May 20, 2021

Zacks Small-Cap Research

Sponsored – Impartial - Comprehensive

Steven Ralston, CFA
312-265-9426
sralston@zacks.com

scr.zacks.com

10 S. Riverside Plaza, Chicago, IL 60606

VolitionRx Ltd (VNRX-NYSE American)

Revenues from Nu.Q Vet cancer screening test are ramping up; Silver One expected to generate revenues in 2021

A discounted cash flow (DCF) model that applies a 9.5% discount rate and a 2% terminal growth rate indicates a price target of $8.01 per share.

Current Price (05/19/21)	$3.56
Valuation	**$8.01**

OUTLOOK

Revenues from Nu.Q Vet ramped up in 1Q 2021. **National launch expected this year**.

Silver One, the company's new **production facility** in Belgium is expected to generate revenues in 2021.

VolitionRx continues to pursue **Nu.Q NETs** for monitoring diseases associated with NETosis, such as COVID-19, sepsis, pneumonia and influenza.

Lung cancer assays are expected to be processed and analyzed over the upcoming months.

Large-scale clinical trial for CRC in U.S. has been on pause since May 2020 due to the pandemic.

SUMMARY DATA

52-Week High	**$6.67**
52-Week Low	**$2.82**
One-Year Return (%)	**4.51**
Beta	**1.78**
Average Daily Volume (shrs.)	**307,167**
Shares Outstanding (million)	**52.89**
Market Capitalization ($mil.)	**$188.29**
Short Interest Ratio (days)	**5.86**
Institutional Ownership (%)	**14.77**
Insider Ownership (%)	**34.17**
Annual Cash Dividend	**$0.00**
Dividend Yield (%)	**0.00**
5-Yr. Historical Growth Rates	
Sales (%)	**N/A**
Earnings Per Share (%)	**N/A**
Dividend (%)	**N/A**
P/E using TTM EPS	**N/M**
P/E using 2020 Estimate	**N/M**
P/E using 2021 Estimate	**N/M**

Risk Level	**Above Average**
Type of Stock	**Small-Growth**
Industry	**Med-Tech/Diagnostic**

ZACKS ESTIMATES

Revenue
(in thousands of $US)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2018	0.0 A	0.0 A	0.0 A	0.0 A	0.0 A
2019	0.0 A	0.0 A	17.1 A	0.0 A	17.1 A
2020	0.5 A	5.2 A	0.6 A	7.1 A	13.4 A
2021	25.5 A	46.0 E	76.0 E	130.0 E	277.5 E

Earnings per Share)
(EPS is operating earnings before non-recurring items)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2018	-$0.17 A	-$0.15 A	-$0.14 A	-$0.11 A	-$0.57 A
2019	-$0.12 A	-$0.11 A	-$0.10 A	-$0.09 A	-$0.41 A
2020	-$0.14 A	-$0.12 A	-$0.09 A	-$0.10 A	-$0.45 A
2021	-$0.12 A	-$0.12 E	-$0.10 E	-$0.10 E	-$0.44 E

Quarterly EPS may not equal annual EPS total due to rounding.

© Copyright 2021, Zacks Investment Research. All Rights Reserved.

EXECUTIVE SUMMARY

VolitionRx is engaged in **multiple epigenetic projects** based on company's proprietary Nu.Q™ platform that has developed numerous **blood-based clinical assays**. Several corporate initiatives are generating or are expected to produce revenues in 2021/22, namely **Nu.Q Vet cancer screening tests**, the **Silver One production facility** and **Nu.Q NETs disease monitoring tests**.

Expected Milestones During 2021

- Expanding Nu.Q Vet assay into national distribution either organically or through licensing agreement(s)
- Beta launch of the Nu.Q Vet in Asia and/or Europe.
- Generating revenues from products and services from Silver One: recombinant nucleosomes, antibodies, reagents and supply kits, along with laboratory services and/or contract research (branded as Nu.Q Discover) for external parties
- Filing of FDA 510(k) submission for Nu.Q NETs disease monitoring tests
- Completion of 1,200-subject lung cancer study in Asia (Taiwan)
- Filing of first FDA 510(k) submission for Non-Hodgkin's Lymphoma (NHL)
- Publishing several abstracts and peer-reviewed scientific papers
    - two additional papers on Nu.Q Vet clinical studies

Nu.Q Vet Assay

Management's front-burner commercialization project is the **Nu.Q Vet assay for cancer detection in canines**. The Nu.Q Vet assay was launched on November 30, 2020. This beta launch has been supported by brochures, leaflets, videos and Veterinarian educational efforts. Over 700 tests have been conducted through the first quarter of 2021. The company is fine-tuning the beta launch by addressing nuances of the process, from pricing to packaging. The **Nu.Q Vet cancer screening test** is the company's **first commercial product**.



Volition Veterinary

Volition website - press toolkit

The development of the Nu.Q Vet platform most likely will be geographical expansion throughout the United States, either by means of in-house efforts or through licensing with established companies in the veterinary space. There is also the potential of licensing arrangements for international expansion, particularly in Asia and Europe.

Silver One

VolitionRx acquired and opened **10,000 square-foot building** (dubbed **Silver One**) in 2020. Located in Namur, Belgium in close proximity to the company's R&D center in Isnes, the facility is **now producing recombinant nucleosomes** for in-house use and is expected to be producing antibodies in the very near future. Later in 2021, Silver One will be in a position to produce additional components, such as reagents, along with supply kits. In addition, the company is pursuing

opportunities to provide laboratory services or to act as a contract research facility (branded as **Nu.Q Discover**) for external parties, such as pharmaceutical companies, bio-tech companies and academic researchers.

Nu.Q NETs (disease tests for sepsis, COVID-19 and influenza)

The **research program continues** for the use of Nu.Q™ technology, specifically Nu.Q H3.1 assay, for **NETosis** – the over-production of NETs (neutrophil extracellular traps) that is triggered by the body's immune response to pathogenic stimuli. The Nu.Q assay is being studied for **monitoring the progression of diseases** associated with NETosis, initially **COVID-19** and **sepsis**, in order to determine the efficacy of treatments since the level of nucleosomes appears to be closely correlated to the severity of the disease. Later studies are expected to target **other diseases** associated with NETosis, such as **pneumonia** and **influenza**.

For **sepsis**, **animal studies have been competed** that have demonstrated Nu.Q NETs can effectively monitor the progression the disease progress and can determine the efficacy of treatments. **Human studies are currently underway** at a UK hospital.



Concerning **COVID-19**, during the **first wave** in 2020, studies demonstrated that the **level of nucleosomes is strongly correlated with disease severity and mortality**. During the **second wave**, serial testing studies are being conducted at UK hospitals in order to determine the predictive value of the Nu.Q H3.1 assay. The data is expected to be presented at upcoming conferences.

The company is laying the groundwork for a large U.S. FDA trial and/or FDA 510(k) study which could potentially lead to market approval for Volition's Nu.Q H3.1 assay for **various diseases associated with NETosis**, such as **sepsis**, **COVID-19** and **influenza**. Management is expected to announce further details once the specifics of the projected process have been determined.

*On-going Large-scale "Marquee" Study for **Lung Cancer** in Asia*

In May 2019, VolitionRx signed a formal contract with the **National University of Taiwan to conduct a large-scale lung cancer study**. The study includes **1,200 participants** receiving Low-Dose CT (LDCT) scan, 1,000 of which have lung cancer. Collection commenced in the summer of 2019, but the COVID-19 pandemic impacted the sample gathering process. However, **by May 2021, the target number of patient cohorts had been collected**. The Nu.Q H3.1 assays are expected to be processed and the analysis finalized over the upcoming months. Management is hopeful that **this large 1,200-subject lung cancer study should be completed in 2021** and that the findings will be presented at conferences later in 2021.

In the meantime, an **abstract** on Nu.Q performance in **lung cancer detection was presented** at the International Association for the Study of Lung Cancer's (IASLC's) **World Conference on Lung Cancer** (WCLC) conference **in January 2021**. The presentation, which was based on an interim analysis of a subset of 220 subjects, indicated that the Nu.Q H3.1 assay could help identify non-cancerous nodules following a LDCT scan. As a result, up to 32% of the subjects that were LDCT positive could avoid unnecessary follow-up biopsies.

If the study's data continues to be positive, management plans to initiate a FDA 510(k) regulatory study in the U.S. for lung cancer.

See LUNG CANCER section below for further information on this 1,200-subject study, along with an associated 76-subject proof-of-concept study and an abstract that was presented on a 220-subject subset of the on-going 1,200-subject study.

