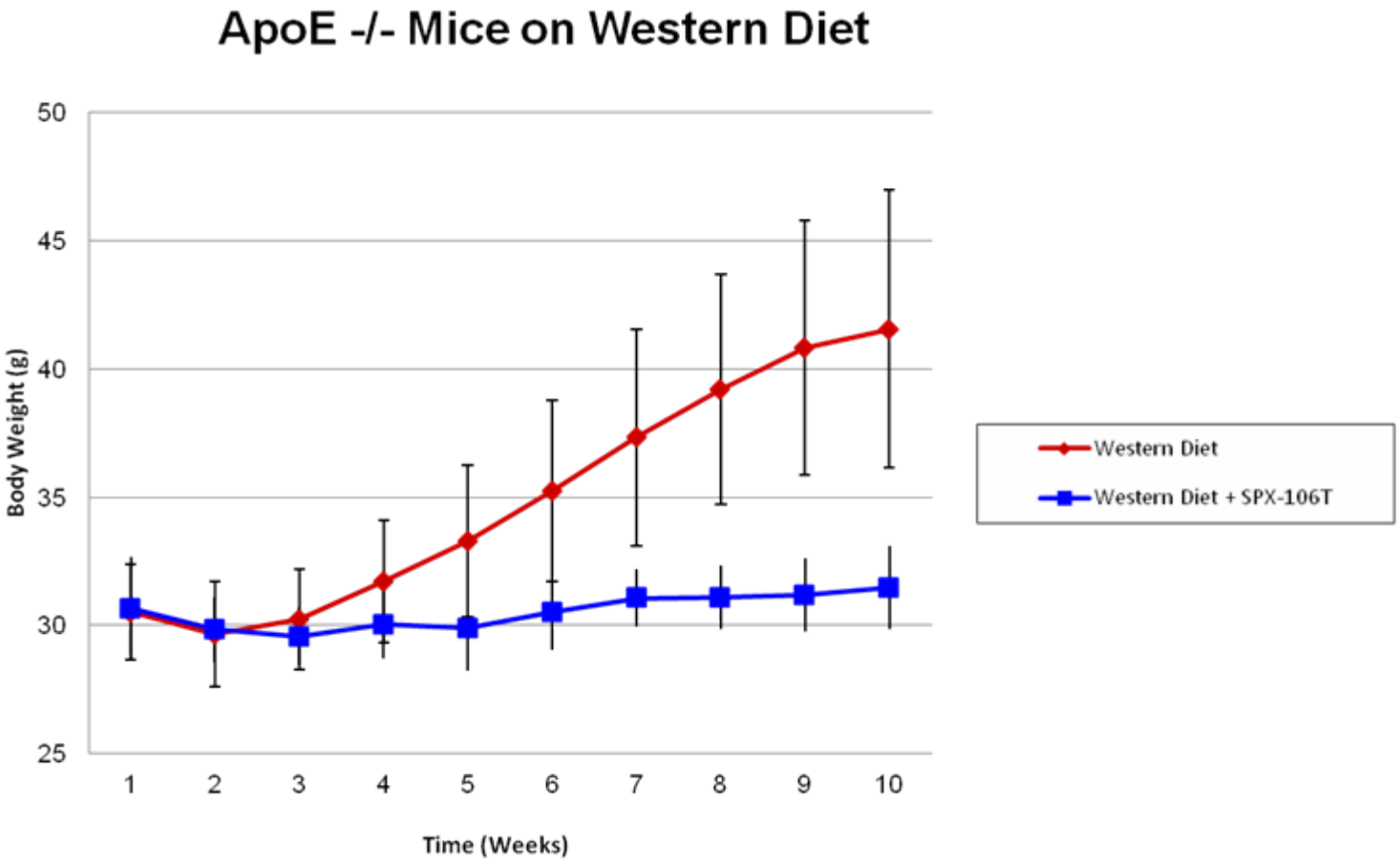
Group 3 : Glucose+Fructose+Tagatose
Group 4*: Glucose+Fructose+SPX106T
p<0.10

