VIDA THERAPEUTICS, INC. BUSINESS PLAN

by

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ABSTRACT

viDA Therapeutics Inc. (herein called viDA), with headquarters in Vancouver, British Columbia, was incorporated in April of 2008. viDA is a new specialty biotechnology company focused on the discovery, development and commercialization of first-in-class drugs for the treatment of age-related degenerative processes, such as age related wrinkling and hair loss. viDA has chosen a distinct company strategy, focusing strongly on the development and marketing of specialty products. viDA bases its business model in the remarkable and patented discoveries surrounding granzymes. Granzymes have been shown to play a central and pivotal role in the destruction of proteins vital in one's body anti-aging processes that prevent skin wrinkling and hair loss. viDA is currently looking to secure an initial round of funding of \$1.5 million for 2008 and an additional \$6 million for 2009 to perform further target identification, target validation, preclinical research and early-stage clinical development. We recommend that viDA seeks the full \$7.5 million in Series A an Series B financing simultaneously to ensure adequate funds to meet projected milestones.

EXECUTIVE SUMMARY

viDA Therapeutics is a new specialty biotechnology company focused on the discovery, development and commercialization of first-in-class drugs for the treatment of age-related degenerative processes, such as age related wrinkling and hair loss. viDA's founders and Board of Directors include experienced industry biotech executives and pharmaceutical researchers with proven track records in discovery and translational research, R&D operations, product development, and business development.

viDA has chosen a distinct company strategy, focusing strongly on the development and marketing of specialty products. viDA bases its business model in the remarkable and patented discoveries surrounding granzymes. Granzymes have been shown to play a central and pivotal role in the destruction of proteins vital in one's body anti-aging processes that prevent skin wrinkling and hair loss. viDA first and foremost will ensure competency and establish a strong presence in the field of medical aesthetics targeting local and international cosmeceutical markets by further developing proprietary inhibitors against the granzymes family.

As already mentioned, much of viDA's research efforts are centered on maximizing the value of the proprietary discovery in the biology of granzymes, targeting the cosmeceutical market. However, viDA will nurture a strategy for R&D that may form the basis for long-term growth and the potential to discover proprietary high-value therapies for a number of age related life threatening cardiovascular indications such as atherosclerosis, unstable angina and aneurysms.

Granzyme B inhibitors are the company's main growth driver. Granzyme B (GrB) is a

protease expressed by many immune cells that mediates programmed cell death. viDA's strong dependence on one key product may seem a concern, however, the company continues to invest significantly in the granzyme protein family, further expanding the therapeutic market presence of the product. viDA's R&D has demonstrated that in conditions of chronic inflammation or aging elevated levels of granzymes accumulate and are capable of degrading structural proteins essential for maintaining tissue integrity, in particular, the elastic properties of blood vessels and skin.

At present, viDA has few competitors in the local cosmeceutical market. However, Allergan/Elizabeth Arden through their strategic alliance, represent a strong competitor in both the US and the international cosmeceutical market. Allergan/Elizabeth Arden has developed a line of products (Prevage), which has been shown in human trials to be very effective in reducing age related skin conditions and with a major success in the cosmeceutical market after launch. viDA aims to launch a product line that will form the first significant threat to Allergan/Elizabeth Arden Prevage franchise.

viDA is currently looking to secure its initial round of funding. viDA's start-up time is estimated to occur over eight months and will require \$3 million Canadian dollars. Upon commencing operations, viDA will require an additional \$6,000,000 to ensure adequate cash flow over the following years of operations. The proceeds from this investment will support discovery and early stage development of proprietary granzyme inhibitors and a first line of products. viDA will look to advance and commercialize these products as a next generation of non invasive and highly effective cosmeceuticals. Figure 1 - viDA's Positioning Statement



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All Figures and Tables were created by the authors with exception Figures 2 and 3 that where kindly provided by Mrs. Rani Cruz, MSc.

GLOSSARY

active site	area in protease that is responsible for cleavage of other proteins
apoptosis	programmed cell death that involves a series of protein interactions and eventual death of a targeted cell
arginine	amino acid
artery	blood vessel that carries blood away from the heart
aspartic acid	amino acid
atherogenesis	the process that starts atherosclerosis or hardening of the arteries
atherosclerosis	hardening of the arteries caused by fat deposition that is accompanied by cell death and the growth of plaques
chymostrypsin	serine protease found in the intestine – digests proteins in food
cleavage	cutting by proteins in a specific area
coronary	related to the heart
efficacy	the power or capacity to produce a desired effect
elastase	serine protease found circulating in the body – cleaves elastin
elastin	ECM protein that gives elasticity to blood vessels, skin, etc
enzyme inhibitors	compounds or agents that combine with an enzyme in such a manner as to prevent the normal substrate- enzyme combination and the catalytic reaction
extracellular	outside of the cell
extracellular matrix (ECM) proteins	proteins that are outside of the cell that are structural. Examples would be elastin and collagen
fibronectin	ECM protein
Granzyme B (GrB)	protein that causes programmed cell death by cutting or cleaving other proteins
hyperlipidemia	high circulating fats and bad cholesterol in the blood
kallikrein	serine protease
knockout	genetically altered species where one or more genes are removed permanently
lesions / plaques	areas where atherosclerosis is present. Can range from small fat streaks to well-developed, large, hard masses that block the space that blood can flow.
medial thinning	part of blood vessel where elastin fibers are present
micromolar	a concentration of one one-millionth of a mole per liter, typically used in reference to the concentration of a chemical compound in an aqueous solution
pathology	how a disease occurs; the study of disease
peptidic inhibitors	drugs/inhibitors made of proteins or peptides
perforin	a protein that is involved in allowing granzyme B to be released into target cells
phenotypic	characteristic that can describe a species that does not take into account the genetics. An example of a phenotype is hair colour.
protease	proteins that cleave other proteins

serine protease	protease that has a serine in its active site. There are only a few proteases known to have this serine amino acid thus is an attractive target for drug inhibitors.
substrate specificity	How specific a protease can target its target. This is dependent on structure, the sequence of the substrate, etc
thrombin	serine protesse involved in blood coogulation
	serine protease involved in blood coagulation
trypsin	serine protease found in the intestine – digests proteins in food
vascular	blood vessel system in the body
wild-type	strains that do not have genes altered that are the strains that altered species start from

1 THE COMPANY AND THE CONCEPT

viDA Therapeutics is an early-stage biotechnology company focused on the discovery and development of first-in-class drugs for the treatment of age-related degenerative processes, cardiovascular disease, and other inflammatory conditions. Based on new and remarkable discoveries surrounding aging and atherosclerosis-specific proteases, called granzymes, viDA is developing proprietary inhibitors against this family of protein-degrading enzymes that have been shown to play a central and pivotal role in the destruction of proteins vital for vascular and tissue integrity.

viDA have demonstrated that in conditions of chronic inflammation or aging that elevated levels of granzymes accumulate and are capable of degrading structural proteins essential for maintaining tissue integrity, in particular, the elastic properties of blood vessels and skin. Moreover, when granzyme expression is blocked in animal models of disease, vessel-wall integrity is strikingly maintained and indicators of atherosclerosis and aneurysms are attenuated. In addition, there is marked reduction of hair loss and of skin degeneration. These notable discoveries offer the potential to discover proprietary high-value therapies for a number of lifethreatening cardiovascular indications such as atherosclerosis, unstable angina and aneurysms as well as lifestyle medicines for age-related wrinkling and hair loss.

viDA was incorporated in April of 2008 and is located in Vancouver, British Columbia. viDA's founders and Board of Directors include senior industry biotech executives and pharmaceutical researchers with proven track records in discovery and translational research, R&D operations, product development, and business development. In addition, viDA possesses a strong intellectual property position and unparalleled expertise in the biology of granzymes, cardiovascular disease and age-related degenerative conditions. As a result, viDA has integrated the expertise and experience necessary to successfully create significant value through the development of a new class of therapies based on granzyme inhibitors.

1.1 Long-term Growth Strategies

viDA will target two large markets: the anti-aging market composed of "cosmeceuticals" (or lifestyle drugs) for the first stage (years one through 10) of viDA's growth, and the multibillion dollar cardiovascular market which will be the second stage (years 10 and beyond) of viDA's growth. Lifestyle drugs represent a diverse group of pharmaceuticals treating chronic, non-life-threatening conditions such as baldness, skin aging and sexual dysfunction, which are symptoms that are the by-products of natural aging. Success in developing novel clinical leads will result in composition of matter patents for a unique class of GrB inhibitors. This new Intellectual Property (IP) will allow viDA to enter the cardiovascular market, with blockbuster potential, owing to the prophylactic prescription of GrB inhibitors to prevent disease. viDA's long-term strategy of entering the cardiovascular market will not be discussed in this plan.

1.2 Product Description

Research taking place in the laboratory of Dr. David Granville has recently resulted in several novel observations on the function of granzyme B. These discoveries will have a major impact in diseases and conditions associated with aging, including cardiovascular disease, baldness, and loss of skin elasticity leading to wrinkling. Granzyme B (GrB) is a protease

expressed by many immune cells that mediates programmed cell death. Until recently, the mechanism of action was thought to be immune cell delivery of GrB directly into cells targeted for destruction, where GrB cleaves key caspases that initiate an apoptotic cascade. Dr. Granville has demonstrated that in certain conditions GrB is also released by immune cells into the interstitial space surrounding cells and plasma. In this manner GrB can exert undesirable effects in a systemic manner leading to the destruction of key structural extra-cellular proteins that can lead to a loss of structural integrity of blood vessels and skin with increasing age. Another key observation from Dr. Granville's laboratory is that GrB can cleave elastin. Taken together, a model emerges whereby GrB released by immune cells cleaves elastin associated with the blood vessels, hair follicles, and the skin, causing cardiovascular disease, baldness, and loss of skin elasticity, respectively. At present, viDA's strategy focuses on R&D surrounding GrB. The products identified will match the biotherapeutic characteristics viDA is searching for, based on the science of granzyme B. The marketing plan is based on the successful identification of a granzyme B inhibitor.