*On-going Large-scale "Marquee" Study for **Colorectal Cancer** (CRC) in the U.S.*

The U.S. EDRN study for colorectal cancer (6,000 subjects) has been on pause since May 2020 due to the challenges encountered in collecting samples during the COVID-19 pandemic. See COLORECTAL CANCER section below for further information on this Early Detection Research Network study and an associated 123-subject study.

*On-going Clinical Trial for Diagnosis of **Non-Hodgkin's Lymphoma** (NHL) in the U.S.*

In November 2020, Volition engaged Diagnostic Oncology CRO LLC (a contract research organization) to conduct a program that will lead to multiple FDA 510(k) submissions for Nu.Q assay(s) that will assist physicians in distinguishing five of the most common forms of **Non-Hodgkin's Lymphoma** (NHL) from common conditions. At a cost of approximately $2.9 million, the effort will include a **1,500-subject clinical trial** and data analysis, along with the preparation of regulatory and reimbursement submissions. The trial is planned to be conducted across 10 major U.S. healthcare institutions. The pandemic has slightly delayed the collection of samples.

Management's Conceptual Business Development Model

Management's **commercial strategy** has been fine-tuned into **four pillars** composed of Nu.Q Vet, Nu.Q NETs, Nu.Q Capture and Nu.Q.

- **Nu.Q Vet** – pursue full commercialization of the current beta-launched Nu.Q Vet blood assay in the United States, Asia and Europe
- **Nu.Q NETs** – research program to bring the Nu.Q H3.1 assay to commercialization for monitoring the progression of diseases associated with NETosis, such as sepsis, COVID-19 and influenza
- **Nu.Q Capture** – advance sample enrichment platform that enhances samples using mass-spectrometry and/or sequencing in order to be able to better identify new biomarker targets for the purpose of detecting tumors and other mutations
- **Nu.Q Cancer** – ongoing human studies in hematological, lung and colorectal cancers

Management is also looking to quickly advance its market opportunities by expanding and dominating each specific market by driving aggressive volume growth through attractive pricing.



2021 Financings

As of the end of the first quarter of 2021 (March 31st), VolitionRx was at its strongest-ever financial position with cash and cash equivalents of approximately $33.06 million. During the first quarter, approximately $20.3 million was obtained by the issuance of shares through an underwritten public offering in February and through an ongoing at-the-market facility.

On February 12, 2021, VolitionRx closed a public offering of 3,809,524 shares priced at $5.25 per share. **Net proceeds** are estimated to be approximately **$18.87 million**, which will be used for continued product development, clinical studies, product commercialization, working capital and general corporate purposes, including potential strategic acquisitions. The offering was pursuant to a shelf registration statement, and Cantor Fitzgerald & Co. was the sole book running manager.

Also, in early January 2021, VolitionRx was awarded a **cash grant of $1.3 million** and **$2.7 million in loans** from the Walloon Region and Namur Invest, Belgium. This non-dilutive funding brings the total amount awarded from agencies from the Walloon Region to approximately $13 million.

The company's current cash burn rate is approximately $2 million per month.

Significant Equity-Related News

VolitionRx was included into two **Russell Microcap** Indexes in June 2020. The iShares Russell 2000 ETF and the iShares Russell Growth ETF now own 823,959 shares of VNRX or 1.56% of the shares outstanding.

RECENT FINANCIAL REPORTS

First Quarter 2021 Financial Results

On May 12, 2021, VolitionRx reported financial results for the first quarter ending March 31, 2021. Total revenues were $25,530, which was driven by product revenue from direct sales of the Nu.Q Vet cancer screening tests being processed by the GI laboratory at Texas A&M University.

Operating expenses increased 4.1% from $5.87 million to $6.11 million. R&D expenses declined 0.6% to approximately $3.87 million as higher personnel and laboratory expenses were offset by lower antibody costs and lower costs related the acquisition of Volition Germany (fka Octomer). G&A expenses increased 6.3% to approximately $1.81 million, primarily driven by higher stock-based compensation and legal fees. Sales and marketing expenses increased 56.0% as an increase in by higher stock-based compensation and personnel costs.

For the first quarter, VolitionRx reported a net loss of $6.13 million (or $0.12 per diluted share) versus a net loss of approximately $5.86 million (or $0.14 per diluted share) in the comparable quarter last year.

As of March 31, 2021, working capital was approximately $28.7 million, improving over 100% above the $14.1 million on December 31, 2020. Shares outstanding increased by 8.8% to 52,871,001 shares from 48,607,017 shares on December 31, 2020.

Full Year 2020 Financial Results

On March 22, 2021, VolitionRx reported financial results for the year ending December 31, 2021. Total revenues declined 21.4% to $13,433 versus $17,096 in 2019. At this point in the company's life

cycle, revenues are minimal, but with the launch of the company's first commercial product in late November 2020, product revenues are expected to increase significantly in 2021.

Total operating expenses increased 32.4% from $16.1 million in 2019 to $21.2 million in 2020 driven primarily by a 40.2% increase in R&D expenses, which was related to higher antibody, sample, laboratory and personnel expenses, particularly employee acquisition costs related to Volition Germany (fka Octomer).

For the year, VolitionRx reported a **net loss** attributable to shareholders of $20.35 million (or **$0.45 per diluted share**) versus $16.01 million (or $0.41 per diluted share) in 2019.

As of December 31, 2020, working capital was approximately $14.1 million, a $5.6 million improvement from the year ending on December 31, 2019. A healthy level of cash and cash equivalents of approximately is $19.4 million, a health amount to sufficiently fund operations for the next 12 months. **Shares outstanding increased by 18.2%** to 48,607,017 shares since December 31, 2019.

OVERVIEW

VolitionRx is a multi-national **epigenetics company** with a focus on **developing blood tests (assays)** that can help detect a range of cancers and other diseases so that appropriate treatment may be prescribed. Blood tests are a diagnostic tool that is relatively simple to administer, convenient and cost-effective. Also, as a front line screening modality, **blood tests would be the optimal approach for the diagnosis of life-threatening diseases** (especially cancer), where early diagnosis is the key factor for survivability.

Management's goal is to lead the foray and then dominate the epigenetics diagnostics space. The company has developed the **Nu.Q platform**, which is designed to accurately identify and measure the amount of nucleosomes (and chromatin) in the bloodstream. Each Nu.Q blood assay or panel is intended to detect epigenetically-altered, circulating nucleosomes, which are biomarkers for cancer and other diseases. The company is in the process of developing and clinically testing multiple blood assays, particularly for lung, colorectal and hematological cancers.

VolitionRx has undertaken the task to address a global unmet need - the scarcity of robust, low-cost screens for cancer. For example, the predominant screens for **lung cancer** are a chest x-ray and/or CT scan, both of which subject patients to radiation. If a suspected area of cancer is detected, a biopsy follows, which has the associated risks of pneumonia, blood clots, infection, adverse anesthesia complications, pleural effusion or pneumothorax (i.e. a collapsed lung, which occurs in 15% of lung biopsy patients[i]). For **colorectal cancer**, a patient is advised to undergo a colonoscopy, which is invasive and can cause an infection, perforation (incidence of 1.96 per 1,000 procedures), bleeding and, in rare cases, death (probability of 0.01%[ii]). Therefore, many patients are reticent to undergo a colonoscopy, and some forgo the test altogether. For those who choose to avoid a colonoscopy and are later diagnosed with stage IV colorectal cancer, little more than 5% survive for five years. Conversely, those diagnosed with stage I bowel cancer (through early detection) have a five-year survival rate of 89.8%.[iii] An early diagnosis of both lung and colorectal cancer dramatically improves a patient's outcome. A low-risk, low-cost, blood-based test would aid in realizing an earlier diagnosis for many patients.

VolitionRx has a substantial IP portfolio with **66 patents**, including 10 in the U.S., 14 in Europe and an additional 42 worldwide as of March 31, 2021. The company has 93 patent applications pending.

The company's **principal research and development center** is located in Isnes, **Belgium**. Opened in 2017, the **custom-designed facility** has 20,000 sq. ft. of office and R&D space, of which 10,000

square feet is devoted to the laboratory. Here, the company has the ability to conduct R&D and clinical studies in-house.



VolitionRx Presentation May 13, 2020

The company has **acquired** a second **10,000 square-foot building** (dubbed **Silver One**) that is situated in close proximity to the company's R&D center. The building has been refurbished and will serve as a production facility for components and supply kits, a service laboratory and contract research facility.