SPHERIX
INNOVATIONS FOR HEALTH

SPX-106T Results

- Serum triglycerides (TG) were cut almost in half
- Reduction on VLDL cholesterol was the next largest, followed by the reduction in LDL cholesterol
- Reduction in TG, VLDL and LDL may explain the reduction in atherosclerotic lesion area in the aortic arch

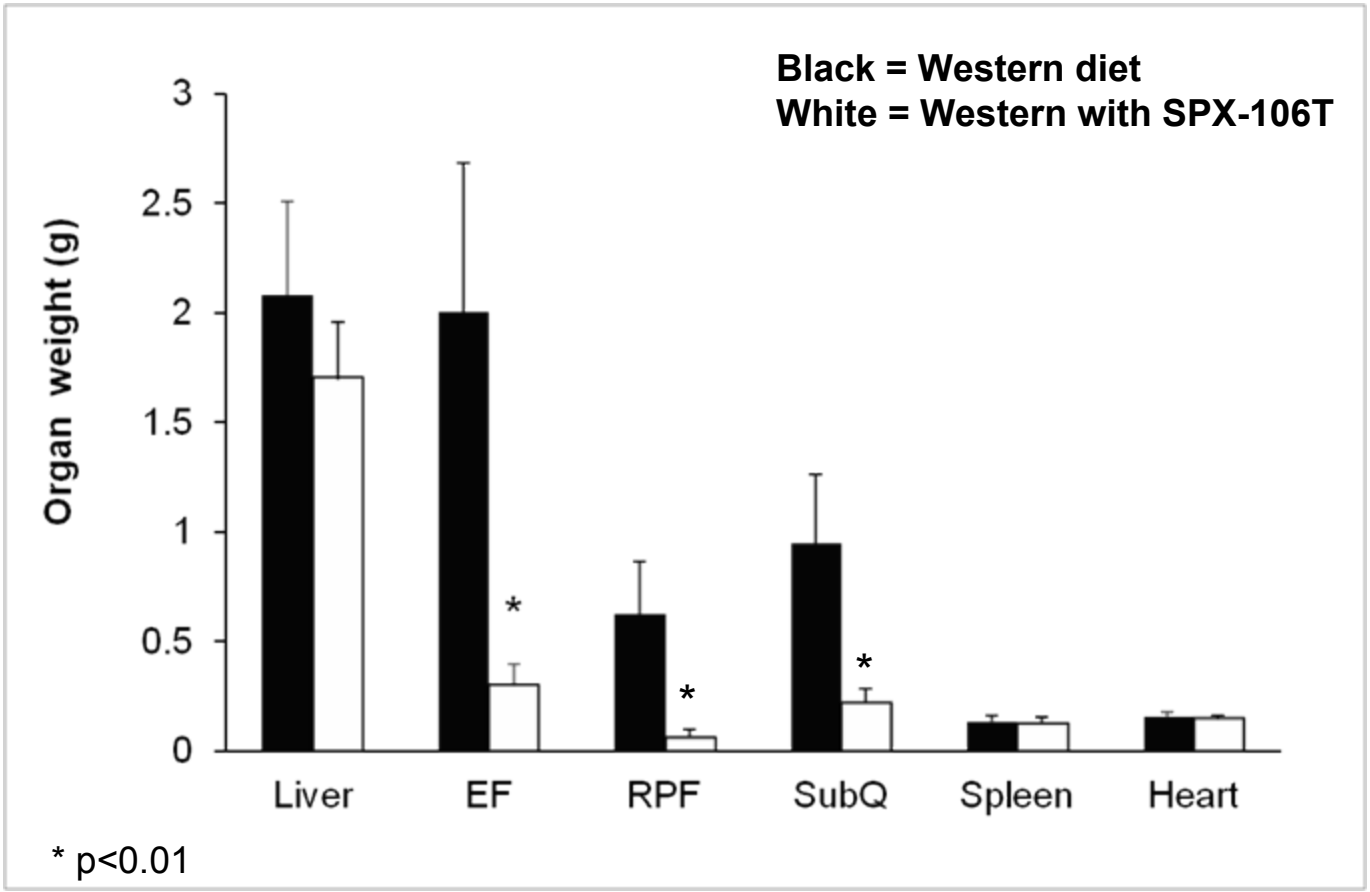
ApoE -/- Total Body Weight



Group	Kcal/g Diet	Total Feed Consumption (g)	Days of study	Number of Mice	Caloric Intake (Kcal/Mouse/Day)
Sucrose	4.5	3985	70	13	19.71
SPX-106T	3.9	4591	70	13	19.68