Original studies from Dr. Granville's laboratory found that GrB was elevated in humans with hyperlipidemia and advanced atherosclerosis. In these patients, the extent of GrB protein corresponded to the severity of atherosclerotic disease. To understand the mechanism, these observations were further explored and validated through Dr. Granville's experiments using an ApoE knockout mouse which models hyperlipidemia and displays rapid onset cardiovascular disease, hair loss and skin problems. In those same mice, when GrB was disrupted, the mice displayed no cardiovascular disease, hair loss, or associated skin problems. The mice could best be described as robust, with a life span considered longer than normal. In searching for potential lead compounds capable of inhibiting GrB, viDA was fortunate to learn of the work of Dr. Bob Sindelar. Dr. Sindelar's research program has isolated several lead compounds capable of binding GrB. Further, he has selected the best candidate as an initial clinical lead, and elucidated the chemistry required to produce analogues in order to refine the binding kinetics and specificity. viDA is currently producing a select group of compounds that will potentially represent their first products. These results will shape the development strategy for viDA's clinical lead refinement.

1.3 Science in Detail

Granzyme B — Dr. Granville's laboratory is interested in understanding how different immunological and non-immunological factors contribute to vascular injury, dysfunction and atherogenesis. In particular, Dr. Granville has been interested in the GrB/perforin pathway, a major mechanism by which immune cells in the body get rid of unwanted cells such as tumour cells and virus-infected cells. GrB is a protease, or protein that cuts other proteins in a very specific manner, which is expressed predominantly by T-cells and NK cells. Upon stimulation of these cells by foreign antigen, GrB and perforin are released into the space adjacent to the target cell. Perforin inserts itself into the target cell's membrane forming a pore, which in turn facilitates GrB entry into the target cell where GrB-mediated processes result in cell death.

Although the majority of GrB is released uni-directionally towards the target cells, GrB can also be released non-specifically in the external space outside the cell. *In vitro* evidence indicates that non-target or bystander cells in the proximity of the target cell also undergo apoptosis (Choy, Hung et al., 2004). With respect to the significance of non-specific GrB

release, Dr. Granville has shown that GrB is capable of cleaving certain extra-cellular matrix proteins *in vitro* such as fibronectin (as reviewed in (Buzza et al., 2005) and elastin (unpublished data). It is an intriguing prospect that low-level, non-specific GrB release may play a role in age-related diseases associated with chronic inflammation through a mechanism consisting of matrix degradation and remodeling.

Models for Granzyme B Function — Dr. Granville's laboratory has recently demonstrated that the GrB/perforin pathway plays a critical role in the onset and progression of cardiac allograft vasculopathy, an accelerated form of atherosclerosis that is the leading cause of death in heart transplant recipients who survive more than one year (Choy et al., 2005; Choy, Kerjner, Wong, McManus, & Granville, 2004; Choy et al., 2003). Interestingly, in human coronary artery specimens isolated from patients who have moderate and severe allograft vasculopathy or atherosclerosis, GrB was found to localize to lipid-rich regions of the atheroma (vascular plaques). To further study the role of GrB in atherogenesis and its relationship to hyperlipidemia, ApoE and GrB double-knockout mice were generated. In an experiment, four groups of mice consisting of (1) control wild-type, (2) ApoE-knockout, (3) GrB-knockout, and (4) GrB/ApoE-double knockout were fed a normal chow or high fat 'Western' diet (21% fat, 0.2% cholesterol) for 30 weeks. No obvious phenotypic differences were observed in these mice during the first three months, however by 30 weeks when the mice were sacrificed and tissues were harvested, the ApoE-knockout mice had aged more rapidly, developed severe skin lesions, hair loss, and numerous atherosclerotic lesions similar to that previously described in the literature (see Figures 2 and 3).



Figure 2. GrB deficiency attenuates cutaneous xanthomatosis, hair loss and discoloration.

Mice were fed a 'Western' high fat diet for 30 weeks. apoE-/- mice appear to age more rapidly and usually must be sacrificed after 30 weeks on this diet for humane reasons. However, when GrB is knocked out in the apoE mouse (bottom right panel), there are no phenotypic external indications of skin/hair alterations.

From: Cruz RP, Boivin WA, Chamberlain CM, Zhao H, Choy JC, McManus BM, Granville DJ. Granzyme B is important in the progression of atherosclerosis. Experimental Biology - FASEB 2008, San Diego, California, USA

The absence of the GrB gene in the GrB/ApoE double-knockout mice significantly reduced both the frequency and size of atherosclerotic lesions (Figure 3). Equally striking were the significant reduction of skin lesions and the presence of a full coat of fur in the GrB/ApoE-double knockout (Figure 3; bottom right) compared to the ApoE-knockout (Figure 3; bottom left). Excitingly, although the ApoE-knockout mice on a Western diet must be sacrificed around six to seven months for humane reasons, the ApoE/GrB double-knockout mice have aged to over 12 months of age with no visible signs of aging or illness. The latter observation, in combination with the reduced incidence of atherosclerosis, indicates that GrB plays a major role in pathologies associated with ApoE deficiency, aging and hyperlipidemia.

Granzyme B as a Target for Drug Development — GrB is an especially attractive target for drug design because of its substrate specificity. There are numerous serine proteases other than GrB including: trypsin, chymotrypsin, elastase, kallikrein, and thrombin. These other serine proteases are involved in various physiological functions like: blood coagulation, clot dissolution, digestion, protein metabolism, immunological response, fertilization, and developmental regulation. A compound that inhibits the action of GrB and does not discriminate amongst other serine proteases could cause any number of detrimental side-effects. However, GrB possesses unique substrate specificity due to an arginine residue positioned in the active site of the enzyme. This buried arginine can interact with acidic peptides, which results in GrB's preference for substrates with an aspartic acid at the site of cleavage. In addition to its acidic substrate specificity at the P1 position (binding site notation), GrB also prefers Ile or Val at P4, Glu, Met, or Gln at P3, an uncharged residue at P1', and Gly or Ala at P2'. With such a unique substrate specificity profile among the proteases, development of a specific inhibitor of GrB becomes very feasible.



Figure 3. GrB deficiency markedly reduces atherosclerosis and medial thinning.

Representative aorta sections from mice fed a Western diet for 30 weeks. (A)C57 WT, (B) GrB-/-, (C) apoE/-, (D) apoE/GrB-DKO. Aortas were stained with Elastic van Giesen stain to visualize elastin. Black arrow (P) demarks a typical advanced atherosclerotic lesion that is observed in apoE mice. The red arrows indicates medial thickness and layers of elastin staining in the vessel wall.

From: Cruz RP, Boivin WA, Chamberlain CM, Zhao H, Choy JC, McManus BM, Granville DJ. Granzyme B is important in the progression of atherosclerosis. Experimental Biology - FASEB 2008, San Diego, California, USA

The scientific literature is currently void of any communications describing non-peptide inhibitors of GrB. Peptidic inhibitors of GrB have been developed, but these are primarily tools for exploring enzyme structure and function. Peptides, as drug candidates are inferior to their non-peptide counterparts, in that they have numerous pharmacological problems associated with them in regards to their absorption, distribution, metabolism, and excretion profiles (ADME) *in vivo*. Thus, the development of potent and selective non-peptide inhibitors of GrB with an acceptable ADME profile is very desirable.

2 MANAGEMENT TEAM

2.1 Key Management Personnel and Responsibilities

Alistair Duncan, C.A. – Founder and President and CEO of viDA Therapeutics. Mr. Duncan was previously President and CEO of Chromos Molecular Systems Inc., where he was also a founder and Director. Prior to that, he was a Principal with the Ernst & Young Corporate Finance and International Life Sciences Group where he provided high technology and life sciences companies with corporate advisory services in strategic planning, valuations, financing, divestitures, and mergers & acquisitions. Currently, Mr. Duncan also serves as a director on the boards of the Michael Smith Foundation for Health Research, Agrisoma Biosciences Inc. and Migenix Inc (TSX: MGX). Mr. Duncan holds a C.A. designation and a B.Sc. in Biochemistry from the University of British Columbia.

Harry C. Ledebur, Jr., Ph.D. – Founder, Dr. Ledebur currently serves as Vice President Research & Development, Chief Scientific Officer for US based private company, NanoMed Pharmaceuticals Inc., Prior to joining NanoMed, Dr. Ledebur was Vice President, Operations and Scientific Affairs at Chromos Molecular Systems. Previously, he was with Caprion Pharmaceuticals Inc. where he served as Vice President of Discovery Programs and Vice President of Research & Development. Dr. Ledebur also served as Program Head of the Antigen Presenting Cell Program at Valentis, Inc. (formerly GeneMedicine, Inc.) where he focused on the development of DNA-based vaccines for cancer and infectious disease. He began his career at Boehringer Ingelheim Pharmaceuticals Inc. as a Research Fellow. Dr. Ledebur received his Ph.D. in Molecular & Cell Biology from Pennsylvania State University and his B.Sc. in Biochemistry from The Ohio State University.

David Granville, Ph.D. – Scientific Founder, Dr. Granville, is an Associate Professor/Canada Research Chair at the Providence Heart and Lung Institute at St. Paul's Hospital, UBC. A Tier II Canada Research Chair, Dr. Granville is also a Michael Smith Foundation for Health Research Scholar and in 2004 was awarded a Canada Top 40 Under 40[™] award by Caldwell and Partners. He also received the 2006 UBC Outstanding Young Alumnus Award, the 2007 SFU Academic Alumnus Award and was a finalist for the 2007 Louis and Arnold Katz Basic Science Prize at the American Heart Association Scientific Sessions. Dr. Granville received his Ph.D. in Experimental Pathology from the University of British Columbia and his B.Sc. from Simon Fraser University.