VNRX Added to the Russell 3000 and Russell Microcap Indexes

VolitionRx was added to both the **Russell 3000** and **Russell Microcap Indexes** effective on the close of June 26, 2020. The Russell indexes are reconstituted annually and many mutual funds benchmark to these indices. Consequently, the **shareholder base** of VolitionRx ought to **broaden**, and the stock should experience **greater liquidity**. In addition, the inclusion of the company's stock into these two Russell indices should **expand awareness** of VolitionRx among investors, both retail and institutional.

VOLITION VETERINARY DIAGNOSTICS - CANINE CANCER

On June 3, 2019, VolitionRx formed **Volition Veterinary Diagnostics Development LLC**, which focuses on the veterinarian diagnostics market. Canine cancer represents a sizeable market as approximately 6.0 million cases of canine cancer are diagnosed each year in the U.S.[iv] compared to 1.76 million human cancers.[v] Roughly 25% of dogs develop cancer at some point in their lives, most often at an age between 8 and 10 years old. With pricing likely to be in the $100-to-$200 per test range, the canine cancer opportunity could be in the hundreds of millions of dollars.

Currently, there is a scarcity of accurate, simple and affordable cancer screening tests in veterinary medicine. In response to the initial symptoms of lethargy, lesions and/or soreness, a veterinarian grapples with a definitive diagnosis of the various possibilities (inflammation, infection, cancer etc.). For an infection, the line of treatment would be to prescribe an antibiotic and then wait-and-see if the dog's condition improves. The screening methodology for cancer involves taking a scan or a biopsy, which is expensive and not without risk, since anesthesia is necessary, in some cases. A front-line blood test that could rule-in or rule-out cancer would aid the diagnosis process and allow for a more effective and less expensive treatment regimen.

Management's goal is to provide all veterinarian clinics with blood tests that can help identify canine cancers early. **Management intends to expand from the current one biomarker** in the company's

current portfolio, **to several biomarkers in order to create a panel** in order to increase the accuracy of a single assay.

On October 25, 2019, VolitionRx **partnered with the Texas A&M College of Veterinary Medicine** & Biomedical Sciences. In exchange for 12.5% ownership of the veterinary subsidiary, Texas A&M University will conduct numerous clinical studies that will test whether VolitionRx's blood tests can detect canine cancer. VolitionRx holds 87.5% of the subsidiary.

The first canine clinical study with Texas A&M University was completed in April 2020. In the **proof of concept study,** a single Nu.Q Vet assay detected almost 70% of two cancers (Canine Hemangiosarcoma and Canine Lymphoma, which account for almost a third of all canine cancers). At a specificity of 90%, **AUCs were 84.5% and 83.1%** for cancer versus healthy.

The second canine clinical study was completed in September 2020 by the Texas A&M College of Veterinary Medicine. The study of 334 dogs (134 health control animals, 73 with Hemangiosarcoma and 127 with Lymphoma) demonstrated good clinical discrimination. The nucleosome levels were consistently low in healthy canines and elevated in those with Hemangiosarcoma and Lymphoma. The Area Under the Curve (**AUC**) for Hemangiosarcoma and Lymphoma were **97.6% and 87.3%,** respectively. At 100% Specificity, the Nu.Q Vet test demonstrated **detection rates** of **89% and 74%** in the canines with Hemangiosarcoma and Lymphoma, respectively.

The Nu.Q Vet test for the diagnosis of canine cancer was launched on November 30, 2020. Initially, the canine cancer test is being sold through the Texas A&M College of Veterinary Medicine. Then, in 2021, with assistance from Texas A&M, VolitionRx will pursue registering the product with the USDA (United States Department of Agriculture). Management believes that a canine cancer test could be a relatively fast-moving program given the less-stringent USDA regulatory pathway for animal diagnostics versus FDA's PMA or 510(k). Once registered, the company intends to pursue a licensing agreement with one or more animal diagnostics companies in order to launch the product nationwide.

The Nu.Q Vet cancer screening test for canines was **launched on November 30, 2020** through Texas A&M College of Veterinary Medicine. The test is being recommended for the **early detection** of cancer **in older dogs** (seven years and older) during their annual health checkup, especially for **at-risk breeds** that are particularly susceptible to cancer (neoplasia) such as Bernese Mountain Dogs, Golden Retrievers, Scottish Terriers, Bouvier des Flandres and Boxers.[vi] The test is also being positioned for dogs that have developed clinical signs of cancer. The tests are being processed at the GI Lab at Texas A&M University.

The beta launch is being marketed to general practice veterinarians in Texas and specialist canine oncologists. A report entitled ***A Look to the Future of Cancer Diagnostics***, which relays insights from four veterinary oncologists, along with supporting clinical data of the Nu.Q Vet test, is being used to support the launch, along with brochures and leaflets (which can be viewed on the company's website under the PRESS ROOM tab in Presentations and Posters).

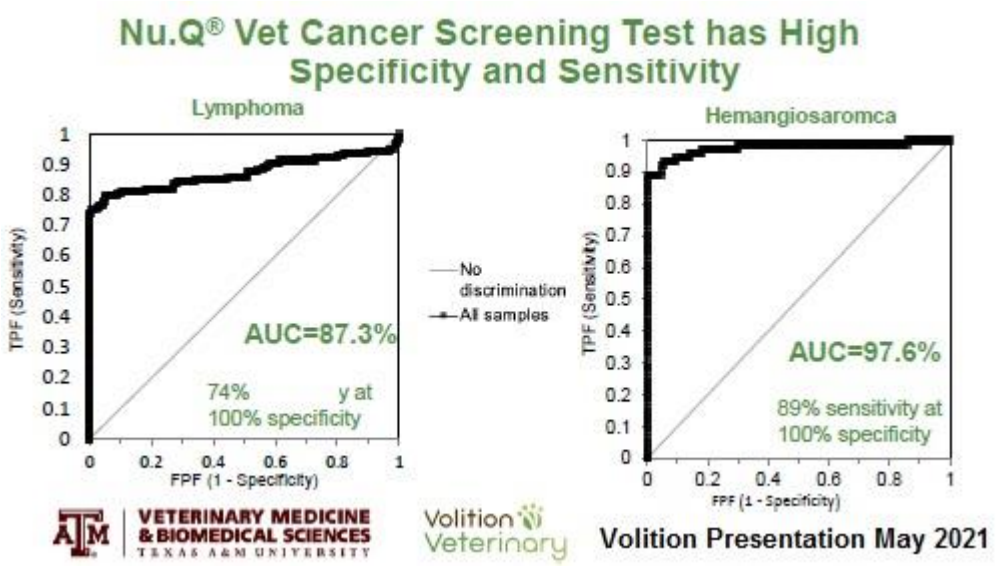
The Nu.Q Vet cancer screening test is a non-invasive, ELISA-based blood test that was developed to screen for certain canine cancers, namely **Lymphoma** (a cancer of lymphocytes and lymphoid tissues) and **Hemangiosarcoma** (a cancer of blood vessel walls, particularly in the heart and spleen). Lymphoma and Hemangiosarcoma account for approximately 33% of canine cancers, which is the most common cause of death in dogs that are three years or older. Golden Retrievers, Labrador Retrievers and German Shepherds are the most commonly affected breeds by Hemangiosarcoma in the spleen and heart.[vii] Almost 50% of all dogs over 10 years old develop cancer.[viii] According the American Veterinary Medical Association's 2017-2018 U.S. Pet Ownership & Demographics Sourcebook, there are 76.8 million canine companion animals in the U.S,[ix] and according to the National Cancer Institute, **more than 6 million dogs are diagnosed with cancer every year**. This represents a potentially significant **market opportunity** for millions of annual

cancer tests. VolitionRx is currently **pricing each test around $45** (85% gross margin) in anticipation that veterinarians will charge between $160 and $200 at the point of service. Interestingly, canine lymphoma is similar to human non-Hodgkin's lymphoma.

