Volition (1)

Corporate presentation

May 2022

Forward Looking Statements and Disclaimer



Statements in this document may be "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, that concern matters that involve risks and uncertainties that could cause actual results to differ materially from those anticipated or projected in the forward-looking statements. Words such as "expects," "anticipates," "intends," "plans," "aims," "targets," "believes," "seeks," "estimates," "optimizing," "potential," "goal," "suggests," "could," "would," "should," "may," "will" and similar expressions identify forward-looking statements. These forward-looking statements relate to the timing, completion and delivery of data from clinical studies, the effectiveness of Volition's blood-based diagnostic and prognostic tests as well as Volition's ability to develop and successfully commercialize such test platforms for early detection of cancer and other diseases as well as serving as a diagnostic or prognostic tool for COVID-19. Volition's actual results may differ materially from those indicated in these forward-looking statements due to numerous risks and uncertainties, including, without limitation, results of studies testing the efficacy of its tests. For instance, if Volition fails to develop and commercialize diagnostic or prognostic products, it may be unable to execute its plan of operations. Other risks and uncertainties include Volition's failure to obtain necessary regulatory clearances or approvals to distribute and market future products; a failure by the marketplace to accept the products in Volition's development pipeline or any other diagnostic or prognostic products Volition might develop; Volition's failure to secure adequate intellectual property protection; Volition will face fierce competition and Volition's intended products may become obsolete due to the highly competitive nature of the diagnostics market and its rapid technological change; downturns in domestic and foreign economies; and other risks identified in Volition's most recent Annual Report on Form 10-K and Quarterly Reports on Form 10-Q, as well as other documents that Volition files with the Securities and Exchange Commission. These statements are based on current expectations, estimates and projections about Volition's business based, in part, on assumptions made by management. These statements are not guarantees of future performance and involve risks, uncertainties and assumptions that are difficult to predict. Forward-looking statements are made as of the date of this release, and, except as required by law, Volition does not undertake an obligation to update its forward-looking statements to reflect future events or circumstances.

NucleosomicsTM and Nu.Q[®] and their respective logos are trademarks and/or service marks of VolitionRx Limited and its subsidiaries. All other trademarks, service marks and trade names referred to in this press release are the property of their respective owners. Additionally, unless otherwise specified, all references to "\$" refer to the legal currency of the United States of America.

Introduction



Our mission is
to **save** lives and **improve**outcomes for
millions of people
worldwide.

- We are a leading epigenetics company
- We are dedicated to advancing the science of epigenetics through our patented Nucleosomics™ platform.
- We aim to revolutionize the diagnosis and monitoring of life-altering diseases, through low cost routine blood tests.
- 90 patents granted with more than 100 additional patents pending
- Early stages of our commercialization starting to monetize our Intellectual Property

Early diagnosis saves lives



Imagine a world where diseases like cancer and sepsis can be diagnosed **early** and monitored easily using **routine** blood tests.

That's the world we're trying to build by developing our ground-breaking family of simple, low-cost Nu.Q[®] tests.