2.2 Supporting Professional Advisors and Services

Current Members of the Board of Scientific and Medical Advisors:

Julia Levy, Ph.D. – Chair of the Board and Founder of QLT, Dr. Levy served in several key senior posts at QLT including Chief Scientific Officer and Vice President as well as President and CEO from 1995 to February 2002. Dr. Levy was also a Director of QLT since 1983 and in December 2006, retired from the Board to become Director *Emerita*. She was actively involved in QLT's Scientific Advisory Board until January 2008 when she retired from QLT entirely. Following her doctorate degree in immunology from the University of London, Dr. Levy was awarded an Industrial Professorship in the Department of Microbiology from the University of British Columbia and is the recipient of several honorary degrees. A fellow of the Royal Society of Canada and former President of the Canadian Federation of Biological Sciences, Dr. Levy has earned numerous awards and honors, including an appointment as an Officer of the Order of Canada in 2001, the Female Entrepreneur of the Year for International Business in 1998, Pacific Canada Entrepreneur of the Year in 2000 and the Future of Vision Award from the Foundation Fighting Blindness in 2001. In 2002 she received, along with Dr. David Dolphin, the Friesen-Rygiel prize for medical research and the Prix Galien Canada research award. Along with Dr. Gustav Huber of Novartis, she was presented with the 2003 Helen Keller Prize for Innovation in Eye Care. In her honor, the Julia G. Levy Professorship in Ophthalmology Chair was created at Johns Hopkins Hospital Wilmer Eye Institute in 2004, the same year she was awarded the Lifetime Achievement Award from the British Columbia Biotechnology Association. The author of many published scientific articles and a sought-after speaker, Dr. Levy currently serves as a director on a number of early-stage biotechnology company boards and on the board of the Working Opportunity Fund, a British Columbian, Canadian-based venture capital firm.

Darrell Elliott – Member of the Board, Mr. Elliott has more than 35 years of experience in merchant banking, venture capital and analogous operating experiences in Africa, Europe and North America. He has served on numerous boards and sub-boards of both private and publicly traded companies. Mr. Elliott is Chairman, CEO and one of the original founders of Apex Bioventures Acquisition Corp., a publicly traded company listed on the American Stock Exchange ("AMEX"). Mr. Elliott is the Chairman and interim CEO of Virexx Medical Corp, a publicly traded company on the TSX and AMEX, and also a director of publicly-traded companies, SMC Ventures Inc., Auricle Biomedical Corporation and Transformative Ventures Ltd., as well as Discovery Parks Trust and several private companies. Earlier, Mr. Elliott was Senior Vice President and Managing Director of MDS Capital Corp., President of MDS Ventures Pacific, Chairman and Chief Executive Officer of British Columbia Medical Innovations Fund, Vice President of Canadian Medical Discoveries Fund and Regional Vice President and Managing Director of Royal Bank Capital Corporation.

Alistair Duncan, C.A. – Member of the Board (see above for biography)

David Granville, Ph.D. – Member of the Board (see above for biography)

3 MARKET ANALYSIS AND RESEARCH

3.1 Market trends

During the first stage of company development, viDA will target the large anti-aging market. The anti-aging market is young and predicted to grow and expand. With revenues of \$56 billion a year in 2006, the anti-aging market is targeted to reach \$79 billion by 2009 (Weintraub, 2006). Within the biotechnology industry, companies focused on cosmetics and toiletries reported the highest growth rates in five years, increasing 10% to over \$253 billion in global sales in 2006 (Nasto, 2007). Furthermore, significant growth has been seen in market indicators, such as Botox, which reported a 12% growth from 2003 to 2007, and Restalyne and semi-

permanent fillers, where 190% growth between the years 2003 to 2007. The success of viDA in the anti-aging market will be linked to the increasingly high demand by clients for anti-aging products, as increased life expectancy and reduced mortality stimulate consumer demand for lifestyle drugs.

3.2 Industry Analysis

The worldwide annual expenditures for cosmetics is estimated at \$18 billion USD (Mayell, 2004). Of the major firms, the oldest and the largest is L'Oréal, which was founded by Eugene Schueller in 1909 as the French Harmless Hair Colouring Company (now owned by Liliane Bettencourt 26% and Nestlé 28%, with the remaining 46% publicly traded). The market was developed in the USA during the 1910s by Elizabeth Arden, Helena Rubinstein, and Max Factor. Revlon joined the market just before World War II and Estée Lauder, not long after the war. Like most industries, cosmetic companies have continued to resist regulation by government agencies like the FDA, and have lobbied against this throughout the years (Lewis, 1998).

viDA's initial market-sector target, the anti-aging market, encompasses a large variety of "Cosmeceuticals", which represent a diverse group of pharmaceuticals targeted towards chronic non-life-threatening conditions such as baldness, skin aging and sexual dysfunction, all symptoms that are the by-products of natural aging. The steady increase in the baby boomer demographic is expected to drive the growth of the lifestyle drug sector over the next 30 years. Today, one person in ten is estimated to be over the age of 60, which is expected to increase to one in five by 2050 with an associated increase of in the number of elderly individuals by 300%

(Bureau, 2008b). Increased life expectancy and reduced mortality will create a demand for lifestyle drugs as evidenced by Viagra and Botox, and will be realized through our development of GrB inhibitors.

viDA will potentially target two primary lifestyle issues:

1. Baldness - One of the largest lifestyle sectors relates to baldness as discussed previously. This market includes 35% of men at 35 years of age and 75% of men at age 80 (Bureau, 2008b). In the USA alone, there are 45 million men who have experienced thinning or receding hair (National Institutes of Health, 2008). As a result, there is a large market for treatments for baldness. Currently, the sector is occupied by the following products:

Drug	Compan(ies)	Description	
Azelaic	Various (eg. Schering Pty Ltd; Ego	Commonly used in the treatment of	
acid/Skinoren	Pharmaceuticals Pty Ltd)	acne, inhibits 5-alpha reductase	
Corticosteriods	Various (eg. Eurand)	Cream or lotion applied to scalp	
Propecia	Merck	Oral drug approved for use in men	
PUVA/psoralen	Various (eg. Dayang Chemicals	Light sensitive drug activated by UV	
	Co. Ltd.; Chemos GmbH)	light	
Retin-A	Various (eg. Ortho-Neutragena)	Topical gel applied to scalp	
(tretinoin)			

Table 1 – Com	nanies and n	roducts within	the halding	market
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Rogaine/Regaine (minoxidil)	Merck	Topical cream applied to scalp
Saw Palmetto	Saw Palmetto Harvesting	Anti-androgen agent effective for
Extract	Company	benign prostatic disease also show promise in balding
Zinc	Various (eg. Chemisfair; Zycon)	Oral high doses of zinc produce immunomodulatory and anti- andronergic effects, but cause side effects such as vomiting and diarrhea

The most efficacious of these products also have the most unwanted side effects. As creams, the medication tends to spread, which can promote the growth of hair in unwanted places. These medications can, at best, slow the loss of hair, but not halt or reverse it. As a result, the percentage of men who seek treatment is but a fraction of the potential patient population. The market size was \$340 million in 2001 and dominated by Propecia and Rogaine.

2. Skin Aging/Skin Damage - An obvious choice for lifestyle drug development relates to the treatment of skin aging. The market is already booming and anti-aging products comprised the fastest-growing sector of the \$10 billion worldwide cosmeceutical market since 1997. Current estimates of anti-aging therapeutics administered worldwide are in the region of \$970 million according to the American Academy of Anti-Aging Medicine. Many cosmeceutical

companies have cashed in on the high consumer demand and have been selling inefficacious products. Anti-aging pharmaceuticals for skin would thus have the advantage that consumers would be reassured by scientific validation of pharmaceutical products. The pathophysiology of skin aging is marked by wrinkles, reduction in thickness, inelasticity and coarseness, all of which are associated with loss of elastin in the skin. Thus a topical GrB inhibitor has promise for blockbuster potential within this market. In the US, more than 33 million people seek treatment from dermatologists for skin complaints. The number of people seeking skin anti-aging treatments in the future is expected to increase substantially as media focus on anti-aging treatments expands and intensifies. More women than men are expected to drive this trend owing to society's preoccupation with youth and beauty.

Current products in this space include: Retin-A (tretinoin), which is commonly used to treat acne and has off label use for skin aging; Renova/Retinova (tretinoin) indicated for wrinkles; and Botox (botulinium toxin type A) a bacterial toxin that de-enervates muscles and smoothes the skin.

3.3 Limitations of the Market

Because lifestyle drugs are perceived as treatments for non-life-threatening medical conditions, healthcare payers and governments may refuse to reimburse patients for their purchase. This has created a particular problem in the USA where insurance providers simultaneously seek to satisfy customer demands while maintaining costs. Recent court cases have favoured insurers who have refused to reimburse patients for the purchase of Viagra. Currently the reimbursement policy across private insurers and public sector government

healthcare plans is fragmented. Many of these products have an active ingredient, which is deemed to be regulated by the FDA/Health Canada, thus will affect pricing as these products must undergo expensive clinical trials.

The reputation of the "pseudo-science" cosmeceuticals and fear of liability should the treatment go wrong, however, are dissuading big pharmaceutical drug companies from entering the field. However, some experts predict that the firms' attitudes could change as their parched product pipelines make them increasingly desperate for commercial success. Most cosmetics firms, meanwhile, have little incentive to enter the regulatory morass of the drug business, given that they can make healthy profits from their existing range of creams and lotions. According to the FDA's definition, drugs are agents used in the diagnosis, cure, mitigation, treatment or prevention of disease, or which are intended to affect the structure or function of the body. Cosmetics, on the other hand, do not require extensive testing and FDA approval before they hit the market, because they simply alter personal appearance.