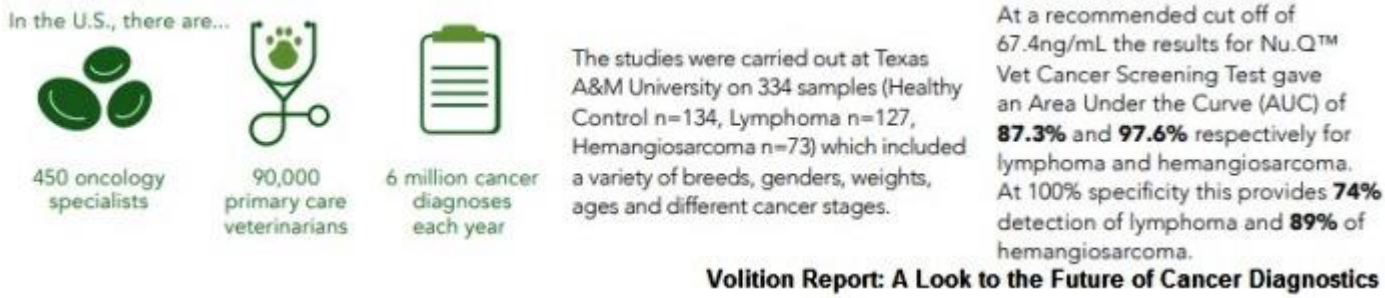
Two Abstracts Presented at the VCS Annual Conference in October 2020

VolitionRx Vet presented **two abstracts** at Veterinary Cancer Society Annual Conference (VCS 2020), which was held virtually between October 15th and 17th.

- Characterizing Circulating Nucleosomes in the Plasma of Dogs with **Lymphoma**
- Characterizing Circulating Nucleosomes in the Plasma of Dogs with **Hemangiosarcoma**



In a study of 334 dogs (134 health control animals, 73 with Hemangiosarcoma and 127 with Lymphoma), the Nu.Q cancer screening test demonstrated good clinical discrimination. The nucleosome levels were consistently low in healthy canines and elevated in those with Hemangiosarcoma and Lymphoma. The Area Under the Curve (**AUC**) for Hemangiosarcoma and Lymphoma were **97.6% and 87.3%,** respectively. At 100% Specificity, the Nu.Q Vet test demonstrated **detection rates** of **89% and 74%** in the canines with Hemangiosarcoma and Lymphoma, respectively. The clinical study was conducted by the Texas A&M College of Veterinary Medicine.

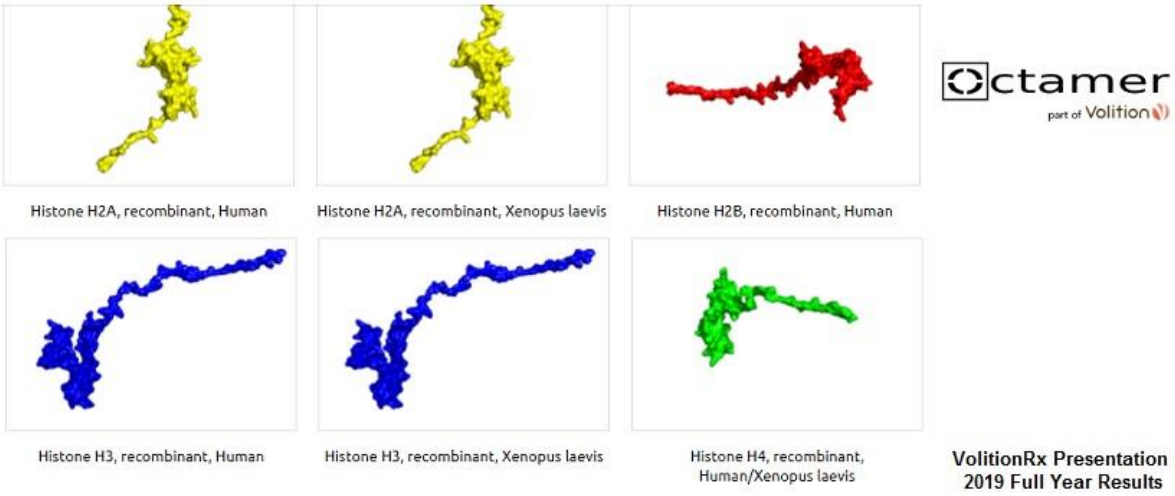


MANUFACTURING FACILITY (NAMUR, BELGIUM)

On January 10, 2020, Volition **acquired Octamer GmbH** for €650,000 (approximately **$725,000**, of which $412,404 [€371,736] was in cash and 73,263 in restricted common shares of VNRX). Located in Gräfelfing, Bavaria, Octamer is an epigenetic reagent company. This **strategic acquisition** provided Volition with the in-house capability to **manufacture recombinant nucleosomes**, which

are used as calibrants and are key components of Volition's Nu.Q platform. In addition, Octamer manufactures and sells **other epigenetic reagents** used in epigenetic research and drug discovery, such as histones, octamers and DNA templates. Not only does the acquisition help secure VolitionRx's supply chain, it also can allow the pace assay development work to increase. Dr. Adrian Schomburg, founder and CEO of Octamer, joined VolitionRx's Scientific Advisory Board.

In the first quarter of 2020, Octamer GmbH was **renamed Volition Germany GmbH**.



VolitionRx Presentation 2019 Full Year Results

Production Facility in Belgium (Silver One)

VolitionRx **acquired** a **10,000 square-foot building** (dubbed **Silver One**) that is situated in close proximity to the company's R&D center. The manufacturing facility opened on January 25, 2021. By May 2021, Silver One began producing recombinant nucleosomes, which are being used for the company's Nu. Q assay product line. The new facility not only brings the manufacture of components in-house, but also will significantly reduce production costs of the company's assay products.

The cost of the building and its fit-out was slightly over $1 million. VolitionRx **borrowed €830,000** ($973,000) from Preface S.A in order **to finance the acquisition of Silver One** and **the renovations required to convert the building** into an operative production facility. The 10-year loan carries an interest rate of 4%. The building will serve as a production facility for components and supply kits, a contract research facility and a service laboratory, which can provide sample processing services for third parties.

Silver One Manufacturing Facility



VolitionRx Press Release YouTube video January 25, 2021

Nu.Q NETs Assay

VolitionRx is seeking to develop a COVID-19 triage test that is to be performed as a companion test **after** a patient has tested positive through one of the many front-line diagnostic PCR (polymerase chain reaction) screening tests approved under the Emergency Use Authorization (EUA) authority of the FDA. The purpose is to develop a **prognostic predictor** of the severity of the COVID-19 disease in a given patient.

Management believes that Nu.Q-developed blood tests for circulating nucleosome debris and NETs production may be able to provide early insight into and predict the evolution of the severity of the disease in COVID positive patients. Volition is investigating if Nu.Q epigenetic assays are able to **triage patients** into those that have a higher probability of requiring higher levels of therapeutic treatment in preparation for the onset of serious symptoms (e.g. immune suppressors, hospitalization, oxygen, ventilation, intubation, etc.) versus those that do not have a likelihood of developing serious symptoms, and therefore, not needing critical care. Those patients with low levels of nucleosome could be sent home to self-isolate and be monitored. Currently, doctors wait for the onset of more serious symptoms before requiring hospitalization, wasting valuable time that could be used to treat patients sooner and more effectively in the hospital.

By detecting elevated levels of nucleosomes and Neutrophil Extracellular Traps (NETs) BEFORE the onset of serious symptoms, management believes a Nu.Q assay has the potential to identify patients that ultimately will require hospitalization. In addition, not only are these elevated levels are anticipated to precede the actual onset of serious symptoms, but also the actual level is believed to serve as a **quantitative risk stratification tool**. It is supposed that more timely detection would lead to earlier appropriate treatment, which, in turn, would lead to better patient outcomes. Also, effective triaging of patients would result in a more efficient use of critical care resources.

If it is demonstrated that a VolitionRx Nu.Q assay is a robust prognostic predictor of the impending severity of the disease, the Nu.Q prognostic test would be administered immediately after a patient tests positive. However, the **potential market** would be larger, since not only would every patient be administered the initial triage test upon testing positive, but also each patient would be subjected to a series of potentially daily assays until the patient finally tests negative.

VolitionRx is proceeding with the process to determine the prognostic potential of a COVID-19 triage test using the Nu.Q H3.1 assay, which was developed on the company's Nu.Q epigenetic platform.

The participants in the **first proof-of-concept study** were 34 PCR COVID-19 positive subjects and 50 control subjects located in Isnes, Belgium. The preliminary study revealed that **PCR positive subjects exhibited elevated levels of nucleosomes relative to healthy control subjects**. The **AUC** (Area Under the Curve) **for a single Nu.Q assay was 98.7%** for PCR positive COVID patients versus control subjects with a sensitivity of 100% at 94% specificity. In other words, almost everyone who tested positive for COVID-19 had elevated nucleosomes. A second Nu.Q assay also revealed promising results with an AUC of 86.2%.