SPHERIX
INNOVATIONS FOR HEALTH

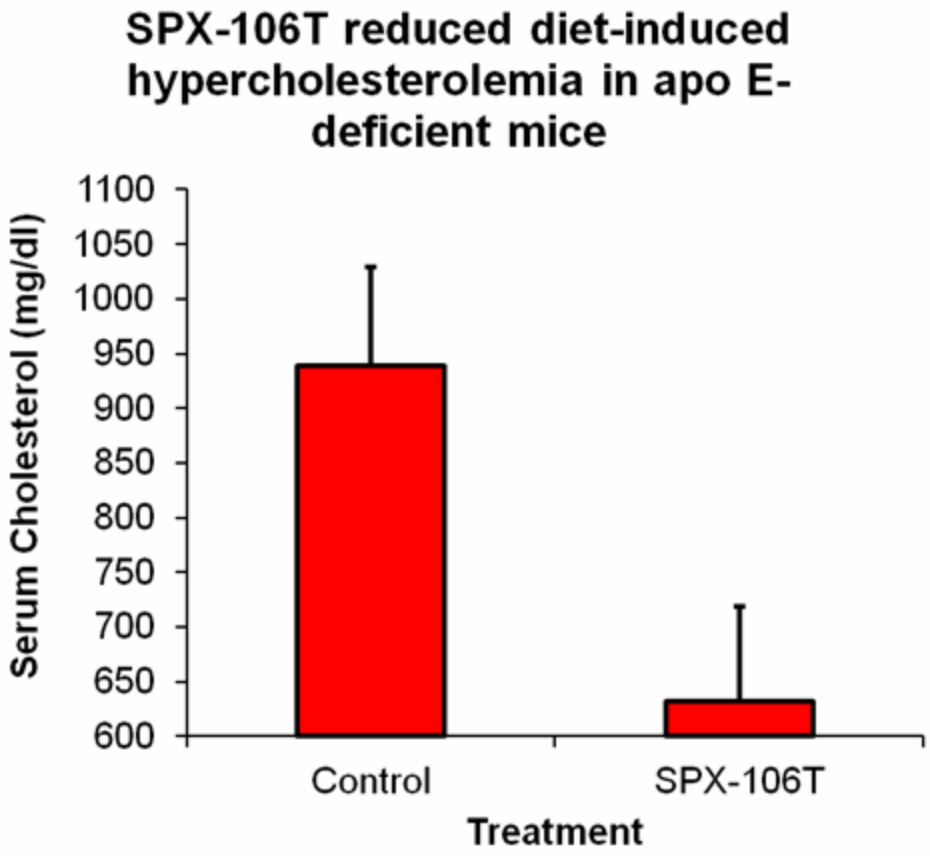
ApoE -/- Mouse Organ Weights



Mass reduction comes from fat pads in the body

SPHERIX
INNOVATIONS FOR HEALTH

ApoE -/- Total Cholesterol

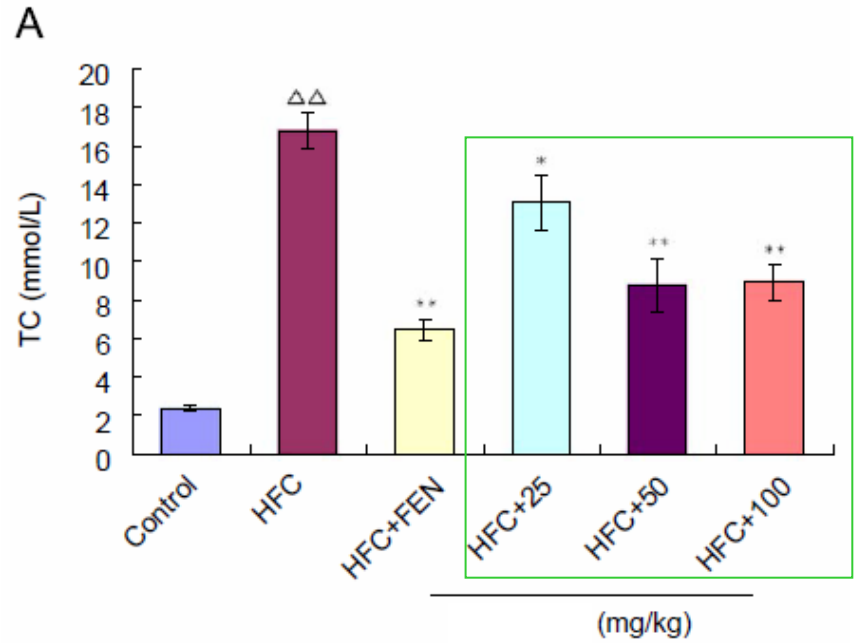


Both groups received a high fat, high carbohydrate diet. In the SPX-106T group, the sucrose in the diet was replaced with tagatose, and the diet was 0.1% SPX-106 by weight.