Cosmeceuticals can be viewed as drugs that affect personal appearance, or cosmetics that change the structure or function of human bodies. For the big pharmaceuticals their interests have not yet shifted towards cosmeceuticals as they are likely to make only a fraction of the profits that can be earned by conventional blockbuster drugs. In addition, the potential of liabilities is also enormous. Patients are usually willing to accept a risk of experiencing a side effect in treating their disease. But someone that takes a drug for its cosmetic effects is likely to hold companies to a greater degree of liability for side effects (Pearson, 2003). Together, viDA's industry threats are shown in the figure below.





As Figure 4 shows, the threat from entrants is limited due to several factors. The patents and intellectual property that viDA holds will prevent others from entering in the same field of research. Furthermore, there are incredible amounts of tacit knowledge which enables viDA to benefit from economies of learning. Therefore, the ability of competitors to enter this market is challenging. The ability for new entrants to attract financing based on generic formulations will be limited because of viDA's first in market status.

However, competition that viDA is facing is well-established with a series of products already in the market which may be viDA's greatest threat. Furthermore, they are verticallyintegrated, have large budgets, established awareness and visibility with target segments, and dedicated sales forces and distribution chains.

viDA views the threat of substitutes as very minor. This is because surgery is extremely invasive and expensive, and for many of the target segments, is not an option. Furthermore, homeopathy and health styles are more of a complement rather than a complete substitute. Lastly, acupuncture is less efficacious yet still invasive.

The threat from suppliers is low as a large number of companies that produce products in the supply chain is large. In fact, contract research organizations operate in a highly competitive industry where supplies are priced competitively.

There is no threat of customers since the consumer base of anti-aging products is large and growing. The same is through of complements.

3.4 Competition

3.4.1 viDA's Competitors

The anti-aging market is serviced by hundreds of companies that have market shares that range from 6% (Rogaine) to 89% (Botox). The following table lists the competing products, key strengths and weaknesses, product prices, distribution channels, intellectual property and strategic alliances of viDA's key competitors.

Company	Allergan Inc.	Allergan Inc.	Medicis	Johnson
				&Johnson
Product:	Prevage	Botox	Restylane	Renova
Key Strength:	 easy to apply, no prescription, crème major reduction and removal of fine lines and lesser facial wrinkles, smoothing over and filling of deeper, more prominent facial expression lines & wrinkles 	 well studied and FDA approved simple, non-surgical procedure relaxes the dominant facial muscles can last up to four months 	- common and easy to perform procedure takes less than 30 min with minimal discomfort and pain - results are almost immediate	- first prescription approved by the FDA for treatment for wrinkles and proven to reduce fine facial wrinkles
Key Weakness:	 slight skin irritation upon initial days of application expensive 	 temporary serious heart problems and serious allergic reactions side effects following injection include temporary eyelid droop and nausea, localized pain, infection, inflammation, tenderness, swelling, redness, and/or bleeding/bruising patients with certain neuromuscular disorders may be at increased risk of serious side effects 	 does not contain anesthetic, so discomfort is greater than other injected treatments allergic reactions common requires repeat treatments every 6 months. 	 no longer being manufactured for sale in Canada patients may experience some redness, itching, dryness or peeling is a dermal irritant does not eliminate wrinkles, repair sun- damaged skin, reverse photoaging or restore more youthful or younger skin
Price:	- face \$349, 1.5oz, - eye \$183, 0.5 oz	- \$400 for doctors - between \$500 and \$2000 for patients, depending on the areas treated - lasts 4 - 6 months	- \$300 - \$1,000 (typically \$700 per cc) - follow-ups required every 6 months	- \$150/40 grams
Distribution:	 over-the-counter cosmetic shops spas online 	 administered by trained and qualified physicians available only by prescription 	- available only through a licensed health care professional	- available only through a licensed health care professional
Strategic alliances:	- Elizabeth Arden	 Clinique Laboratories, LLC new skin care line, will be sold exclusively in US physicians' offices in fall 2008 	- many medical professionals using co-treatments of Restylane and Botox	 marketed by OrthoNeutrogena, marketing branding by Stratagem Healthcare Communications
Patents:	 three patented peptides formula expires 2026 	- patent expired in 2006	- patent expires in 2009	- patent expired in 2006
Additional information:	- Prevage MD, by prescription only, utilizing the main ingredient, Idebenone	 three major treatment categories offered cosmetic, therapeutic for select neurological diseases severe underarm sweating 		

Table 2 – viDA's key competitors

Company	Merck	McNeil	DermaPlus	DermaGenetics
Product:	Propecia	Rogaine	Dermalastyl-β	Dermagenetics
Key Strength:	- first clinically proven treatemnt for hair loss - first oral treatment taken once a day for the prevention of further hair loss and for re- growth in the most common sites of hair thinning in men - does not lose patent protection till 2013	 male and female-specific products; contains Minoxidil, the only ingredient that is FDA approved and proven to regrow hair in women clinically proven to regrow hair is available in an easy-to-use foam nongreasy, doesn't drip, and dries quickly 	 water soluble and intact protein that has higher skin absorbency lesser chance of reaction more esthetically acceptable than competing cosmeceuticals proprietary technology to design and manufacture personalized biomaterials that have obvious performance and marketing advantages over existing materials reduces wrinkles by 45% in 2 months 	 uses single nucleotide polymorphisms (SNPs) from each individual to prepare a customized treatment DNA skin analysis offers customized treatment based on skin genes personal DNA UltraCustom formula
Key Weakness:	 masks levels of prostate cancer antigen, which might lead to false negatives decreases libido and causes erectile dysfunction for use by men only reproductive risks for women for 	- may be harmful if used when pregnant or breast feeding	- not sanctioned by the medical field	- not sanctioned by the medical field
Price:	- \$59-69 for a 1 month supply - 1 year therapy recommended	- \$29.95 for a one month supply	- \$89 USD for 2 month supply	- \$89 USD for 2-month supply
Distribution:	- available only through prescription online DTCA	 available without a prescription online DTCA and sales 	- online sales only	 online sales and spa professional retailed exclusively through qualified spas, skin care businesses and professional offices that are under the direction of (licensed) health-care professionals, aestheticians or physicians.
Strategic	- none	- none	- none	- none
Patent Expiry:	- patent expires 2013	- patent expired 2000	- patent expires 2019	- patent expires 2009

3.5 Market Segmentation and Targeting

3.5.1 Segmentation

viDA has identified at least four main market segments for Lifestyle Stage 1 targets:

- 1) medical professionals
- 2) people at risk for hair loss
- 3) baby boomers, and
- 4) beauty-conscious individuals.

The first and most effective market segment viDA will target is medical professionals. The ability of medical professionals to influence patients and consumers sets this segment apart from the others, and buy-in from medical professionals will be essential to successful product diffusion.

In North America, medical professionals involved in the anti-aging industry include dermatologists, cosmetic surgeons and medical professionals certified by the American Academy of Anti-Aging Medicine. Together, this group represents approximately 31,000 professionals in Canada and the USA that viDA will target during the company's initial marketing campaigns (Appendix II).

It is perhaps unsurprising that over \$76 million CAD is spent on hair transplants, as 40% to 50% of men and women by the age of 50 experience hair loss (National Institutes of Health, 2008). In fact, word-wide spending on hair restoration was estimated at one billion dollars in 2006. Accordingly, people at risk for hair loss are a secondary market for viDA Therapeutics, with approximated 101 Million North Americans affected. Similarly, baby boomers will be

targeted as consumers of viDA products, increasing viDA's target markets to include 72 million baby boomers. Another segment encompasses the 3.8 million beauty-conscious individuals, defined as females between the ages of 30 and 49, who are typical "health seekers", that are employed full-time with an average income of \$36,000 per year (see Appendix II).

3.5.2 Market Size

Together, medical professionals, people at risk for hair loss, baby boomers and beautyconscious individuals make up a potential market of over 177 million consumers. The marketsize calculations and primary sources of this information can be found in Appendix II.

3.5.3 Target Segment

The importance of medical professionals as the first target market for viDA is evidenced by the trust that the general public on the whole places in medical professionals. Indeed, doctors are legally regarded as "learned intermediaries" who are liable for the ramifications of their advice and opinions regarding risks and benefits of medical and health products. Patients will trust their doctor's professional expertise and good judgment to be the final word on the products that they recommend (Brown, 2005).

The business of improving personal appearance by medical means is vast and is growing in many directions. Along with cosmeceuticals, a wide range of treatments are available in doctors' offices. Chemical peels, laser treatments, micro-dermabrasion, which were once primarily the purview of spas and beauty clinics, are now common offerings at many dermatologists' and cosmetic surgeons' offices.

Doctors are opening their own spas, lending their names to various product lines, and writing books detailing methods that allegedly keep skin youthful. About half of all dermatologists sell cosmetic products in their offices, as they see that distributing these retail products adds essentially to their profits and therefore, viDA can target both retailers and educators with the same marketing dollar (Tsao, 2004).

As a result, patients increasingly view dermatologists/cosmetic doctors as having the skills and tools to reverse or halt the aging process - and many doctors are more than happy to serve as elevated aestheticians. Plenty of dermatologists view selling cosmeceuticals as good medical practice. "What we love about dispensing these products is we really know what patients are using," says Patricia Farris, a dermatologist based in New Orleans and clinical assistant professor at Tulane University (Tsao, 2004).

It is expected that among consumers, the popularity of cosmeceuticals will continue to rise as long as improving physical appearance remains a top social priority. The medical and scientific community's role in shaping this fast-growing field is expected to be crucial. Recently, recognizing the large profits to be extracted from the rapidly growing market, a number of large cosmeceutical companies (e.g. L'Oreal) have incorporated medically-trained personnel into their workforce. It is apparent that the established companies already recognized these segments as being crucial for their products, since it represents a unique dual aptitude, i.e. "client" and "purveyor". Thus partnerships with the medical community will provide viDA with the opportunity to extend its market outreach, as well as re-enforce the product brand that stands for scientific excellence and quality.
3.5.4 Product Diffusion

Targeting medical professionals first will enable viDA to efficiently diffuse products to secondary target segments, as medical professionals recommend viDA products to their patients. This will allow diffusion of viDA products to occur with legitimacy and credibility. Medical professionals will learn about viDA products through medical conferences, medically-focused and results-based seminars and one-on-one meetings.

