

RESVERLOGIX

CLEARING THE PATH
TO BETTER HEALTH™

2010
ANNUAL
REPORT



WHO WE ARE:

Resverlogix is a biotechnology company which conducts pioneering research and development with the purpose of transforming research targets into innovative therapies.

Resverlogix Corp. is engaged in the development of novel therapies for important global markets with significant unmet medical needs including cardiovascular disease, Alzheimer’s disease and inflammation.

Our focus is to improve longevity and quality of human life by creating best-in-class therapeutics.

Our NexVas™ Plaque Regression program has produced the Company’s lead drug candidate, RVX-208, a novel treatment of atherosclerosis. This is a small molecule that potentially may reverse cholesterol transport via a novel mechanism of action by inducing the endogenous production of ApoA-1.

We have recently completed a Phase 2 clinical trial and pending data analysis will plan to begin another Phase 2 trial later in 2010.

Key Development programs include:

NexVas™ PR – enhancing ApoA-1 for atherosclerotic plaque regression

NexVas™ VI – inhibiting vascular inflammation for plaque stabilization

NexVas™ AD – enhancing ApoA-1 for Alzheimer’s disease

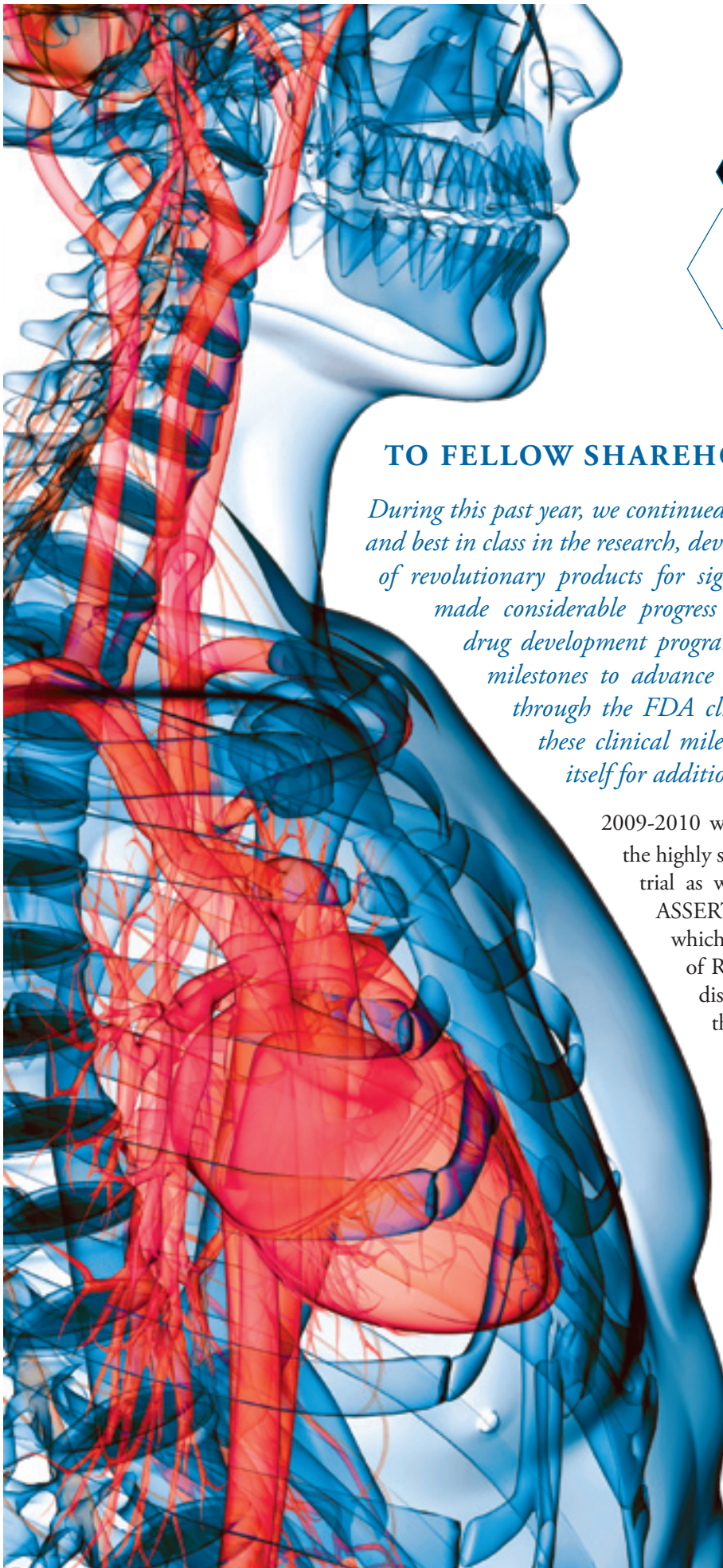
OUR MISSION:

Our mission is to be both first and best in class in the research, development and successful commercialization of revolutionary products. As a leader in our field, we will meet our primary objective which is to improve the quality and longevity of our patients’ lives.

We are committed to:

- + Innovation
- + Integrity
- + Collaboration
- + Leadership
- + Quality

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TO FELLOW SHAREHOLDERS,

During this past year, we continued to focus on our mission to be both the first and best in class in the research, development and successful commercialization of revolutionary products for significant unmet medical needs. We have made considerable progress by virtue of the advancements in our drug development program, which has delivered a number of key milestones to advance our lead atherosclerosis drug, RVX-208, through the FDA clinical trial process. The ability to deliver these clinical milestones has allowed Resverlogix to position itself for additional value creation.

2009-2010 was a very busy year for our clinical team with the highly successful completion of our Phase 1b/2a clinical trial as well as the recent completion of our Phase 2 ASSERT clinical trial. Data from the ASSERT trial, which examined reverse cholesterol transport markers of RVX-208 in subjects with stable coronary artery disease, will be announced later in 2010. Prior to that we will also report on modifications to the ASSURE trial, our Phase 2b clinical trial which will include intravascular ultrasound (IVUS) technology. This study is anticipated to provide early data that could demonstrate plaque regression in patients treated with RVX-208.

As well, our discovery research group has made significant headway in our inflammatory disease program, having identified novel approaches to treating serious inflammatory conditions, such as rheumatoid arthritis. The potential of this research has been demonstrated by the ability to use proprietary compounds that markedly reduce inflammation and improve resolution of the disease in well characterized animal models



Donald J. McCaffrey

of rheumatoid arthritis (both mouse and rat collagen-induced arthritis). Based on successful results demonstrated in numerous preclinical studies, two new patent applications were filed for novel compounds and their use in regulating inflammatory markers.