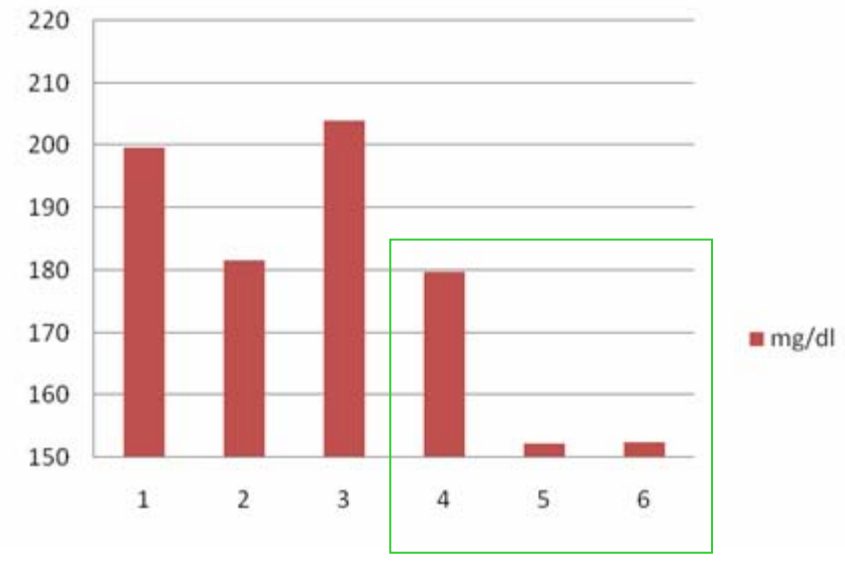
SPHERIX
INNOVATIONS FOR HEALTH

Comparative Cholesterol Results

High Fat Diet



Western Diet

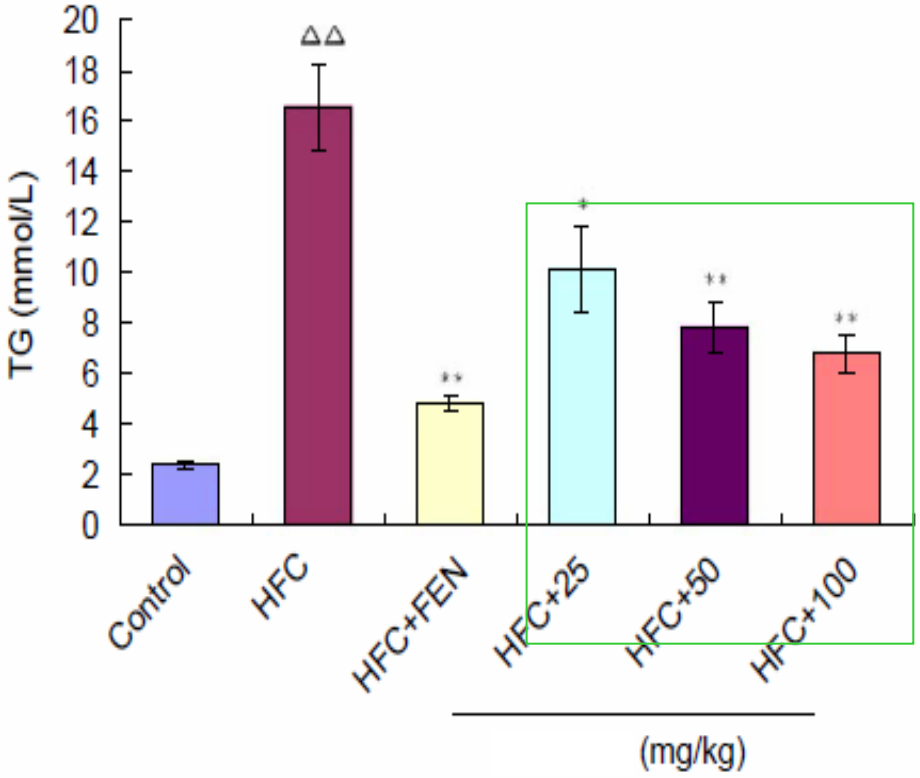


Measurements following 3 weeks of treatment in the hamster

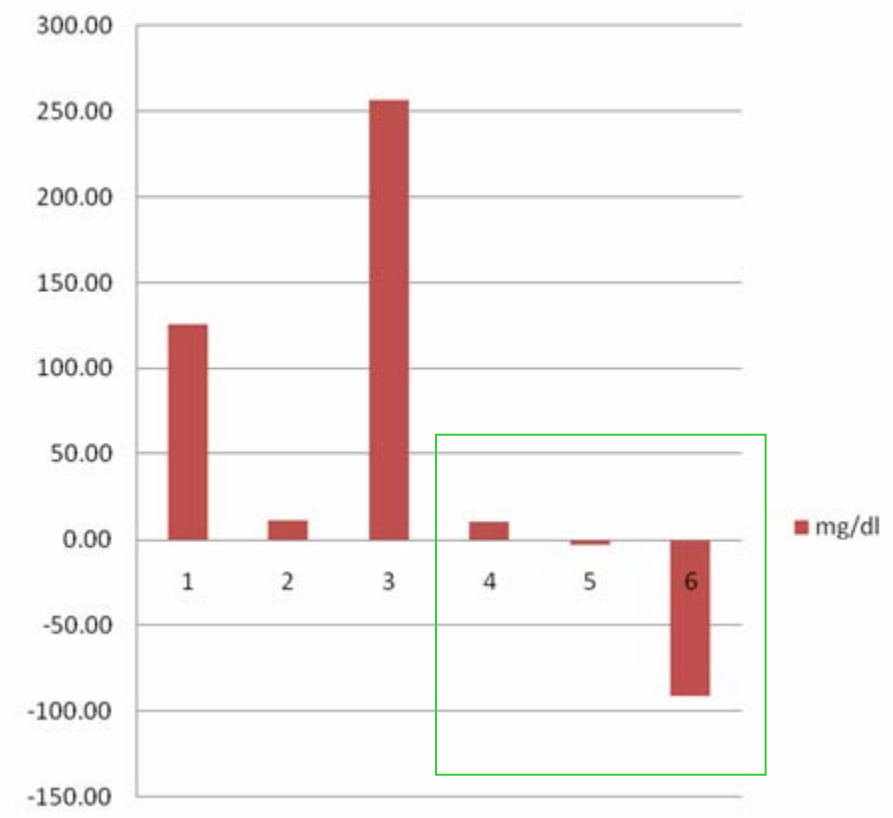
SPHERIX
INNOVATIONS FOR HEALTH

Comparative Triglyceride Results

High Fat Diet



Western Diet



Measurements following 3 weeks of treatment in the hamster

SPHERIX
INNOVATIONS FOR HEALTH

Phase 2 Dose-Response Trial

- **Objective**
  - Evaluate dose-response effect of minimal doses of D-tagatose (2.5, 5.0 or 7.5 grams dosed 3-times daily) on glycemic control in subjects with Type 2 diabetes not well controlled by diet and exercise
  - 2.5 grams was comparator
- **Design**
  - Multi-center, single-blind, randomized, parallel group clinical study; 6 months duration
  - 34 patients in each of the 3 groups for a total of 102 evaluable patients
- **Clinical Endpoints**
  - Primary: HbA1c (Δ7.5g-2.5g = -0.2%)
  - Secondary: LDL, HDL, TG, glucose, insulin, body weight
    - 7.5 g reduced triglycerides by -42 mg/dl vs. the 2.5 gram dose (EE) and -31 mg/dl (p=0.03) (ITT) at 3 months which remained -29 mg/dl at 6 months
    - Mean triglyceride level was 180 at start of trial

Protocol 70971-005

SPHERIX
INNOVATIONS FOR HEALTH

Phase 2 Dose Response Triglyceride Results