Once the evidence of product efficacy is accepted, viDA may ask highly-credible medical professionals to voice their opinions (positive feedback) to the public through viDA. Financial gains from supplier-induced-demand may also play a role in product diffusion through medical professionals, where physicians serve their own interests in prescribing drugs that are financially profitable (Dranove, 1988). Innovators and early adopters in the next target segment are the people at risk for hairloss which viDA foresees as the group that will create the demand for viDA product once they are aware of the efficacy and results. This target segment will be the tipping point to bring in the early majority (the baby boomers) as momentum will build with the demand from this group.

3.5.5 Competitive Insulation

viDa's unique scientific discovery capabilities and patent repertoire gives viDA a competitive insulation over its rivals. As an academic start-up biotechnology company, viDA has competitive insulation over similar companies, such as Allergan, in that viDA's technology and laboratory infrastructure, coupled with highly trained and qualified personnel, are subsidized by grant money and/or university support in terms of infrastructure, location, and availability of personnel such as "start-up-scientists" (i.e. Ph.D. students and post-doctoral research fellows). New commercial entrants do not have this level of subsidization and support, and are forced to enter the industry based on the merits of their business plans. The sunk-costs associated with starting up serving as a strong barrier to entry for companies not supported by an academic institution. viDA's position as a new entrant is therefore strong and they are in a good position to enhance their value proposition to the cosmeceutical industry.

3.5.6 Advantages and Disadvantages

viDA enjoys a clear advantage of having identified a validated target and initial clinical lead. The lead displays specificity to GrB with respect to the overall family of serine proteases. In addition, the mechanism of action has recently come to light by virtue of an excellent animal model discovered by Dr. Granville's group (see Fig. 1).

viDA's primary disadvantage is that the current lead has an IC50 of around 150 μ M (micromolar). However using chemical expertise of the scientific advisory team, viDA has mapped out a clear protocol for the generation of a targeted library to identify a refined clinical lead with greater binding affinity. Proof of concept in an animal model follows a 30-week timeline, and the infrastructure and precedence are in place to see the study through to completion.

3.6 Intellectual Property

The Intellectual Property that creates the foundation for viDA has been licensed from the University of British Columbia, and is made up of three parts:

- Methods of treating diseases associated with aging including atherosclerosis, hair loss, and loss of skin elasticity/wrinkling where the treatment involves inhibition of GrB;
- 2) Composition of matter for novel GrB inhibitors; and
- 3) Formulation patents for the clinical application of the GrB inhibitors.

As viDA advances towards clinical trials it is anticipated that additional patents for new formulations will also be filed.

3.6.1 Method Patents

viDA has filed provisional patents relating to the methods of treating disease. The first is entitled "Methods of Improving Longevity and Reducing the Cosmetic Effects of Aging" (US Provisional serial # 60/780,352, priority date March 9, 2006), which claims methods of reducing or reversing the effects of aging on both hair and skin through the inhibition of GrB. This provisional application was converted to a full PCT application for global protection of the IP on March 9, 2007. Although many formulations are discussed, this application focuses on a topical delivery of the clinical lead formulation. Of note, viDA did not claim the application of GrB inhibitors for the treatment of arthrosclerosis. This is because there is prior art that discloses the link between arthrosclerosis and GrB activity.

	viDA	Prior Art		
Title:	Methods of Improving Longevity and Reducing the Cosmetic Effects of Aging	Granzyme B inhibitors		
Patent #:	US60/780, 352.	WO 03/065987		
Pub/Filed:	2006	2003-08-14/2003-01-31		
Inventor(s):	Cruz RP, McManus, BM, Granville DJ.	Merck and Co. INC.		
Significance:	This patent describes methods of reducing or reversing the effects of aging on both hair and skin through the inhibition of GrB; focuses on a topical delivery of the clinical lead formulation	HIGH: This patent describes the use of a GrB inhibitor for the treatment of immunoregulatory abnormalities including autoimmune or chronic inflammatory diseases. The patent specifically mentions treatment of alopecia areata and atherosclerosis.		

Table 3 – viDA's Patent US60/780, 352.

Patent WO 03/065987 describes a specific class of Granzyme B inhibitors, but does not have any enabling data. As such, these claims will issue for the composition alone, and not for any specific method of use. Alopecia areata is also mentioned, however this is a specific, yet infrequent form of hair loss, affecting 1.7% of the population. The market for a product to treat hair loss is much greater, 35% of men at 35 years of age and 75% of men at age 80, and is not enabled or described in the art.

The patent literature contained very little relevant prior art. viDA thinks this is due to the non-selective nature of serine protease inhibitors. As discussed previously there is a requirement for an inhibitor specific to GrB, else dire adverse side effects would occur in the patient. However, as evidenced by Dr. Granville's mouse model, specific inhibition of GrB does not interfere with normal development. There are examples of scientific articles that contain damaging prior art.

	Prior Art				
Title:	Extracellular Matrix Remodeling by Human Granzyme B via Cleavage of Vitronectin, Fibronectin, and Laminin	Role of cytotoxic T cells in chronic alopecia areata.			
Pub/Filed:	J Biol Chem. 2005 Jun 24;280(25):23549-58	J Invest Dermatol. 2000 Jan;114(1):112-6			
Inventor(s):	Buzza MS, Zamurs L, Sun J, Bird CH, Smith AI, Trapani JA, Froelich CJ, Nice EC, Bird PI	Bodemer C, Peuchmaur M, Fraitaig S, Chatenoud L, Brousse N, De Prost Y			
Significance:	HIGH: This publications links GrB and cancer as it describes an extracellular and perforin- independent function of granzyme B which may contribute to disease progression, specifically tissue destruction found in cancer.	HIGH: This publication links GrB and alopecia areata. The authors suggest that the presence of GrB may explain the onset of apoptosis in AA follicles and that proteinase inhibitors could provide a new therapeutic approach.			

Table 4 – Granzyme B prior art

The two journal articles above again describe a suggested link between GrB and atherosclerosis and alopecia areata. It can be surmised that it was Merck's review of the literature for patent WO 03/065987 that led to the method claims within the patent, but the company had no enabling data.

A common theme emerges from the review of the patent and journal literature. In all cases of related art, the mechanism of action for extracellular GrB was mediated through apoptosis. Two mechanisms were suggested: the first being cell destruction through the understood mechanism of perforin enabled cellular entry of GrB, which induces apoptosis; the second being GrB cleavage of extracellular matrix proteins like fibronectin that would cause cell displacement from its basement membrane, inducing apoptosis through a process called anoikis. In parallel, Dr. Granville's continuing research pinpointed the actual mechanism of action, which was cleavage of elastin by GrB. Elastin is responsible for good tone in the vasculature and the skin, as well as the health and composition of the hair follicle. With these new observations viDA has filed a second US provisional patent, "Inhibitors of Elastin Cleavage" (serial # 60/797,352, priority date May 4, 2006). The patent claims the use of GrB inhibitors for the treatment of pathologies associated with the degradation of elastin. Having conducted a comprehensive search viDA has not located any prior art to this observation. These observations were included in the March 9, 2007 PCT application. viDA expects claims to issue for a topical medicament consisting of a GrB inhibitor for the preservation of skin elasticity, and the prevention of baldness not caused by alopecia areata.

Table 5 – viDA's Patent US60

	viDA	Prior Art
Title:	Inhibitors of Elastin Cleavage	None
Patent #:	US60/797,352	
Pub/Filed:	2006	
Inventor(s):	Cruz RP, Granville DJ.	
Significance:	The patent claims the use of GrB inhibitors for the treatment of pathologies associated with the degradation of elastin.	

3.6.2 Composition of Matter Patent

viDA is currently pursuing refined clinical leads though construction of an analogue library based on the small molecule inhibitor initially identified. Searches for derivatives of the original tetrasubstituted furan inhibitor based on the diversity set selected have not returned any described compounds. viDA will pursue a composition of matter patent based on the best refined leads. This will be novel since the diversity library previously generated will contain molecules that do not perform well in functional assays and some that perform very well. As such, it is impossible to predict which compound will be the best candidate, and this aspect will be used to teach the novel composition findings from viDA's refined compound to the patent examiner. US provisional patents will be filed on the individual leads, or if possible, a family of leads when the studies previously described are completed.

The Merck patent described above (WO 03/065987) lists a family of GrB inhibitors that do not overlap with our compounds of interest. What is more, the GrB inhibitors listed by Merck were originally chosen for their ability to bind Granzyme A. As scientific validation continued, it was realized that GrB was the more desirable target, and the library focus was shifted midstream. Of particular importance, the Merck compounds will have promiscuity for serine proteases in general since they lack the directed strategy of binding the arginine residue specific to the GrB active site using carboxylic acid containing leads. This is perhaps why the Merck GrB project has seen no further preclinical development as indicated by the PharmaProjects database due to the potential for adverse side effects.

There is one other patent that describes specific inhibitors of GrB:

	Prior Art
Title:	Induction of immunity using inhibitors of granzymes
Patent #:	US20030148511A1
Pub/Filed:	2003-08-07 / 2001-11-14
Inventor(s):	Ashton-Rickardt Philip G.; Opferman Joseph T.
Significance:	MEDIUM: The patent describe the use of SPI6 and PI9 or other potential granzyme B inhibitors (mimetics, inhibitory antibodies, polypeptide inhibitors, small molecules). The SPI6 and PI9 serpins are endogenous inhibitors of granzyme B found in the mouse and human, respectively.

Table 6 – GrB inhibitors prior art

Patent US20030148511A1 describes a class of peptide based GrB inhibitors found endogenously within mammals. Their application is limited solely to cancer. Peptides are not the first choice for inhibitors of GrB due to their unfavourable ADME profile.