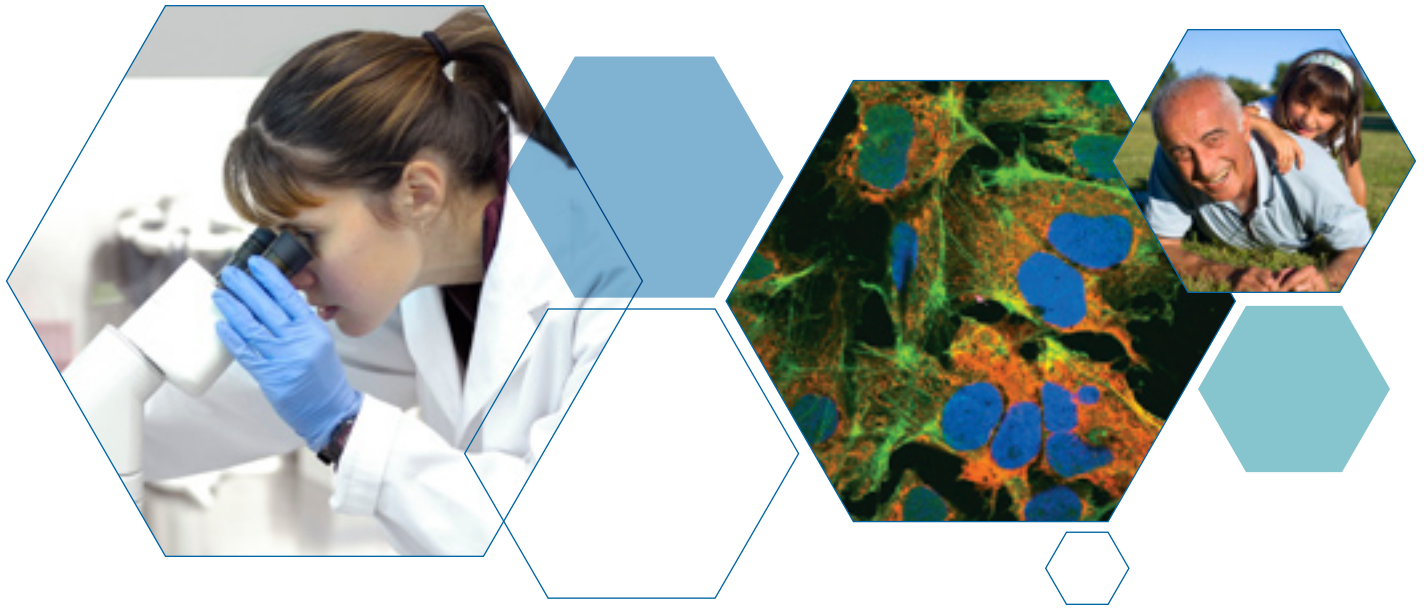
Throughout the past year, Resverlogix maintained a strong position in the Life Sciences sector as we continued to demonstrate our formidable lead in the development of ApoA-1 production therapeutics for cardiovascular diseases. Leading drugs in the \$35 billion cholesterol market have not been able to clearly demonstrate the removal of arterial plaque. As RVX-208 progresses through the clinical trial process the drug is expected to demonstrate the ability to clear plaque from the artery walls – this is a highly attractive proposition for investors. In fiscal 2010, Resverlogix raised \$13 million, in addition to the \$24 million raised in April 2009, allowing the Company to strategically retire its debt 2.5 years before it was due. In addition to these accomplishments, Resverlogix also closed a \$25 million Standby Equity Distribution Agreement thus providing additional security should the global equity markets once again face the challenges and experiences in recent years. These fiscal accomplishments afford Resverlogix a stronger financial position.

Resverlogix's scientific programs also continued to garner external recognition. Resverlogix successfully achieved its goal of presenting scientific data at key annual cardiovascular conferences including the American College of Cardiology; Annual Atherosclerosis, Thrombosis and Vascular Biology; European Society of Cardiology and International Atherosclerosis Society. Resverlogix also published a critical paper in the prestigious Journal of American College of Cardiology in collaboration with the Division of Cardiology at the Research Institute of the McGill University Health Centre.

Resverlogix will commemorate its 10th birthday in February 2011. With the momentous milestones that lay ahead, and an ever strengthening scientific and management team, we will be entering a new phase of Resverlogix's evolution. We look forward to celebrating with our shareholders, employees and business partners in what is expected to be a promising year.

Sincerely yours,

Donald J. McCaffrey
September 9, 2010



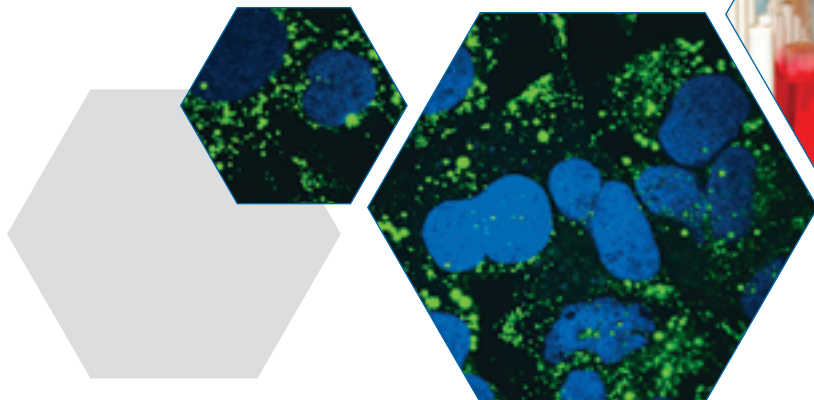
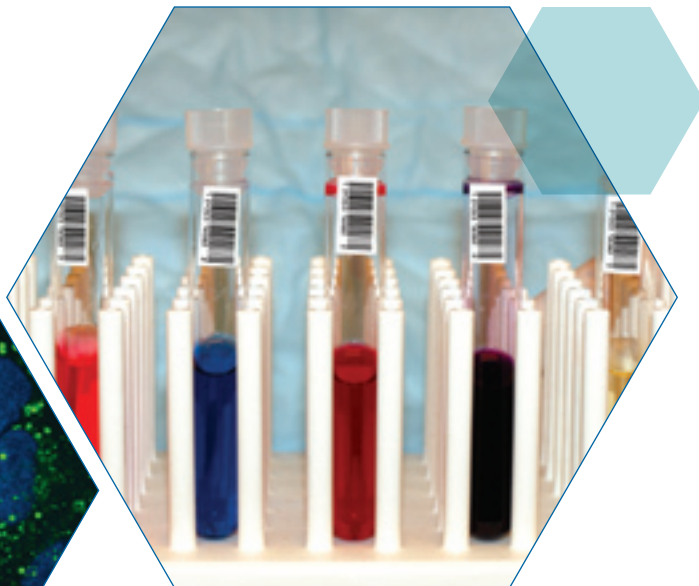
HIGHLIGHTS OF FISCAL YEAR 2009-2010