- Unlike some other drugs, D-tagatose lowered triglycerides without elevating VLDL
- D-tagatose in the 7.5 g dose reduced LDL vs. the 2.5 g dose by -11 mg/dl by the third month of treatment
- The reduction essentially held steady at the six-month end-of-study visit (-10 mg/dl). HDL was unchanged, increasing only between 0.3 and 1.4 mg/dl over the entire course of the study vs. comparator

SPHERIX
INNOVATIONS FOR HEALTH

HbA1c and Body Mass Index

	HbA1c	BMI	TG
HbA1c	1	0.722	0.801
BMI	0.722	1	0.718
TG	0.801	0.718	1
Values are Pearson product-moment correlation coefficients, p≤0.10			

Levels of glycated hemoglobin (HbA1c) are directly correlated to levels of triglycerides (TG) and body mass index (BMI). When one of these measures is elevated, the others are likely to be elevated as well. As a result, hyperphagia could, in effect, lead to "fat cell burn-out".

SPHERIX
INNOVATIONS FOR HEALTH

Phase 3 Clinical Trial in Diabetes

- Objective
  - Evaluate 15 grams of D-tagatose dosed 3-times daily on glycemic control in subjects with Type 2 diabetes not well controlled by diet and exercise
- Design
  - Multi-center, double-blind, placebo-controlled study
  - 494 treatment-naïve patients randomized
  - 34 sites in the U.S., 23 sites in India
    - 102 patients enrolled in the U.S., 254 patients enrolled in India
  - Entry HbA1c between 6.6% and 9.0% (avg. 7.5%)