3.6.3 Freedom to Operate

viDA's patent prosecution strategy uses methodology, composition matter, and formulation to provide a foundation to insure viDA's freedom to operate. viDA's results to date and continuing research in Dr. Granville's laboratory will allow for efficient prosecution of the PCT application. This method patent will protect the use of GrB inhibitors to topically treat loss of both skin elasticity and hair.

On the composition of matter front, viDA anticipates the emergence of several, or potentially a family, of novel clinical lead compounds. A composition of matter patent on these leads will create a powerful portfolio for viDA, and it will reopen the possibility of obtaining rights for treatment of cardiovascular disease. This is possible since the methodology for treating cardiovascular disease has not been protected by competing patents. Rather, it has only been discussed and prior art exists only in respect to viDA's method patents. viDA will investigate treatment of cardiovascular disease as a long-term strategy, where pre-clinical work and IP generation will be performed in tandem with anti-aging applications.

4 THE MARKETING PLAN

viDA's lead compound for the anti-aging market will be introduced as a new, exciting and effective product in the anti-aging market, based on sound and validated scientific results. Maintaining the allure of newness, coupled with a packaged offering is instrumental for success. viDA's market value chain proposition is shown below.

Figure 5 - viDA: Value chain proposition



4.1 Overall Marketing Strategy

viDA's domestic and international market strategy will initially focus on the medical community (for example dermatologists and cosmetic surgeons) championing viDA, with baby boomers, as the primary segment of the consumer population targeted. Business relationships are extremely important for viDA's success, as competing companies in North America that are targeting the same segments will challenge viDA. Some initial marketing strategies and considerations are:

1) Product and Business Development

- a) Plan manufacturing and marketing alliances early
- b) Visit potential larger customers in person
- c) Establish local reputation first then promote internationally
- d) Establish tradeshow schedule and budget and appropriate conferences nationally and internationally
- e) Establish travel or entertainment budget for business team

2) Distribution Strategies

- a) Find distributors/retail that will work almost exclusively for viDA
- b) Sign exclusive or semi/exclusive contracts with distributors. (Well-educated distributors know how to get approvals (one reason for exclusivity)
- c) Select distributors that have an in-depth market understanding (e.g. regional expertise, professional associations [doctors], consumer segments)
- d) Consider and organize shipping and delivery (UPS, FEDEX, DHL). Avoid services with limited tracking and insurance mechanisms for lost merchandise
- e) Establish paying mechanisms (wire transfer or credit, establish a credit period before considering credit for a customer

3) Promotional and Marketing

- a) Decide on direct (e.g. catalogs, TV, internet, multilevel marketing) and indirect (drug stores, spas, department stores, doctor's offices) sales strategy
- b) Consider labeling and language issues (e.g. in Canada Quebec slightly different as rest of Canada, Canadian-English versus American-English, and US States may have separate requirements.
- c) Send samples, marketing literature and documents (consider expenses as this can add up especially with shipping)
- d) Decide which products to sell first and in which market

4) Brand and Patent Strategies

- a) Consider regulatory issues in a timely manner, as cosmeceuticals must be registered
- b) Establish strong mechanisms for copying and patent protection (for Canada and the US). Note, registration process can be lengthy. Professional organizations (e.g. US department of Commerce and the Canadian Chamber of Commerce) can help with what is needed.
- c) Establish a good relationship with US department of Commerce and Canadian Chamber of Commerce
- d) Commerce department will be instrumental in screening potential clients

e) Commerce departments have market research available

Cosmeceutical company Prevage succeeded through a co-marketing agreement between Allergan and Elizabeth Arden with two main products, a physician strength PrevageMD that contains 1% idebenone (the patented ingredient) and an E. Arden cosmetic over the counter Prevage containing 0.5% of idebenone. The result was growth for the first three months that was 10% over the corresponding period of the preceding year and with the dermatology business also benefiting from sales and launch quantities of Prevage. viDA will establish a similar marketing value proposition exploiting its core strengths of research and business development and partnerships in the areas of manufacturing and sales/distribution.

Based on viDA's internal resources, skills and capabilities, viDA will focus on research and development and will require a partner to execute marketing and distribution of its products. viDA can potentially seek a co-marketing distribution with the following companies: L'Oreal, Sephora and Lifebrands.

L'Oreal represents a large, established, reputable company that is international, vertically-integrated, have high-end products (eg. Lancome, Kiehl's, Biotherme, Shu Uemura, Helena Rubenstein), mid-range products (eg. L'Oreal professional, Redken, Vichyand, Skinceuticals) and low-end products (eg. Maybelline and Garnier). If viDA partners with L'Oreal, they will have access to global distribution and marketing channels and may adopt some marketing and distribution strategies.

Sephora is the leading retail beauty chain in Europe and recently present in the US. Sephora is the child company of Moet Hennessey Louis Vuitton. If viDA partners with Sephora, high-end products will be the focus. Like L'Oreal, Sephora's global presence in marketing and distribution is well-established. Given viDA's projected position within the competitive landscape as a high-quality product, partnering with Sephora would be viDA's optimal alliance.

Lifebrands, conversely, represents higher accessibility to a larger consumer market who readily adopt new brands and are price-sensitive. An alliance with Lifebrands will enable viDA to enjoy mass market appeal and access to profits from large numbers of sales as opposed to partnership with Sephora where viDA will enjoy higher profitability per product sales that is inherent in the brand exclusivity.





4.2 Pricing

The pricing for viDA products will evolve as efficacy is proven and with reference to high-end competitors pricing and perceived customer value in the selected market segments. viDA is targeting the price category of Prevage (Allergan/Elizabeth Arden), one of the most successful and effective products in the market for the last couple of years. The price will need to be either similar or competitively lower in the range of \$299 to \$399. Together, the price and the improved efficacy viDA intends to achieve with its lead compound will place viDA in a competitive position in the industry (see positioning map below).





viDA Therapeutics Business Plan Nancy Lee and Valia S. Lestou

4.3 Field Sales Tactics

viDA's marketing and distribution partner(s) will establish relationships with medical professionals by recruiting experienced pharmaceutical sales representatives to target cosmetic surgeons, dermatologists, and medical professionals specializing in anti-aging. Ongoing site visits to medical centers and doctors' offices will be essential to driving awareness and adoption by the medical professional target segment. viDA's marketing and distribution partner(s) will also target dermatology and cosmetic surgery conferences as prime venues for advertising, sponsorship, product sampling and education. By primarily focusing marketing campaigns on medical conferences, viDA will maximize marketing value and sales area coverage because of the fact that physicians practicing globally are concentrated in one location.

As viDA's product gains adoption by medical professionals and the company starts to enjoy sales revenues, viDA's marketing and distribution partner(s) can increase marketing efforts to include secondary target markets. This may involve pursuing relationships with national retail chains that will set up highly visible retail Point-of-Sale displays focused on producing impacting, memorable and persuasive product messaging. Because viDA's marketing and distribution partner(s) will continue to deploy sales agents to physician's offices, consumers will be drawn to viDA's products through a pull and push mechanism of sales.

4.4 Advertising and Sales Promotions

Advertising at medical conferences and within medical journals will be key to viDA's publicity campaign to medical professionals. viDA's marketing and distribution partner(s) may

also use product sampling as a primary method of encouraging adoption by the physicians practicing dermatology, cosmetic surgery or anti-aging. Similarly, viDA's marketing and distribution partner(s) will consider product sampling to secondary target markets during focused marketing campaigns.

As companies within the biotech and pharmaceutical industries increasingly target consumers directly to improve the visibility of their products and brands, an important option for viDA to consider is direct-to-consumer-advertising (DTCA). Although DTCA is only legal in the USA and New Zealand amongst all the industrialized nations, viDA may consider establishing an American arm to facilitate ongoing consumer adoption. Consumers exposed to DTCA are twice as likely as those not exposed to DTCA to request specific advertised drugs, as well as prescriptions for those drugs (Mintzes *et al.*, 2003). An excellent example of this can be seen in the case of hGH, where Genentech was actually awarded for their marketing efforts in promoting hGH products targeted primarily at a consumer audience in 2007 (Media, 2007). Genentech's campaign aimed to enroll 25% of identified hGH patients in the "Stepping Stones" support program. Three months post-launch, greater than 40% of physicians anticipated increasing prescriptions because of the program. Therefore, viDA's marketing and distribution partner(s) will consider DTCA for long-term advertising and sales promotion campaigns, and accordingly comply with the appropriate regulatory, legal and logistical challenges to exercising this option.

5 PRODUCT DEVELOPMENT STRATEGY AND REGULATORY GUIDELINES

viDA's main product development goal will be to generate, validate and implement new anti-aging product concepts and product lines that will ensure the planned growth of the company. viDA's primary objective is to further develop basic research on granzyme B inhibitors for both the antiaging industry as well as the cardiovascular market. Therefore, viDA can outsource standard R&D activities to a CRO, such as large scale target identification and synthesis, and partner with companies that are experienced in marketing and distribution.

viDA will capitalize on a line of products that will create strong, differentiating messaging in the anti-aging cosmeceutical industry. viDA will offer a mix of product pricepoints within the various product categories and manage the timing of product introduction by bringing some products to market quickly, followed by supplementary and added-value product lines. The figure below represents viDA's strategic product development for the first years.

While viDA will focus predominantly on developing products for the anti-aging market, pre-clinical and IP development for products destined for the cardiovascular market will proceed in tandem. By working on both indications during early research and development stages, viDA will leverage existing research and financing using animal models, where additional investment to develop data for a second indication will be minimal.

Figure 8 – viDA's Strategic Development of Product Lines



After successfully introducing its first line of products as seen above, viDA may use revenues and/or additional financing to either diversify, by expanding into the segment of hair loss, or continue to build brand recognition with face care.