We had a very eventful fiscal year, where we made significant progress across all areas of Resverlogix achieving key clinical and business milestones. Our focus served us well as we attract world-renown scientists, partners and advisors which generated long-term shareholder value. Below are highlights from the 2009-2010 year.

- + May 19, 2009 – Two patent applications filed for inflammation program
- + August 25, 2009 – Clinical endpoint met in Phase 1b/2a clinical trial
- + September 29, 2009 – Top line results from Phase 1b/2a trial
- + October 13, 2009 – A. Brad Cann appointed as new CFO; Kelly McNeill joins Board of Directors
- + December 22, 2009 – Phase 2 clinical trial starts two months early
- + December 23, 2009 – \$5M financing completed
- + January 7, 2010 – RVX completes repayment of convertible debt 2.5 years prior to maturity
- + January 28, 2010 – \$8M financing completed
- + February 1, 2010 – Arthur J. Higgins, CEO Bayer Healthcare, joins Board of Directors
- + February 8, 2010 – Recruitment for ASSERT trial closes five month early
- + February 27, 2010 – ASSURE Phase 2 trial initiation commences
- + March 29, 2010 – \$25M Standby Distribution Equity Agreement

The total direct and indirect costs of CVD and stroke in the US for 2010 will reach an estimated

\$503.2 billion¹
 (Cancer is estimated to be \$263.8 billion)²



THE CONUNDRUM

An estimated 81.1 million¹ Americans have cardiovascular disease (CVD), slightly more than 10% of those people die from the disease and unfortunately this trend is not changing according to recent statistics released from the American Heart Association¹.

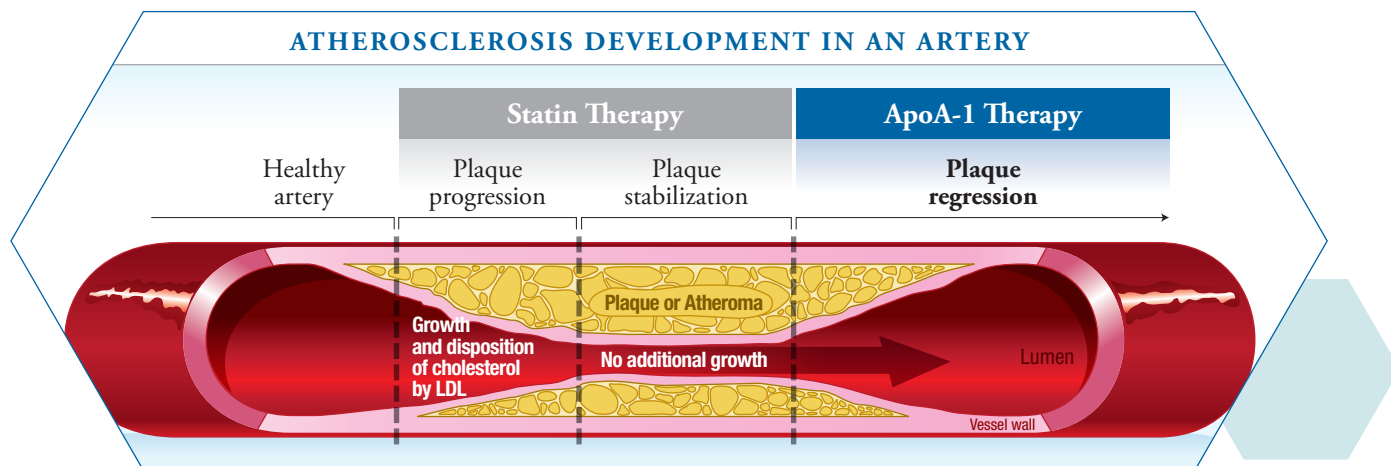
Cardiovascular disease was responsible for 34.3% of total deaths in the US in 2006². CVD claims more lives than cancers, chronic lower respiratory diseases and accidents combined.