    - ≤6% considered normal, ≥8% considered high, ADA recommends ≤7%
- Clinical Endpoints
  - Primary: HbA1c
  - Secondary: TG, LDL, HDL, body weight, glucose, insulin,

NEET Study (Protocol 70971-004)

SPHERIX
INNOVATIONS FOR HEALTH

Favorable Tagatose Top-Line Data

Statistically significant reduction of HbA1c in US ITT and PP at all time points

Reduction in HbA1c Over Time

Patient population	2 months	6 months	10 months
U.S. PP	-0.4* (n=51)	-0.6* (n=29)	-1.1* (n=20)
U.S. ITT LOCF	-0.3* (n=100)	-0.3* (n=101)	-0.4* (n=101)
India PP	-0.1 (n=150)	0.0 (n=117)	-0.2 (n=72)
India ITT LOCF	-0.2 (n=253)	-0.1 (n=254)	-0.2* (n=254)
Global PP	-0.2 (n=201)	-0.2* (n=146)	-0.4* (n=92)
Global ITT LOCF	-0.2* (n=353)	-0.2* (n=355)	-0.2* (n=355)
Global ITT (7.5<HbA1c<9.0)	-0.3 (n=175)	0.1 (n=134)	-0.5* (n=92)

PP = Per-Protocol; ITT = Intent-to-Treat; LOCF = Last Observation Carried Forward

* $p<0.05$; all other figures do not have statistical significance

SPHERIX
INNOVATIONS FOR HEALTH

Other Diabetes Clinical Findings

- Patients with ≥1 treatment-emergent adverse events in the active group (163) was comparable to the placebo group (166)
  - No serious adverse event deemed treatment related
  - No episodes of hypoglycemia or pancreatitis were reported among any trial subjects
- The study was not powered for significance in secondary endpoints (e.g., triglycerides)