In order to understand the regulatory challenges that viDA may face, the definition of "cosmeceuticals" must be understood. Cosmeceuticals or cosmetic pharmaceuticals are cosmetic products that contain biologically active ingredients and claim to have medicinal or drug-like benefits. Raymond Reed, founding member of the US Society of Cosmetic Chemists, coined the term in 1961 (Wang, 2008).

While the Food, Drug, and Cosmetic Act (U. D. o. H. a. H. Services, 2004) does not

recognize the term "cosmeceutical," the cosmetic industry uses this word to refer to cosmetic products that have medicinal or drug-like benefits. The Food, Drug, and Cosmetic Act defines drugs as those products that cure, treat, mitigate or prevent disease or that affect the structure or function of the human body. While drugs are subject to a review and approval process by FDA, cosmetics are not approved by FDA prior to sale. If a product has drug properties, it must be approved as a drug (U. H. a. H. Services, 2002).

viDA will be aware of the regulatory requirements and will avoid claims stated on the product labeling, in advertising, on the Internet, or in other promotional materials that may cause its products to be considered a drug. viDA will educate the consumer so that the consumer's perception is accurate and thus, establish brand and product reputation.

Moreover, since cosmeceuticals are products that affect structure and function of skin, which are like drugs but are marketed with claims based on appearance of skin, i.e. "reduce the appearance of wrinkles", clients will expect that viDA will play an important role as a consultant and evaluator of the procedures for both its non-prescription and prescription for safety and efficacy. The experimental preclinical and clinical trials do not need to be as stringent as FDA would recommend for a New Drug Application (NDA), however some minimal standards will need to be established.

As a paradigm, viDA may use Allergan's design for small clinical trials that established efficacy and effectiveness of its substance Idebenone (ingredient of Prevage and Prevage MD). Effectiveness of Idebenone was established on three clinical studies with small number of subjects (one with n=29 and two with n=18, using different concentrations) all analyzed by dermatologists. By using the simpler clinical trial model as applies for cosmeceuticals, viDA will

be able to establish the scientific foundation of Granzyme B. This will add value to the company as viDA will enter the market and launch a credible brand name that would be synonymous to both, highly marketable and scientifically validated quality products.

5.1 Develop a refined clinical lead (\$580k)

The search to identify a promising clinical lead for GrB inhibition was successful, and has confirmed the synthetic protocol for its creation. The incorporation of parallel/combinatorial methodologies is ideal for the refinement of viDA's clinical lead compound. The lead is a tetrasubstituted furan that possesses no chiral centers and is highly symmetrical. The dihydroxy furan can then serve as a "core" structure in which different groups (diversity reagents) can be attached via an ether linkage to the hydroxyl groups at positions 3 and 4 using parallel chemistries.

The chemistry work will be carried out by a specialized chemistry CRO. This is an emerging and competitive market with centers in the US, Canada, India and Eastern Europe. Under confidentiality, a group will be chosen based first on a track record for milestone based results, and second on cost.

The ability of the individual analogues derived from the initial clinical lead to inhibit GrB activity can be easily quantified using commercially available kits such as the Innozyme GrB Fluorometric Activity Assay Kit from CalbioChem. Available in a 96 well format, a known amount of GrB and analogue are added to a well which contains a modified pro-urokinase that serves as a substrate. When cleaved by GrB, the urokinase is activated and is able to cleave the

fluorogenic substrate (Glutaryl Gly-Arg AMC), releasing AMC. AMC is measured fluorometrically. In this manner the activity of the analogues can be rapidly determined at low cost.

From the *in vitro* results, the experimental approach to study the three best leads in an *in vivo* animal model is relatively straightforward. As part of the stability assays, the pK, or plasma half-life of the potential leads will be determined through mass spectroscopy. Briefly, wild type control mice will be injected with three doses of the potential lead; low, medium and high doses where the medium dose is the anticipated therapeutic level as determined from the *in vitro* GrB functional inhibition assay and the low and high doses are half and double respectively. Blood draws will occur every 30 minutes over a four hour period using eight mice per dosage such that only one draw per mouse will occur. The plasma will be separated, immediately frozen and shipped to the University of Victoria Proteomics Facility to determine the concentration of the lead in plasma over time. From this analysis a pK will be calculated, which will determine the therapeutic dose for the *in vivo* animal studies.

5.2 Establish efficacy in an animal model for GrB mediated pathogenesis (\$1.5 million)

In vivo assessment of the leads will start with eight-week old GrB/ApoE-double knock out mice, alongside the appropriate age-matched single knockout and wild type controls. For each of the three lead compounds to be studied, the experiments will use four GrB/ApoE-double knock out mice, four GrB-knock out mice, four ApoE knockout mice and four controls, for a total of 16 mice per lead. An additional set of 16 untreated mice will be used as the negative control. All experimental animals will be fed a high-fat Western diet for the 30 week course of the experiment. Beginning at week 20 the experimental mice will receive twice daily injections of one of the lead compounds for 10 weeks, at which time the animals will be sacrificed and atherosclerotic plaques, skin lesions and hair loss will be quantified. The effectiveness of the GrB inhibitors will be judged on their ability to limit plaque formation, skin lesions and hair loss. Gross pathology will be performed on the mice to search for signs of adverse side effects.

An initial seed round investment of \$1.5 Million will result in a refined clinical lead that has been validated in an animal model, with an established mechanism of action. This is an excellent staging ground for a Series A financing to permit the completion of GMP and GLP preclinical trials and entry into clinical development.

5.3 Carry out GMP, GLP preclinical development and IND Application: topical (\$1,722k) and cardiovascular (\$2,472k)

Following a Series A financing of viDA, the company will complete the required Good Manufacturing Process (GMP), and subsequent Good Laboratory Process (GLP), testing required to complete the preclinical phase of development and file the Investigational New Drug (IND) application in order to proceed to clinical trials. As part of viDA's growth as a company, a key hire at this point will be an individual with a track record in preclinical development and early clinical development. This individual will coordinate the continued refinement of the clinical lead that includes formulation development, stability refinement and ultimately manufacture of the drug formulation viDA will carry forward to the clinic. This work will be performed by an outside CRO. Following manufacture of the individual formulations for both topical and cardiovascular applications, extensive absorption, distribution, metabolism, and excretion (ADME) studies will be carried out, followed by toxicology (Tox). While the ADME-Tox requirements are well defined and straightforward, the associated costs are large; in the order of \$750k per formulation. With manufacture and ADME-Tox profiling in hand, viDA will first request a briefing meeting with the FDA, and then prepare and file an IND.

5.4 Carry out clinical development: topical (\$350k)

FDA review of the application requires approximately 30 days. During the intervening time viDA will be in the final stages of preparing for the initiation of a Phase 1 trial for the topical formulation. The clinical trial planning will have begun, with most of the planning revolving on enrolling interested physicians across North America who would like to participate in the trial. These efforts will be facilitated by recruitment of key clinical "thought leader" in the field onto the viDA Scientific Advisory Board (SAB). Our SAB members will spread viDA's scientific and clinical development through top-tier medical conferences. The resulting interest will fuel site recruitment in advance of notice of approval for the IND by the FDA.

With the resulting data for the preclinical development nearly complete, protocol design for the Phase 1 trial will begin at viDA using our SAB and an outside group of expert consultants.

6 OVERALL SCHEDULE

viDA's operational strategy seeks to aggressively achieve measurable milestones.

YEAR	MILESTONE
Year 1	Develop a refined clinical lead (\$580k).
	Establish efficacy in an animal model for GrB mediated pathogenesis (\$1.5mil)
Year 2	Carry out GMP, GLP preclinical development and IND Application: topical (\$1,722k) and cardiovascular (\$2,472k)
Year 3-5	Carry out clinical development: topical (\$350k)

Table 7 – viDA's yearly milestones

7 FINANCIAL NEEDS, EQUITY STRUCTURE AND RETURN ON INVESTMENT

7.1 Start-up

viDA's start-up time is estimated to occur over eight months and will require \$3 million Canadian dollars. These funds will be used to establish adequate laboratory facilities and create the complimentary infrastructure necessary to begin operations. These requirements include but are not limited to: laboratory equipment, property, legal and administration, salaries and funds to support selected contract research organizations. Upon commencing operations, viDA will require an additional \$6,000,000 to ensure adequate cash flow over the following years of operations.

7.2 Proposed Equity Structure

Table 8 - Capital Structure

Shares 900,000 600,000	Percent 30	\$1,50 Shares	0,000	\$6,00	0,000
Shares 900,000 600,000	Percent 30	Shares			
Shares 900,000 600,000	Percent 30	Shares	D (
900,000 600,000	30		Percent	Shares	Percent
600.000		900,000	15	900,000	6.8
,	20	600,000	10	600,000	4.5
600,000	20	600,000	10	600,000	4.5
300,000	10	300,000	5	300,000	2.25
240,000	8	240,000	4	240,000	1.8
180,000	6	180,000	3	180,000	1.35
180,000	6	180,000	3	180,000	1.35
3,000,000	100	3,000,000	50	3,000,000	22.7
		3,000,000	50	3,000,000	22.7
				7,200,000	54.6
3,000,000	100	6,000,000	100	13,200,000	100
\$0.50		\$0.50		\$0.84	
1,500,000		3,000,000		11,048,000	
(pre- money)					
	600,000 600,000 240,000 180,000 3,000,000 3,000,000 3,000,000 \$0.50 1,500,000 (pre- money)	500,000 30 600,000 20 600,000 20 300,000 10 240,000 8 180,000 6 180,000 6 3,000,000 100 \$0.50 100 \$0.50 100 \$0.50 1,500,000 (pre-money) (pre-money)	500,000 300 300,000 20 600,000 600,000 20 600,000 300,000 300,000 10 300,000 10 300,000 180,000 6 180,000 180,000 180,000 3,000,000 100 3,000,000 3,000,000 3,000,000 100 6,000,000 3,000,000 \$0.50 1,500,000 \$0.50 3,000,000 (pre-money) (pre-money) 3,000,000 \$0.50	300,000 20 500,000 10 600,000 20 600,000 10 300,000 10 300,000 5 240,000 8 240,000 4 180,000 6 180,000 3 180,000 6 180,000 3 3,000,000 100 3,000,000 50 3,000,000 100 3,000,000 50 3,000,000 100 6,000,000 100 \$0,50 100 6,000,000 100 \$0,50 \$0,50 \$0,50 1,500,000 (pre- money) 100 6,000,000 100	500,000 30 500,000 10 500,000 600,000 20 600,000 10 600,000 300,000 10 300,000 10 600,000 300,000 10 300,000 5 300,000 240,000 8 240,000 4 240,000 180,000 6 180,000 3 180,000 180,000 6 180,000 3 180,000 3,000,000 6 180,000 3 180,000 3,000,000 100 3,000,000 50 3,000,000 3,000,000 100 6,000,000 50 3,000,000 3,000,000 100 6,000,000 100 13,200,000 \$0,50 \$0,50 \$0,50 \$0,84 11,048,000 (pre- money) (pre- money) 3,000,000 (pre- money) \$0,84 11,048,000