A **follow-up proof-of-concept study demonstrated stratification.** Two independent cohorts of COVID-19 positive patients at University Hospital Liege, Belgium and at the German Heart Center in Munich, Germany, were administered quantitative nucleosome immunoassays. It was found that the highest levels of nucleosome debris and NETs production (which is a result of a ramp-up of the immune system) were found in patients in the ICU that required ventilation. In addition, both histone 3.1 variant and citrullinated nucleosomes increased with disease severity. Importantly, there was a **correlation between the level of nucleosome elevation and the severity of the disease**. Healthy control subjects had the lowest levels nucleosome debris.

The results of these proof-of-concept clinical studies were submitted for peer review in July 2020. The associated article, "Circulating Nucleosomes as potential prognostic markers for COVID-19 disease severity," was presented at the virtual MEDICA conference on November 19, 2020.

Management is **now focused on larger longitudinal studies** in order to **determine the lead time** between the realization of high levels of circulating nucleosome debris (and NETs production) and the onset of severe symptoms. Therefore, management believes that the demonstrated correlation implies strong prognostic and that circulating nucleosomes could serve as a biomarker for disease severity in COVID-19 positive patients.

A novel patent has been filed with the FDA for this COVID-19 triage test. The COVID-19 triage test uses the Nu.Q H3.1 assay, which has already received the European CE Mark certification for the blood cancer test in January 2021. The CE Mark helps sets the stage for FDA approval in 2021.

Nu.Q COVID-19 Triage Test Expanded into Research Program Targeting NETosis

In the process of advancing the company's Nu.Q COVID-19 Triage Test, management expanded the research program to encompass **NETosis**, the activation and release of neutrophil extracellular traps (NETs) for the purpose of binding pathogens as an immune response to infections. The pandemic has brought the study of NETosis to the forefront due to the human body's over-response to COVID-19.

VolitionRx is laying the groundwork for a large U.S. FDA trial and/or FDA 510(k) study for using the company's assay for diagnostic tests and disease monitoring (particularly for monitoring the response to therapeutic treatments) of NETs-related diseases, including sepsis, COVID-19 and influenza. Management will announce details of this initiative once the specifics have been finalized. VolitionRx has **filed a novel patent** for the application of the company's assays for NETosis.

Nu.Q™ PROCESS RE-ENGINEERED

In early 2020, VolitionRx completed a project that **re-engineered the Nu.Q assay platform**. Previously, Volition's assays utilized a plate format, a process that utilizes high protein-binding plates and requires a six-hour incubation period. After the re-engineering project, assays now use a **magnetic particle-based assay format** that gives a chemiluminescent endpoint which requires less than two hours. Luminescent assays are known to be very sensitive and have a wide dynamic range. Therefore, there has been a **step-change improvement** in analytical performance in terms of sensitivity, throughput and reproducibility, along with improved specificity and reduced background noise, all of which translates into improved clinical performance. In addition, the matrix was changed from serum to plasma, which enhanced accuracy (through an improved noise-to-signal ratio).

The magnetic particle-based chemiluminescent assay format provides at least a **10-fold improvement in analytical sensitivity** compared to the prior plate format due to the benefits of using blood plasma, which aided in reducing interferences. In addition, the new format **cuts the turnaround time** of test results with the time required to process a test having been reduced from six hours to one hour and 20 minutes. Obviously, this enables a much **higher throughput**. **Reproducibility** of test results is excellent, which improved from below 10% to just below 3%.

The re-engineered Nu.Q assay format can be used on a wider range of commercial, fully-automated platforms, and the FDA has approved the automated immunoassay analyzer with all of the above improvements for clinical use in the U.S. and Europe. Through the first quarter of 2020, VolitionRx has developed eight different bead-based Nu.Q assays on the new, re-engineered assay platform.

Even under the new re-engineered the Nu.Q assay platform, a few assays will continue to utilize the plate process, the triage tests and research-use kits, to name a couple.

LUNG CANCER

In early 2019, VolitionRx conducted a lung cancer **proof-of-concept study** with **76 subjects**. A Nu.Q assay detected lung cancer, including stage I cancer, with an **AUC of 85%** (cancer versus healthy). In a second confirmatory cohort with **152 subjects**, the same, single Nu.Q assay detected lung cancer with an **AUC of 79%**.

In May 2019, VolitionRx signed a formal contract with the **National University of Taiwan to conduct a large-scale lung cancer study**. The study includes **1,200 participants** receiving low-dose CT scan, 1,000 of which have lung cancer. Collection commenced in the summer of 2019, but the COVID-19 pandemic impacted the sample gathering process.

On January 28, 2021, VolitionRx had an **abstract presented** at the World Conference on Lung Cancer on a **220-subject subset** of the on-going 1,200-subject, **large-scale lung cancer study**. The abstract entitled *Circulating Nucleosomes in Lung Cancer Diagnosis following Low-Dose Computed Tomography* was virtually presented by Dr. Tung-Ming Tsai of the **National Taiwan University Hospital**.

The data suggests that Nu.Q™ assays could help identify non-cancerous nodules following a Low-Dose Computed tomography (LDCT) scan. LDCTs have limitations including poor specificity (i.e. a high percentage of false positives). The study's results suggest that Nu.Q assay for nucleosome detection may be able to discriminate well between non-cancerous benign nodules versus early-stage lung cancer. This ability **could reduce the number of unnecessary biopsies by as much as 32%**.

The study could provide the first statistically-powered evidence of the potential utility of Nu.Q diagnostics as a screen for lung cancer or as an adjunct/triage test for low-dose CT. LDCT, currently the only recommended screening test for lung cancer, has drawbacks including its relatively high cost, patient exposure to radiation, over-diagnosis and a potential for meaningful rates of false-positives. As such, an adjunct or triage test that could improve accuracy of lung cancer screening and/or reduce the need for LDCT (without compromise to diagnosis) could have massive appeal, in our opinion.

COLORECTAL CANCER (CRC)

In early 2019, VolitionRx conducted a CRC **proof-of-concept study** with **123 subjects**, a single Nu.Q assay detected CRC with an **AUC of 72%** (cancer versus healthy). In the same cohort, a two-assay panel, which included the initial Nu.Q assay and an inflammatory biomarker test, had an **AUC of 84%**. The goal will be to replicate and confirm these results with reproducible assays in a larger study.

VolitionRx has several large-scale, ongoing colorectal cancer studies. In July 2018, VolitionRx signed an agreement with the **National University of Taiwan to conduct two, large-scale, three-year colorectal cancer studies: a** 5,000 subject asymptomatic screening study and a 2,000 subject symptomatic study. As of July 2020, **more than 50% of the samples have been collected**, but the COVID-19 pandemic is impacting the same gathering process.

CRC Trial Timelines of VolitionRx

Institution	Condition	Sample Collection	Cohort	Timing
Early Detection Research Network of the U.S. National Cancer Institute (EDRN)	Colorectal Cancer	9,000 Prospective, 4,600 Retrospective	13,500 + Screening Population	Collection Ongoing to 2020.
National Taiwan University	Colorectal Cancer	Prospective	5,000 Asymptomatic Patients	Collection Ongoing to 2021.
National Taiwan University	Colorectal Cancer	Prospective	2,000 Symptomatic Patients	Collection Ongoing to 2021.

VolitionRx 10-K 2018

The target number of samples for the prospective sampling in the EDRN trial (in the table above) is now at a minimum of 6,000 subjects. Given the shutdowns and lockdown restrictions in the U.S., the COVID-19 pandemic has slowed rate of collection, and at times, halted collections altogether. Due to slower-than-expected collections, management anticipates that the trial will be extended