SPHERIX
INNOVATIONS FOR HEALTH

Intellectual Property Protection

- Patents include:
  - Ten national filings for SPX-106T based on PCT publication # 2010/054001 as anti-metabolic, atherosclerosis, obesity & diabetes methods and composition
  - Filing for a tagatose-metformin formulation for diabetes
  - US patent # 5,447,917 D-tagatose as anti-hyperglycemic agent
  - US patent # 5,356,879 D-tagatose as anti-hyperglycemic agent
- New Chemical Entity Exclusivity (Hatch-Waxman) – U.S.
  - 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 exclusivity (base case)
- Pediatric Exclusivity – U.S.
  - 6 months exclusivity for conducting studies in pediatric population
  - Added to end of all existing marketing exclusivity and patent periods

SPHERIX
INNOVATIONS FOR HEALTH

Near Term Milestones

Milestone	Initiating
• Perform additional animal studies on hypertriglyceridemia	1Q'11
• File IND for SPX-106T at FDA	1Q'12
• Begin human study with SPX-106T in hypertriglyceridemia	2Q'12
• Engage partner for D-tagatose in diabetes to continue development	Ongoing

SPHERIX
INNOVATIONS FOR HEALTH

Financial Overview*

Cash (9/30/11)	$5.0 million
Working Capital (9/30/11)	$4.7 million
Revenue (9 months ended 9/30/11)	$0.7 million
Estimated Cash Burn (10/1/11-9/30/12)	approx. $4-6 million
Shares Outstanding (11/30/2011)	3.1 million
Warrants Outstanding @ $32.5	110,435
Warrants Outstanding @ $15.0	210,000
Warrants Outstanding @ $15.625	12,600
Warrants Outstanding @ $8.125	12,807
Warrants Outstanding @ $8.00	213,450
Warrants Outstanding @ $2.24	532,559
Warrants Outstanding @ $2.95625	15,977

*Unaudited

Experienced Leadership

- **Claire L. Kruger, Ph.D., Chief Executive Officer**
  Toxicologist with 25 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., Prescient Medical, Inc., and Escent Technologies, Inc. Professor of Pharmaceutical Sciences at the College of Pharmacy, University of Kentucky Medical Center. Joint appointments in Electrical & Computer Engineering and in Chemistry. Inventor with over 100 publications and 17 patents.
- **Robert L. Clayton, 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
- **Katherine M. Brailer, Corporate Secretary and Director of Administrative Services**
  25 years of experience in all aspects of administrative services, including 10 years as an Officer of Spherix

SPHERIX
INNOVATIONS FOR HEALTH

Authoritative Scientific Investigative Team

- **Lisa A. Cassis, Ph.D. – adipocytes and aneurysm**
  Chair of the Department of Nutritional Sciences in the College of Medicine. A primary research interest is the study of production of components of the renin-angiotensin system by adipocytes, and the impact of an adipose renin-angiotensin system on the development of obesity and obesity-associated diseases (diabetes, hypertension, atherosclerosis).
- **Alan Daugherty, Ph.D. – lipids and atherosclerosis**
  Editor-in-Chief of the AHA Journal *Arteriosclerosis, Thrombosis, and Vascular Biology* (ATVB). College of Medicine Senior Associate Dean for Research, Director, Saha Cardiovascular Research. Studies macrophages, endothelial cells and smooth muscle cells in the development of dyslipidemias, atherosclerosis, and abdominal aortic aneurysm.
- **Phillip Kern, M.D. – metabolic syndrome**
  Professor, Division of Endocrinology and Molecular Medicine, Director, Barnstable Brown Kentucky Diabetes and Obesity Center, Director, Center for Clinical and Translational Sciences. Basic and clinical research related to obesity, metabolic syndrome, and diabetes. Clinical studies have examined adipose tissue and muscle gene expression in relation to insulin resistance, tissue lipotoxicity and inflammation in obesity related insulin resistance. Other research involves the gene expression of lipoprotein lipase (LPL), an important enzyme in adipose tissue that is involved in triglyceride metabolism, diabetes, and obesity.