Atherosclerosis is a key underlying factor for many cardiovascular diseases. This is a body-wide disease that takes place in the arteries – meaning that similar events that occur in the heart also take place in the arteries, brain, intestines, kidneys and legs.

Atherosclerosis is caused primarily by fat and cholesterol which accumulate in the wall of an artery forming what is known as an atheroma or plaque build-up.

Resverlogix is presently focused primarily on cardiovascular disease; however our discovery programs are looking at many other disease areas in the body which may benefit from the regression of atherosclerosis.

1. 2010 American Heart Association Statistics (www.americanheart.org)
2. 2010 American Cancer Society (www.cancer.org)





KEY IS REVERSE CHOLESTEROL TRANSPORT

A number of studies^{3,4,5,6} have demonstrated that the risk of cardiovascular disease is inversely correlated to levels of apolipoprotein A-1 (ApoA-1) as well as plasma HDL-c.

Reverse cholesterol transport (RCT) is a pathway by which accumulated cholesterol is transported from the vessel wall to the liver for excretion. A critical part of RCT is cholesterol efflux, in which accumulated cholesterol is removed. Biomarkers such as (ApoA-1), high density lipoprotein (HDL) cholesterol, and large HDL particles are key indicators of reverse cholesterol transport (RCT).

RCT is the most widely accepted mechanism linked to the anti-atherosclerotic activity of ApoA-1 and HDL.

In Resverlogix's Phase 1b/2a clinical trial RCT biomarkers provided key data:

- + Plasma ApoA-1 increased compared to placebo, achieved a range in all subjects of 5.1% - 10.3% and was statically significant.
- + At the lowest dose of 1mg/kg in low HDL subjects, serum ApoA-1 increases reached statistical significance of 5.7% (p<0.05) at Day 8 and 7.8% (p<0.05) at Day 28.
- + At the highest dose of 3 mg/kg in low HDL subjects, serum ApoA-1 increases research statistical significance of 6.5% (p<0.01) at Day 8 and 10.6% (p<0.01) at Day 28.
- + Alpha1-HDL particles, illustrated highly statistical significance with an increase of 43% (p<0.001), in all subjects and 67% (p<0.01) in the low dose arm over placebo at day 28.

3. Walldius, G et al; 2001; Lancet; 358 (9298): 2026-33

4. Yusef, S. et al; 2004; Lancet; 364 (9438): 937-52

5. Gordon T et al; 1977; Am J Med.; 62(5): 707-14.

6. Assmann G et al.; 1996; Atherosclerosis; 124 Suppl: S11-20



A SOLUTION

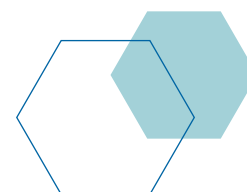
The international life science community predicts that a small molecular drug able to reduce the risk of cardiovascular events in addition to other vascular events would be beneficial to millions of people.

The global market for dyslipidemia and its underlying cause atherosclerosis currently represents USD \$34.4 billion in sales for brand name therapeutics in 2009 ⁷.

Currently, the leading drugs in this market, statins, manage only the build-up of new atherosclerosis burden but not the removal of existing atherosclerosis. Resverlogix's leading drug candidate, RVX-208, is positioned to potentially remove atherosclerosis via the small molecule's ability to increase ApoA-1 production and thus facilitate reverse cholesterol transport.