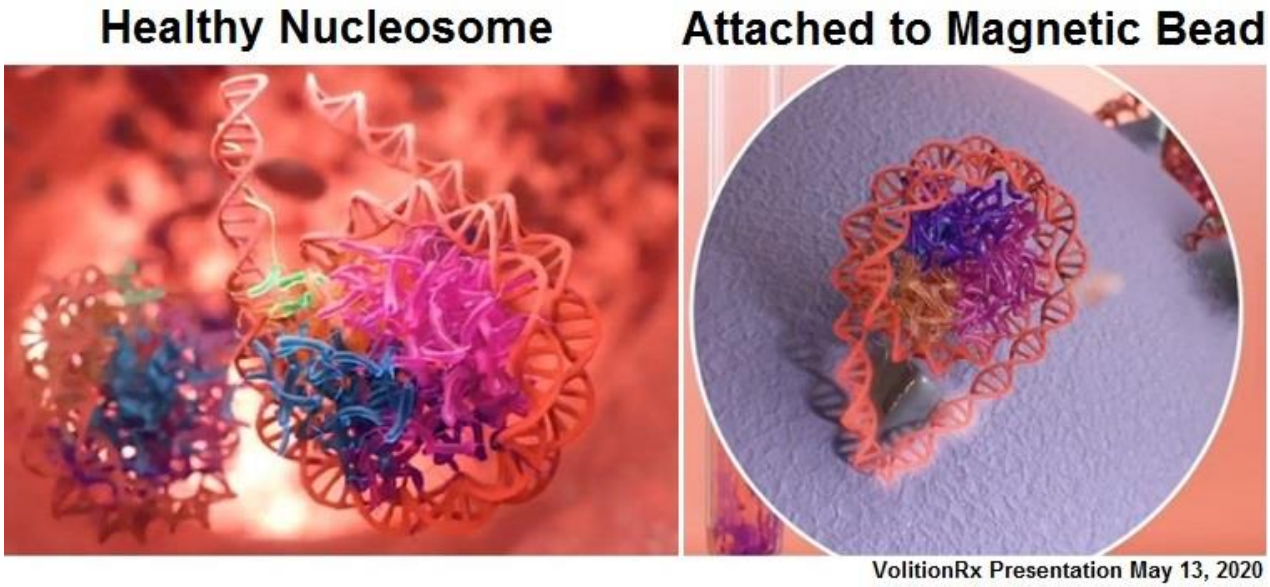
HEMATOPOIETIC (BLOOD-BORNE) CANCER

In December 2019, VolitionRx announced the results from **a proof of concept study** with 54 subjects diagnosed with hematopoietic cancers. A single Nu.Q assay was used to investigate whether the hematopoietic cancer could be detected. The Nu.Q assay detected blood cancer with an AUC of 91% (cancer vs. healthy). Specifically, the test detected 80% of the subjects diagnosed with Non-Hodgkin's Lymphoma, Acute Lymphocytic Leukemia and Acute Myeloid Leukemia at 95% specificity among healthy subjects. A number of other assays in development also demonstrated promising individual assay results with AUCs ranging from 79% to 91%.

The Nu.Q assay appears quite robust and seems to have high sensitivity. The results of this proof of concept study suggest that the Nu.Q assay could be potentially used to screen people for early detection of a wide variety of cancers.

Nu.Q™ CAPTURE TECHNOLOGY

Nu.Q Capture technology is based on the ability to **extract and isolate nucleosomes** (chromosome fragments) from blood samples. Consequently, the technology is able to isolate the nucleosomes containing particular epigenetic signals from the other particles in the blood that cause background noise, which **should improve accuracy** by reducing the number of false positives and false negatives. The isolation of nucleosomes would also allow for further investigation of those nucleosomes with mass spectrometry for further analysis and identification, which **could lead to the discovery of other biomarkers**. After Nu.Q Capture technology has been sufficiently advanced, **management plans to integrate Nu.Q Capture with Nu.Q assays**. Also, there could be a licensing opportunity to enable other companies in the liquid biopsy space to produce enriched samples (utilizing the Nu.Q Capture process) that would enhance their efforts in sequencing research.



Chromosomes from healthy cells are different from cancer cells both in their genetic sequence and in terms of their protein structure due to epigenetic differences. When cells die (apoptosis), chromosomes are degraded by enzymes, and the resulting fragmentation releases subunits called nucleosomes. These now circulating nucleosomes retain the epigenetic information of the chromosome. Nucleosomes from healthy chromosomes are slightly longer than those from cancerous chromosomes due to the linking characteristics of healthy DNA.

Nu.Q Capture is designed to pull out healthy nucleosomes from a plasma sample. Magnetic beads (that are coated with a protein that binds to linker DNA) are inserted into the plasma sample. Only the nucleosomes with linker DNA (healthy chromosomes) bind to the magnetic beads. The sample is then subjected to a magnetic field, drawing aside the magnetic beads with the longer healthy nucleosomes attached, allowing for the extraction of the shorter nucleosomes. The process allows for the capture and separation of shorter (potentially malignant) nucleosomes from a plasma sample. Analysis of the enriched sample of shorter nucleosomes (and their associated DNA content) is more accurate for diagnostic applications and disease monitoring due to the removal of the background noise from healthy, longer chromosomes. Also, it is easier to identify new biomarker targets in enriched samples through mass spectrometry.

In late May 2020, VolitionRx shared data at the ASCO meeting from a study on colorectal cancer that used the new enhanced Nu.Q Capture process. The study clearly demonstrated the separation of short and long nucleosomes from cancer cell lines and no difference in samples from healthy controls.

In March 2021, a clinical paper entitled *Serial profiling of cell-free DNA and nucleosome histone modifications in cell cultures* was published in Nature's Scientific Reports. This first paper on Nu.Q Capture detailed the company's novel approach to epigenetic profiling of select circulating nucleosomes in the blood of cancer patients in order to identify new biomarkers.

EQUITY FINANCINGS

On May 22, 2020, VolitionRx closed a public offering of 5,019,750 shares priced at $2.75 per share. **Gross proceeds were $13.8 million**. Net proceeds will be used for continued product development, clinical studies, product commercialization, working capital and general corporate purposes, including potential strategic acquisitions.

Under an Equity Distribution Agreement (aka At The Market equity offering program or ATM) with Oppenheimer & Co., VolitionRx issued 436,372 shares under this shelf registration statement during the first half of 2020. **Net proceeds were approximately $1.7 million**. Subsequent to the quarter end, approximately an additional 1.2 million shares were sold under the ATM. **Net proceeds were approximately $4.7 million**.

During the third quarter of 2020, 450,000 options were exercised resulting in the issuance of 91,458 shares with the company receiving **net proceeds of $82,500**. In addition, 25,000 warrants were exercised resulting in the issuance of 25,000 shares and the company receiving **$61,750** in proceeds.

On November 12, 2020, a new Equity Distribution Agreement was entered into that provides for the sale of up to $25,000,000 worth of VolitionRx common stock by Oppenheimer and Cantor acting as joint sales agents. This ATM (At The Market) offering (aka shelf offering) supplements the EDA dated September 28, 2018.

On February 12, 2021, VolitionRx closed a public offering of 3,809,524 shares priced at $5.25 per share. **Net proceeds** are estimated to be approximately **$18.87 million**, which will be used for continued product development, clinical studies, product commercialization, working capital and general corporate purposes, including potential strategic acquisitions. The offering was pursuant to a shelf registration statement, and Cantor Fitzgerald & Co. was the sole book running manager.

VALUATION

Utilizing a financial model based on DCF methodology, which forecasts out to 2030, and uses a 9.5% discount rate (based on CAPM) and a 2% terminal growth rate, the indicated value of VNRX is **$8.01 per share**.

RISKS

- VolitionRx is a clinical stage company. Since its formation, the company has incurred losses due to the continued spending on the time-consuming and costly efforts to discover and develop diagnostic products, including conducting clinical studies, obtaining regulatory clearance/approval in the United States, Asia and Europe Management expects continued losses from ongoing research and development expenses, along with administrative, manufacturing, sales and marketing expenses.

- Additional capital is required to continue funding management's strategic plan of commercializing the Nu.Q platform through the development of a suite of blood-based diagnostic tests. To date, VolitionRx has been successful in raising capital to fund the company's initiatives.

- If third parties are believed to have infringed on the company's patents, the ensuing litigation would be time-consuming and costly. Conversely, third parties might believe that their proprietary rights have been infringed, which might also result in time-consuming and costly litigation, along with potentially impinging on VolitionRx's ability to manufacture and sell certain future products.