7.3 ROI: Comparable Companies, Market Caps and P/E ratios

1) Allergan, Inc.: A multi-specialty healthcare company, discovers, develops, and commercializes specialty pharmaceutical, medical device, and over-the-counter products for the ophthalmic, neurological, medical aesthetics, medical dermatological, breast aesthetics, obesity intervention, urological, and other specialty markets worldwide, with a market cap of \$16.26 B on 305 million common shares. While the company is currently enjoying revenue growth (22%) it is posting positive EBITDA (\$1.11 B), with the forward P/E ratio is projected to be 17.36 for the year ending 31/12/09.

2) Medicis Pharmaceutical Corporation: Focusing primarily on the treatment of dermatological and podiatric conditions and aesthetics medicine, with a market cap of \$1.17 billion on 56.44 million shares outstanding. The company reports year-over-year revenue growth of 38.1% on positive earnings (\$150.94 million); with, the forward P/E ration of is projected to be approximately 11.3 for the year ending 31/12/09.

While both of these companies have established operations within the anti-aging market, their growth and operation are believed to reflect viDA's potential within the industry. Therefore, referencing the projected P/E ratios for these two companies, viDA conservatively estimates a multiplier of 10 to apply to viDA's EBITDA to estimate the terminal value of the company in future years.

7.4 ROI: Exit Strategy

viDA can envision two exit strategies: - an Initial Public Offering (IPO) on the public markets or sale to larger pharmaceutical or cosmetic companies. If viDA considers an acquisition, the main priority would be to ensure maximization of shareholder value. In light of the average 40% discount expected in most acquisitions, viDA will compare this option carefully with an initial public offering.

As viDA creates value in developing anti-aging and cardiovascular product pipelines, the company will seek acquisition by major industry players, such as large Pharma and established cosmetic companies. Large pharmaceutical companies like Merck and Pfizer are actively researching new prescription compounds for cosmetic purposes. In 2007, Pfizer acquired Anaderm, based in Ann Arbor, Michigan. Anaderm is working on drugs to tackle five common cosmetic concerns: age spots, oily skin, hair loss, excess hair and sun damage. Currently, Pfizer's open interest in cosmeceuticals seems to be an exception, rather than the rule. Merck, which markets Propecia, regards its product as an outlier, and it is continuing to concentrate on major diseases such as diabetes. Moreover, sales for Propecia have been relatively modest for Merck, at \$98 million worldwide, and rising only 4% in the US market.

Large, well-established cosmetic companies that can afford expensive research and clinical trials required to bring a new drug onto the prescription market represent a second potential acquirer. Precedent for this concept can be seen with the creation of Galderma. Cosmetics giant L'Oréal, for example, teamed up with the food and drinks conglomerate Nestlé in 1981 to create a dermatology-research company called Galderma, headquartered in Lausanne, Switzerland. The company is seeking new drugs for aging skin and/or balding. Thus, viDA's exit options are potentially vast, as exit through acquisition includes not only traditional pharmaceutical companies, but large cosmetics organizations as well.

8 CRITICAL RISKS, PROBLEMS AND ASSUMPTIONS

Several risks hve been identified and ordered in priority:

- Adverse events and target ineffectiveness may serve as viDA's primary risks as a drug development biotechnology company. viDA may mitigate this risk by ensuring adequate financing exists prior to the exposure of any negative results, which will serve to support additional rounds of target development and testing. viDA may also consider licensing the rights to granzyme therapy development for either anti-aging or cardiovascular therapy to enable complete focus on one indication.
- The inherent risk in biotechnology ventures often leads to high percentage equity financing for these ventures. Therefore, board management is essential to maintaining the correct focus and leadership required for growing biotechnology companies. viDA may mitigate any risk in this area by actively managing board members to reflect the needs of the venture during its various stages of growth.
- The importance of Intellectual Property in biotechnology requires extreme due diligence in protecting property rights. viDA may mitigate any risks in IP challenges by seeking out and establishing excellent relationships with IP lawyers specializing in licensing, contract and corporate law in biotechnology.

- Completion of viDA's first product and sales are anticipated to occur according to traditional drug development scheduling, however unforeseeable circumstances may delay the product development and sales schedule. Rigorous project and product management protocols will be developed implemented to help mitigate this risk.
- Inadequate marketing against established competitors leads to dismal sales/revenues; viDA will ensure that the selected marketing and distribution partner(s) will focus on creating an effective marketing campaign. Establishing viDA as a brand may serve to mitigate this risk.
- Superior technologies will minimize the impact viDA's products. viDA will monitor competing technologies closely and increase research, development or marketing efforts appropriately.

9 CONCLUDING STATEMENT

viDA Therapeutics Inc. was created in 2008, when its founders recognized that the booming demand for quality cosmeceutical products is a unique opportunity for their scientific discoveries. viDA is based on ground-breaking research that has the potential to revolutionize the cosmeceutical industry. The intellectual property owned by viDA, the team assembled and the support from the local academic and business community will facilitate its successes. Furthermore, viDA is poised to be the first mover in the area of elastin-inhibiting cosmeceutical therapy for anti-wrinkling and hair regeneration. viDA is seeking \$1.5 million for the seed round and an additional \$6 million in series A financing to develop the products in the large anti-aging market. With revenues of \$56 billion a year in 2006, the anti-aging market is targeted to reach \$79 billion by 2009 market, with a potential of reaching \$111 billion by 2012.

The company's key assets are primarily its patents, its tacit scientific knowledge and its dedication to represent BC's independent provider of aesthetic medicine products and services to doctors. viDA is led by an experienced professional group comprised of scientists, physicians, business consultants and technical experts, that strive to be a long-term, trusted partner for their local and international partners and clients.

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10 APPENDIX I – MARKETING ANALYSIS

10.1 Target Market Segmentation Analysis

The four top market segments for viDA include medical professionals, people at risk for

hair loss, baby boomers, and beauty conscious women. The following table lists details of each

segment.

Medical Professionals
Canadian dermatologists = 580
cosmetic surgeons $= 600$
Canadian cosmetic surgery clinics = 33
Dermatology clinics = 24
Aesthetic Plastic Surgery = 2400
American Academy of Dermatology = 16,000
Total = 31,137
People at Risk for Hair Loss
40-50% of men and women experience hair loss by the age of 50
people aged 20-65 in N.A. = 202,943,269
$= 202,943,269 \ge 50\%$
Total = 101,471,634.5
Baby Boomers
North American pop age 44-64 = 87,330,104
Total = 87,330,104
Beauty Conscious
Females aged $30-49 = 47,194,569$
81% full time employed with average income @ \$36k/yr)
= 47,194,569 x 81% full time employed with average income @ \$36k/yr
Total = 3,822,761.79

Data based from: (Bureau, 2008a, 2008b; Buyer, 2008; Canada, 2008; Cosmeticdesign.com, 2004; Dermatology, 2008; Health, 2008; Surgeons, 2008; Surgery, 2008)

11 APPENDIX II – FINANCIAL STATEMENT

11.1 Income Statement

Pro Forma Income Statement

	2008	2009	2010	2011
D&D (Tarriag)	202 500	277 500	1 602 500	1 670 000
	202,300	277,500	1,002,500	500,000
R&D (Cardio)	202,500	377,500	2,192,500	500,000
General and Administrative	200,000	250,000	500,000	700,000
Patents	100,000	150,000	250,000	250,000
Total Operating Expenses	705,000	1,055,000	4,545,000	3,120,000
Interest Income	30,000	12,500	160,000	60,000
SR&ED Credits	0	162,000	262,000	1,518,000
Grants	150,000	250,000	0	0
Financing	1,000,000	6,000,000	0	0
Total Non-Operating Income	1,180,000	6,424,500	422,000	1,578,000
Net Income	475,000	5,369,500	-4,123,000	-1,542,000

11.2 Annual Balance Sheet

	2008	2009	2010	2011
Assets				
Cash	475,000	4,844,500	1,721,500	179,500
Short Term Investments	0	1,000,000	0	0
Intangible Assets (IP, Management)	1,500,000	5,000,000	8,000,000	20,000,000
Total Assets	1,975,000	10,844,500	9,721,500	20,179,500
Liabilities				
Accounts Payable	50,000	75,000	100,000	150,000
Shareholders' Equity				
Common Stock	1,925,000	10,769,500	9,621,500	20,029,500
Total Liabilities	1,975,000	10,844,500	9,721,500	20,179,500

11.3 Financial Assumptions

- To account for inflation, most operating (e.g. Property lease, legal etc.) and R&D costs were increased at 2% /year.
- Property lease cost is based on \$38/sq ft/yr (industry average).
- Insurance estimate are based on \$30,000 base insurance for property, workers comp etc.
- Increasing intangible assets are assumed to represent increased value of existing IP, as well as the acquisition and development of additional patents and intangible assets.