A 2009 research report authored by Destum Partners highlighted that there is general acceptance within the scientific community that increasing apolipoprotein A-1 (ApoA-1) has been shown to reduce percent atheroma volume and is predicted to positively impact the mortality and morbidity of CVD and stroke patient. The researchers of this study estimated that a reduction of atherosclerosis by either 1% or 5% could provide a potential annual savings to the US health care system, society, and employers of \$22.9 billion and \$76.8 billion respectively.

7. *Dyslipidemia Pipeline Assessment and Market Forecasts to 2016* report by GlobalData (http://www.researchandmarkets.com/research/7b89d8/dyslipidemia_pip)



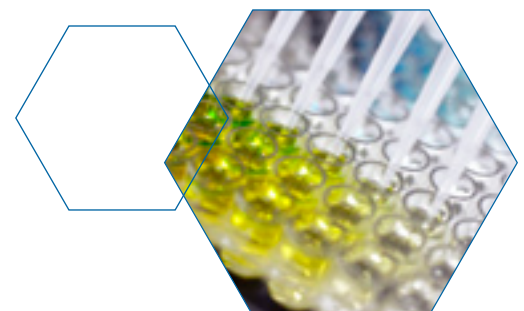


TO OUR TRIAL PARTICIPANTS AND FUTURE PATIENTS

Only a small fraction of people who have cardiovascular disease are taking proper medications to address their illness. It is our belief that ApoA-1 technologies are the next class of drugs which could revolutionize the way that cardiovascular and vascular diseases are treated in the future.

To the 458 subjects who have participated in our clinical trials to date – we thank you for your contribution. Your commitment to taking the therapeutic, collecting information and coming back for scheduled doctor visits is an important part of the development of RVX-208.

To our future patients – please know that we intend to be the best in this new class of drugs. Our lead drug, RVX-208, has demonstrated consistent results and strong promise in its clinical development. We remain devoted to safely advancing our therapeutics through the clinic so that we can successfully commercialize the products in the marketplace.



GLOSSARY

Alpha1-HDL: mature lipid-rich particles that are involved in reverse cholesterol transport (RCT) whereby cholesterol is removed from cell membranes to the liver for excretion.

Alzheimer's Disease (AD): a disease marked by the loss of cognitive ability, generally over a period of 10 to 15 years, and associated with the development of abnormal tissues and protein deposits in the cerebral cortex.

Apolipoprotein: the protein combined with a lipid to form a lipoprotein, a component of HDL and LDL.

ApoA-1: is the primary apolipoprotein component of the HDL particle.

ApoB: is the primary apolipoprotein component of the LDL particle.

ApoA-1^{Milano}: a naturally occurring variant of ApoA-1, discovered in the body of some people from Limone-sul-Garda, Italy.

Atherosclerosis: a disease in which the deposition of lipids and plaque in arteries results in the hardening and decrease of arterial lumen size.

Atherosclerotic Plaque: the deposit or accumulation of lipid-containing plaques in the arterial wall (also known as atheroma).

Biopharmaceuticals: a medical drug developed by biotechnology to improve human or animal health.

Cardiovascular disease (CVD): is a group of diseases of the heart and blood vessels.

Cholesterol: a fatty molecule essential for normal body functions, including the production of hormones and bile acids; it is also an important component of a cell membrane.

Cholesterol Efflux: the removal of cholesterol from the tissues to the liver for excretion.

Dyslipidemia: a disorder associated with abnormal levels of blood lipids and lipoproteins.

Endogenous: is a process whereby a molecule is produced within the body.

Epidemiology: is the study of factors affecting the health and illness of populations, and serves as the foundation and logic of interventions made in the interest of public health and preventive medicine. It is considered a cornerstone methodology of public health research and is highly regarded in evidence-based medicine for identifying risk factors for disease and determining optimal treatment approaches to clinical practice.

High-density Lipoprotein (HDL): a complex of lipids and proteins (ApoA-1) that function in the transport of cholesterol away from the tissues to the liver and is associated with a decreased risk of atherosclerosis and coronary heart disease (also known as "good cholesterol").

Low-density Lipoprotein (LDL): a complex of lipids and proteins (ApoB) that function by transporting cholesterol to the tissues, in particular the arteries, and is associated with an increased risk of atherosclerosis and coronary heart disease (also known as "bad cholesterol").