BALANCE SHEET

VolitionRx Limited

(in $US except share data)	2017	2018	2019	2020	1Q 2021
Period ending	12/31/2017	12/31/2018	12/31/2019	12/31/2020	3/31/2021
ASSETS					
Cash and cash equivalents	10,116,263	13,427,222	16,966,168	19,444,737	33,061,711
Accounts receivable	-	-	-	7,118	14,238
Prepaid expenses	248,661	245,441	267,518	303,178	1,095,971
Other current assets	202,295	229,755	322,593	576,660	496,902
Total Current Assets	**10,567,219**	**13,902,418**	**17,556,279**	**20,331,693**	**34,668,822**
Property, plant and equipment	3,480,782	3,119,643	2,981,225	5,171,134	5,249,398
Operating lease right-of-use assets	-	-	381,483	326,085	303,548
Intangible assets	576,397	466,905	372,305	321,641	288,003
TOTAL ASSETS	**14,624,398**	**17,488,966**	**21,291,292**	**26,150,553**	**40,509,771**
Accounts payable	351,735	807,162	627,253	1,539,547	1,463,963
Accrued liabilities	1,278,428	923,034	2,168,588	3,491,740	3,365,696
Management and directors' fees payable	35,397	1,200	21,979	55,174	39,484
Current portion of long-term debt	443,908	416,553	647,569	841,319	840,556
Current portion of financing lease liabilities	139,084	145,150	97,946	59,930	56,941
Current portion of operating lease liabilities	-	-	257,244	179,624	167,364
Deferred grant income	-	-	-	-	-
Current portion of grant repayable	41,930	40,094	39,295	69,218	66,475
Total Current Liabilities	**2,290,482**	**2,333,193**	**3,859,874**	**6,236,552**	**6,000,479**
Long-term debt	1,312,785	1,984,262	2,195,278	2,606,885	2,390,687
Financing lease liabilities	874,684	720,013	607,708	601,967	564,484
Operating lease liabilities	-	-	131,875	151,828	142,015
Grant repayable	188,579	311,042	297,991	259,603	249,313
Non-Current Liabilities	**2,376,048**	**3,015,317**	**3,232,852**	**3,620,283**	**3,346,499**
TOTAL LIABILITIES	**4,666,530**	**5,348,510**	**7,092,726**	**9,856,835**	**9,346,978**
SHAREHOLDERS' EQUITY					
Common Stock	26,519	35,335	41,125	48,607	52,871
Additional paid-in capital	65,774,870	85,604,271	103,853,627	126,526,239	147,382,487
Accumulated other comprehensive income	(129,343)	223,651	125,670	(59,978)	74,155
Accumulated deficit	(55,714,178)	(73,722,801)	(89,821,856)	(110,173,971)	(116,290,117)
Total VolitionRx Stockholders' Equity	**9,957,868**	**12,140,456**	**14,198,566**	**16,340,897**	**31,219,396**
Non-controlling interest	-	-	-	(47,179)	(56,603)
Total Stockholders' Equity	**9,957,868**	**12,140,456**	**14,198,566**	**16,293,718**	**31,162,793**
TOTAL LIABILITIES & STOCKHOLDERS' EQUITY	**14,624,398**	**17,488,966**	**21,291,292**	**26,150,553**	**40,509,771**
Shares outstanding	26,519,394	35,335,378	41,125,303	48,607,017	52,871,001

PROJECTED ANNUAL NCOME STATEMENTS

VolitionRx Limited

Income Statement (in $US, except share and per share data)	2017 12/31/2017	2018 12/31/2018	2019 12/31/2019	2020 12/31/2020	2021 E 12/31/2021
Product	-	-	-	11,321	242,530
Service (Contract lab services)	-	-	16,204	0	35,000
Royalty (Research kits)	-	-	892	2,112	0
Total Revenues	**0**	**0**	**17,096**	**13,433**	**277,530**
Expenses					
Research and development	8,906,006	10,906,871	10,363,253	14,533,862	15,963,313
General and administrative	5,376,500	5,821,072	4,731,054	5,654,018	6,007,951
Sales and marketing	763,407	1,169,756	965,713	1,073,368	1,828,503
Total Operating Expenses	**15,045,913**	**17,897,699**	**16,060,020**	**21,261,248**	**23,799,768**
Loss Before Other Income	**(15,045,913)**	**(17,897,699)**	**(16,042,924)**	**(21,247,815)**	**(23,522,238)**
Grant income	-	-	155,031	635,513	0
Interest income	-	-	112,367	49,495	15,121
Interest (expense)	(73,133)	(110,924)	(126,572)	(129,799)	(161,282)
Gain on disposal of fixed assets	-	-	-	293,312	0
Other income (expense)	349,839	-	(196,957)	0	0
Total Other Income (Expenses)	**276,706**	**(110,924)**	**(56,131)**	**848,521**	**(146,161)**
Net Gain (Loss)	**(14,769,207)**	**(18,008,623)**	**(16,099,055)**	**(20,399,294)**	**(23,668,399)**
Net Gain (Loss) Non-Controlling Int.	-	-	-	(47,179)	(54,115)
Net Gain (Loss) - VNRX Stockholders	**(14,769,207)**	**(18,008,623)**	**(16,099,055)**	**(20,352,115)**	**(23,614,284)**
Basic and diluted loss per share	**(0.56)**	**(0.57)**	**(0.41)**	**(0.45)**	**(0.44)**
Wgted. Avg. Shares Out. - diluted	26,389,580	31,389,220	39,180,369	45,278,847	54,082,250

PROJECTED QUARTERLY INCOME STATEMENTS

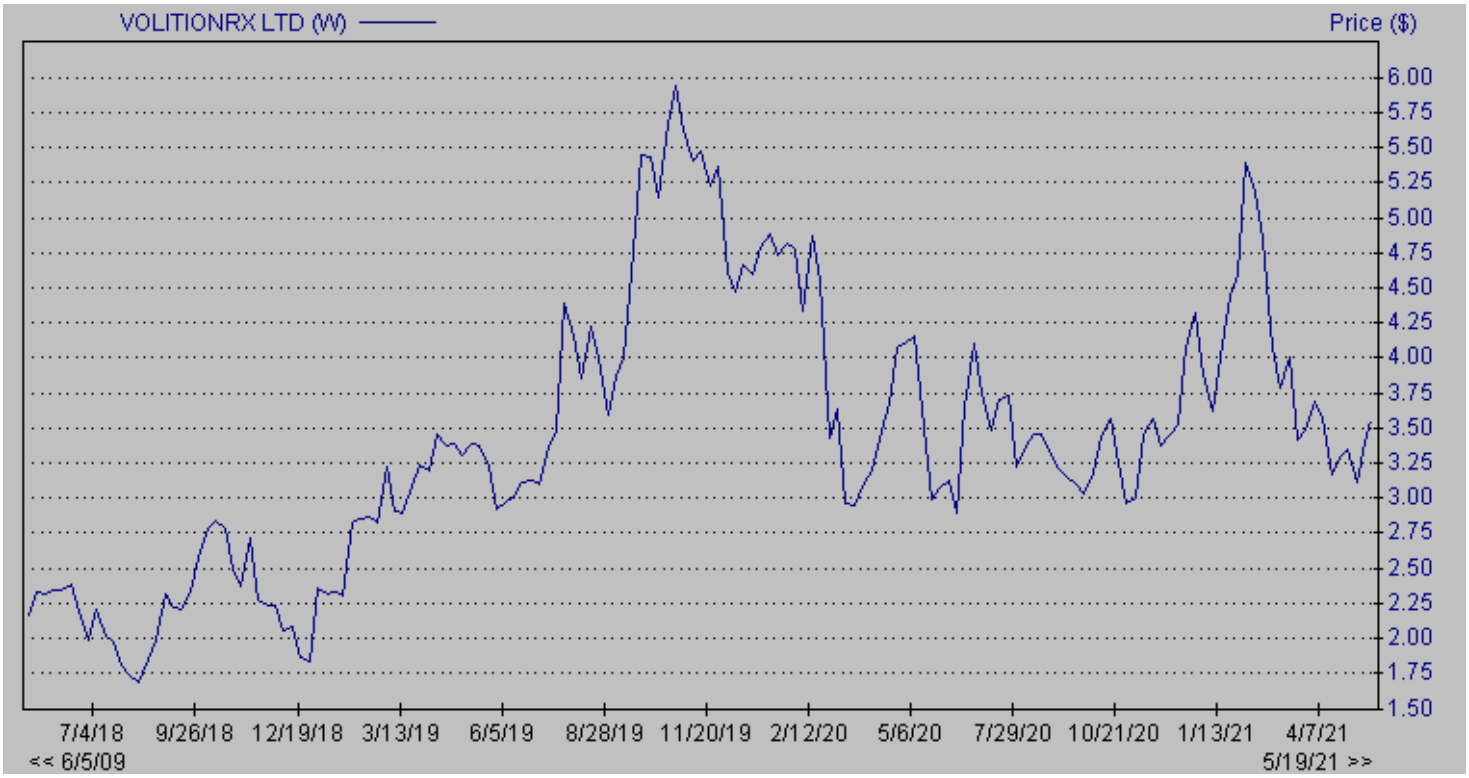
VolitionRx Limited

Income Statement (in $US except share and per share data)	2019 12/31/2019	1Q 2020 3/31/2020	2Q 2020 6/30/2020	3Q 2020 9/30/2020	4Q 2020 12/31/2020	2020 12/31/2020
Product	892	304	3,322	575	7,120	11,321
Service (Contract lab services)	-	-	-	-	-	0
Royalty (Research kits)	16,204	240	1,872	0	0	2,112
Total Revenues	**17,096**	**544**	**5,194**	**575**	**7,120**	**13,433**
Expenses						
Research and development	10,363,253	3,894,966	3,492,845	3,180,177	3,965,874	14,533,862
General and administrative	4,731,054	1,703,522	1,508,836	1,080,308	1,361,352	5,654,018
Sales and marketing	965,713	273,954	215,891	244,510	339,013	1,073,368
Total Operating Expenses	**16,060,020**	**5,872,442**	**5,217,572**	**4,504,995**	**5,666,239**	**21,261,248**
Loss Before Other Income	**(16,042,924)**	**(5,871,898)**	**(5,212,378)**	**(4,504,420)**	**(5,659,119)**	**(21,247,815)**
Grant income	155,031	7,924	90,946	0	536,643	635,513
Interest income	112,367	38,414	7,741	2,801	539	49,495
Interest (expense)	(126,572)	(33,779)	(22,604)	(34,722)	(38,694)	(129,799)
Gain on disposal of fixed assets	0	0	93,202	200,393	(283)	293,312
Other income (expense)	(196,957)	0	0	0	0	0
Total Other Income (Expenses)	**(56,131)**	**12,559**	**169,285**	**168,472**	**498,205**	**848,521**
Net Gain (Loss)	**(16,099,055)**	**(5,859,339)**	**(5,043,093)**	**(4,335,948)**	**(5,160,914)**	**(20,399,294)**
Net Gain (Loss) Non-Controlling Int.	-	(9,567)	(5,779)	(8,050)	(23,783)	(47,179)
Net Gain (Loss) - VNRX Stockholders	**(16,099,055)**	**(5,849,772)**	**(5,037,314)**	**(4,327,898)**	**(5,137,131)**	**(20,352,115)**
Basic and diluted loss per share	**(0.41)**	**(0.14)**	**(0.12)**	**(0.09)**	**(0.10)**	**(0.45)**
Wgted. Avg. Shares Out. - diluted	39,180,369	41,197,125	43,414,318	47,027,011	49,475,000	45,278,847

VolitionRx Limited

Income Statement (in $US except share and per share data)	2020 12/31/2020	1Q 2021 3/31/2021	2Q E 2021 6/30/2021	3Q E 2021 9/30/2021	4Q E 2021 12/31/2021	Estimate 2021 12/31/2021
Product (Nu Vet)	11,321	25,530	46,000	66,000	105,000	242,530
Service (Contract lab services)	0	-	-	10,000	25,000	35,000
Royalty (Research kits)	2,112	0	0	0	0	0
Total Revenues	**13,433**	**25,530**	**46,000**	**76,000**	**130,000**	**277,530**
Expenses						
Research and development	14,533,862	3,873,079	3,950,541	4,029,551	4,110,142	15,963,313
General and administrative	5,654,018	1,810,160	1,603,287	1,147,934	1,446,571	6,007,951
Sales and marketing	1,073,368	427,401	446,634	466,733	487,736	1,828,503
Total Operating Expenses	**21,261,248**	**6,110,640**	**6,000,462**	**5,644,218**	**6,044,449**	**23,799,768**
Loss Before Other Income	**(21,247,815)**	**(6,085,110)**	**(5,954,462)**	**(5,568,218)**	**(5,914,449)**	**(23,522,238)**
Grant income	635,513	0	0	0	0	0
Interest income	49,495	1,721	7,700	4,000	1,700	15,121
Interest (expense)	(129,799)	(42,181)	(40,916)	(39,688)	(38,497)	(161,282)
Gain on disposal of fixed assets	293,312	0	0	0	0	0
Other income (expense)	0	0	0	0	0	0
Total Other Income (Expenses)	**848,521**	**(40,460)**	**(33,216)**	**(35,688)**	**(36,797)**	**(146,161)**
Net Gain (Loss)	**(20,399,294)**	**(6,125,570)**	**(5,987,677)**	**(5,603,906)**	**(5,951,246)**	**(23,668,399)**
Net Gain (Loss) Non-Controlling Int.	(47,179)	(9,424)	(6,861)	(10,404)	(27,425)	(54,115)
Net Gain (Loss) - VNRX Stockholders	**(20,352,115)**	**(6,116,146)**	**(5,980,816)**	**(5,593,502)**	**(5,923,821)**	**(23,614,284)**
Basic and diluted loss per share	**(0.45)**	**(0.12)**	**(0.12)**	**(0.10)**	**(0.10)**	**(0.44)**
Wgted. Avg. Shares Out. - diluted	45,278,847	50,928,742	51,947,317	54,544,683	58,908,257	54,082,250

HISTORICAL STOCK PRICE



DISCLOSURES

The following disclosures relate to relationships between Zacks Small-Cap Research ("Zacks SCR"), a division of Zacks Investment Research ("ZIR"), and the issuers covered by the Zacks SCR Analysts in the Small-Cap Universe.

ANALYST DISCLOSURES

I, Steven Ralston, hereby certify that the view expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the recommendations or views expressed in this research report. I believe the information used for the creation of this report has been obtained from sources I considered to be reliable, but I can neither guarantee nor represent the completeness or accuracy of the information herewith. Such information and the opinions expressed are subject to change without notice.

INVESTMENT BANKING AND FEES FOR SERVICES

Zacks SCR does not provide investment banking services nor has it received compensation for investment banking services from the issuers of the securities covered in this report or article.
Zacks SCR has received compensation from the issuer directly, from an investment manager, or from an investor relations consulting firm engaged by the issuer for providing non-investment banking services to this issuer and expects to receive additional compensation for such non-investment banking services provided to this issuer. The non-investment banking services provided to the issuer includes the preparation of this report, investor relations services, investment software, financial database analysis, organization of non-deal road shows, and attendance fees for conferences sponsored or co-sponsored by Zacks SCR. The fees for these services vary on a per-client basis and are subject to the number and types of services contracted. Fees typically range between ten thousand and fifty thousand dollars per annum. Details of fees paid by this issuer are available upon request.

POLICY DISCLOSURES

This report provides an objective valuation of the issuer today and expected valuations of the issuer at various future dates based on applying standard investment valuation methodologies to the revenue and EPS forecasts made by the SCR Analyst of the issuer's business.
SCR Analysts are restricted from holding or trading securities in the issuers that they cover. ZIR and Zacks SCR do not make a market in any security followed by SCR nor do they act as dealers in these securities. Each Zacks SCR Analyst has full discretion over the valuation of the issuer included in this report based on his or her own due diligence. SCR Analysts are paid based on the number of companies they cover.

SCR Analyst compensation is not, was not, nor will be, directly or indirectly, related to the specific valuations or views expressed in any report or article.

ADDITIONAL INFORMATION

Additional information is available upon request. Zacks SCR reports and articles are based on data obtained from sources that it believes to be reliable, but are not guaranteed to be accurate nor do they purport to be complete. Because of individual financial or investment objectives and/or financial circumstances, this report or article should not be construed as advice designed to meet the particular investment needs of any investor. Investing involves risk. Any opinions expressed by Zacks SCR Analysts are subject to change without notice. Reports or articles or tweets are not to be construed as an offer or solicitation of an offer to buy or sell the securities herein mentioned.

---

[i]Annals of Internal Medicine, August 2, 2011

[ii] Risk of Perforation After Colonoscopy and Sigmoidoscopy: A Population-Based Study, Journal of the National Cancer Institute, Volume 95, Issue 3, 5 February 2003, pages 230–236

[iii] https://www.healthline.com/health/colorectal-cancer-survival-rate

[iv] Animal Cancer Foundation https://acfoundation.org/faqs/

[v] American Cancer Society, Cancer Facts & Figures 2019, page 2

[vi] Mortality in North American dogs from 1984 to 2004: an investigation into age-, size-, and breed-related causes of death," (J Vet Intern Med 2011;25(2):187-198).

[vii]Morris Animal Foundation, https://www.morrisanimalfoundation.org/article/understanding-hemangiosarcoma

[viii] American Veterinary Medical Association, https://www.avma.org/resources/pet-owners/petcare/cancer-pets

[ix] American Veterinary Medical Association, https://www.avma.org/resources-tools/reports-statistics/us-pet-ownership-statistics