Lipids: are fatty substances, including cholesterol and triglycerides, that are present in cell membranes and body tissues.

Lipoproteins: a complex of proteins and lipids that are the principal means by which fat and cholesterol is transported in the blood; major lipoproteins are low-density lipoproteins (LDL) and high-density lipoproteins (HDL).

Macrophage: a type of white blood cell that ingests foreign particles, including cholesterol.

NexVas AD: NexVas™ Alzheimer's Disease is a discovery stage technology for the development of drugs that enhance ApoA-1 for stabilization and regression of Beta Amyloid Plaque.

NexVas PR: NexVas™ Plaque Reduction is the Company's primary program for the development of drugs that increase the production of ApoA-1 to reduce the risk of cardiovascular diseases. ApoA-1 is the key building block of HDL, the "good cholesterol".

NexVas VI: NexVas™ Vascular Inflammation is the Company's second CVD program, a discovery stage technology for the development of drugs that target molecular markers of inflammation.

Phase 1 Clinical Trial: a smaller scale trial, where a drug is first tested on a small number of healthy human volunteers to evaluate the drug's safety and a number of other factors (an approximate 1-2 year time trial).

Phase 2 Clinical Trial: a study intended to evaluate the efficacy of a new drug in patients suffering from the condition that the drug is intended to treat (an approximate 1-3 year time trial).

Phase 3 Clinical Trial: a pivotal, large scale study conducted to demonstrate the safety and efficacy of a new drug in a random population of patients suffering from the condition that the drug is intended to treat (an approximate 2-5 year time trial).

Pre-beta1 HDL : lipid-poor particles that initiate reverse cholesterol transport (RCT) from cell membranes to the liver for excretion (also known as nascent HDL).

Reverse Cholesterol Transport: the term that signifies the process whereby cholesterol, is packaged and transported by special particles in the plasma called lipoproteins for movement from peripheral tissues through the blood and back to the liver for excretion from the body. Cholesterol that moves from peripheral tissues to the liver is considered to be moving in : the reverse direction.

Statin: a class of drugs that block cholesterol production in the body by inhibiting an enzyme called HMG-CoA reductase.

Therapeutic: a pharmaceutical useful for treating a disease.



CORPORATE INFORMATION

DIRECTORS

William A. Cochrane, O.C., M.D., F.R.C.P., F.A.C.P.,
Chairman

Wayne Chiu

Arthur J. Higgins

Peter Johann, Ph.D.

Donald J. McCaffrey

Kelly B. McNeill, B.Comm. (Honours), M.Acc., C.A.

MANAGEMENT TEAM

Donald J. McCaffrey,
President and CEO, Co-founder & Secretary

Norman C.W. Wong, M.D., F.R.C.P.,
Chief Scientific Officer, Co-founder

A. Brad Cann, C.A., C.B.V.,
Chief Financial Officer

Jan O. Johansson, M.D., Ph.D.,
Senior Vice President, Medical Affairs

Kenneth Lebioda, B.A.,
Senior Vice President, Business & Corporate Development

Gregory S. Wagner, Ph.D., D.A.B.T.,
Senior Vice President, Research & Development

Allan Gordon, M.D., Ph.D.,
Senior Vice President, Clinical Development

Peter Young, Ph.D.,
Vice President, Discovery Research

Theresa Kennedy, B.Sc.,
Vice President, Corporate Communications

Tina Rarick, M.B.A.,
Vice President, Project Management & Business Operations

SHAREHOLDER INFORMATION

AUDITORS

KPMG LLP

Calgary, AB

LEGAL COUNSEL

Borden Ladner Gervais LLP

Calgary, AB

Michael R. Rempel Professional Corporation

Calgary, AB

PATENT COUNSEL

Finnegan, Henderson, Farabow, Garrett & Dunner, LLP

Cambridge, MA

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Calgary, AB

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Stock ticker: RVX

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US ADDRESS

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USA 94104

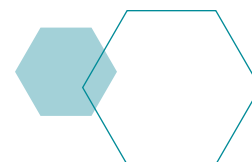
INVESTOR RELATIONS INFORMATION:

Theresa Kennedy,

Vice President, Corporate Communications

e: theresa@resverlogix.com

p: 604-538-7072

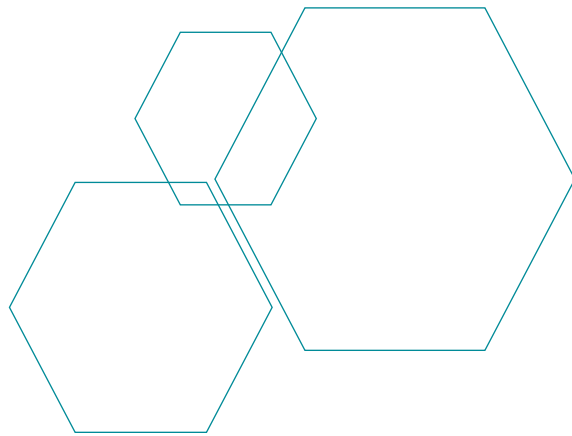


FORWARD-LOOKING STATEMENTS AND CAUTIONARY FACTORS THAT MAY AFFECT FUTURE RESULTS

Information which is included in this 2010 Annual Report contains statements concerning future events which may constitute forward-looking information under applicable Canadian securities legislation. Statements contained herein that are not based on historical fact, including without limitation statements containing the words "believes", "anticipates", "plans", "intends", "will", "should", "expects", "continue", "estimate", "forecasts" and other similar expressions, constitute forward-looking information. In particular, this Annual Report includes forward looking information relating to: our mission to be both first and best in class in the research, development and successful commercialization of revolutionary products, our objective of improving the quality and longevity of our patients' lives, reverse cholesterol transport being the most widely accepted mechanism linked to the anti-atherosclerotic activity of ApoA-1 and HDL, our belief that RVX-208 may potentially remove atherosclerosis via the drug's ability to increase ApoA-1 production, our belief that ApoA-1 technologies may change the way cardiovascular and vascular diseases are treated, the timing and conduct of clinical trials, and our plans to establish RVX-208 and regression of atherosclerosis with the evaluation of intravascular ultrasound (IVUS). Readers are cautioned that our expectations, beliefs, projections and assumptions used in preparation of such information, although considered reasonable at the time of preparation, may prove to be wrong, and as such, undue reliance should not be placed on forward-looking statements.

With respect to forward-looking statements contained in this Annual Report, we have made the following key assumptions: RVX-208 is the only known orally available novel small molecule that increases ApoA-1 production and HDL functionality; our patent and patent applications will protect our ideas and inventions related to composition of matter, methods and treatments in our core areas of science and business; the Phase 2 clinical trial results will provide data to evaluate the drug properties of RVX-208 in humans through analysis of safety, pharmacokinetics and reverse cholesterol transport markers including ApoA-1, HDL-c, prebeta-HDL particles, alpha-1 HDL particles and cholesterol efflux via ABCA-1 transport; we have met the applicable end-points of the Phase 2 trials to be able to commence the planned Phase 2 IVUS trial and we will be able to raise additional capital through external financing or partnering activities that provide additional funding for clinical programs including the planning of future clinical programs.

Our actual results, events or developments could be materially different from those expressed or implied by these forward-looking statements. We can give no assurance that any of the events or expectations will occur or be realized. By their nature, forward-looking statements are subject to numerous known and unknown risks and uncertainties including but not limited to those associated with the success of research and development programs, clinical trial programs, inherent risks in the testing of unproven products in human clinical trials, product liability claims, the inability to maintain sufficient insurance coverage on reasonable terms, the regulatory approval process, competition, securing and maintaining corporate alliances, market acceptance of the Company's products, the availability of government and insurance reimbursements for the Company's products, the strength of intellectual property, financing capability, the potential dilutive effects of any financing, reliance on subcontractors and key personnel and additional risk factors discussed in our AIF and other documents we file from time to time with regulatory authorities, which are available through SEDAR at www.sedar.com. The forward-looking statements contained in this 2010 Annual Report are expressly qualified by this cautionary statement and are made as of the date hereof. The Company disclaims any intention and has no obligation or responsibility, except as required by law, to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.



CLEARING THE PATH TO BETTER HEALTH™