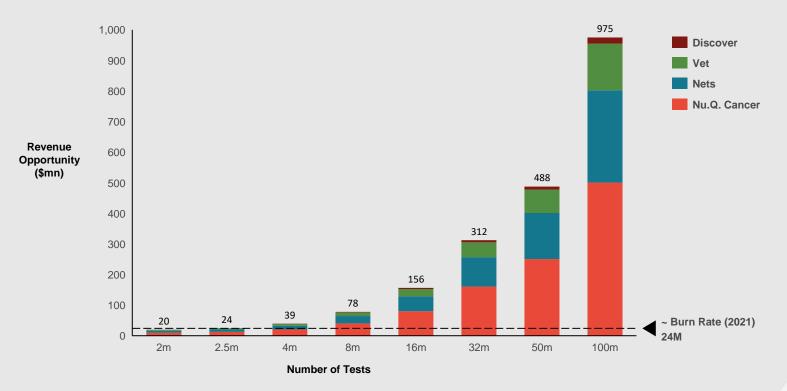








Opportunity simulation across all products*

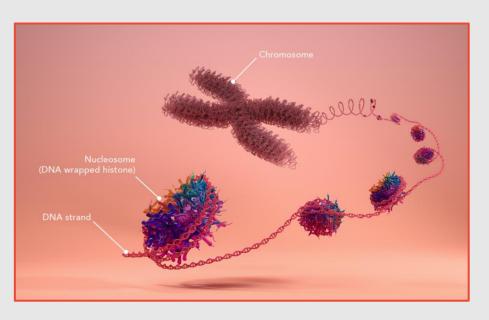


*Not revenue or margin guidance. Based on averages across all products

Sources: Volition Internal Analysis, Illustrative

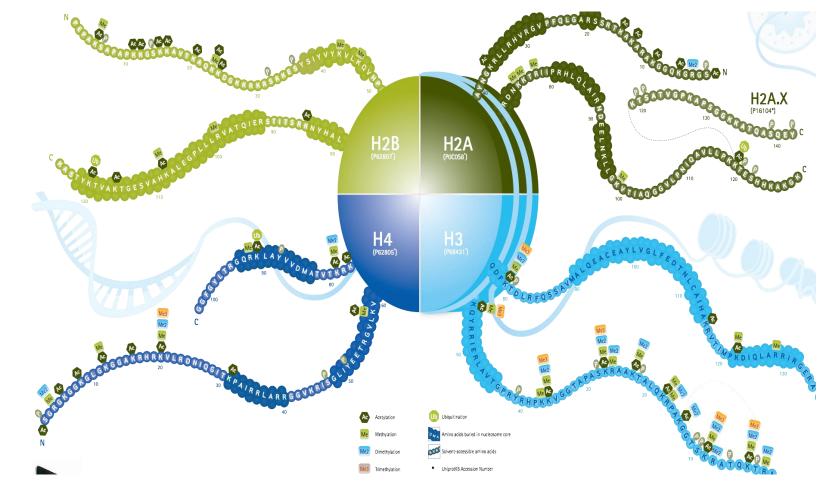
Nu.Q® - the basic concept (across species)





- Every 150 base pairs of DNA are wrapped around a nucleosome to form a DNA-Nu complex
- Each individual bead is called a nucleosome
- Nucleosomes consist of DNA and histone proteins.
 Histones and DNA are subjected to a variety of epigenetic modifications
- cancer leads to cell death which results in fragmentation and release of nucleosomes into the blood
- Nu.Q® assays quantify nucleosomes from different origins e.g. cancer versus healthy using simple immunoassay, mass spectrometry, and/or sequencing.





How will Nu.Q® make a difference?



Our Nu.Q® tests detect various characteristic changes in nucleosomes that occur from the *earliest* stages of disease.



Population screening



Risk stratification & diagnostic aid



Disease and treatment monitoring

How can our Nu.Q® tests be used?



- Early detection of canine cancer
 Disease response and progression Disease response and progression monitoring
- Detection, risk stratification and monitoring of NETosis (in sepsis and COVID-19)

- Early detection of blood, lung, colorectal and other human cancers. Disease and treatment monitoring of blood cancers.
- An enabling technology in the liquid biopsy space, to capture and An enabling technology in the liquid biopsy space, to capture and concentrate nucleosomes containing particular epigenetic signals for further analysis, more accurate diagnosis and to guide treatment further analysis, more accurate diagnosis and to guide treatment.

Property of Volition[©] 2022 Slide 9



Our Product Proposition



- The Nu.Q® Vet Cancer Test is positioned for use in the annual health check of older dogs (those that are seven years and older) and may also be a complementary test for younger dogs at high risk for developing cancer in their lifetimes such as Golden Retrievers
- It is a **simple**, **low-cost**, **easy to use** ELISA based screening blood test which will help streamline the diagnostic process for up to 1/3rd of malignancies in dogs namely Lymphoma and Hemangiosarcoma.
- In a study of over 330 dogs, at **97%** specificity, the Nu.Q[®] Vet Cancer Test identified **77%** of lymphomas and **82%** of hemangiosarcoma versus control^{1,2}.
- It is available from the GI Lab at Texas Results due 3-5 business days

- 1. 2017-1018 AVMA Pet Ownership and Demographics SourceBook
- 2. https://fetchacure.org/resource-library/facts//
- https://gco.iarc.fr/today/data/factsheets/populations/840-united-states-of-america-factsheets.pdf







Commercial Strategy

Licensing Update



Global Licensing & Supply Agreement



Heska

- is a leading global provider of advanced veterinary diagnostics.
- is dedicated to developing the next generation of rapid, low-cost, point-of-care diagnostics for companion animals.
- has a worldwide distribution and partnering network.
- shares our philosophy, our work ethic and vision as to how Nu.Q® Vet can really help save lives and improve outcomes for millions of pets worldwide.



The Deal



Subset of the Veterinary Diagnostics Market – Cancer for companion animals

Our executed agreement provides **Heska**:

- Exclusive rights to sell Volition's Nu.Q[®] Vet Cancer Test for companion animals at the point of care.
- Non-exclusive rights to sell the Nu.Q[®] Vet Cancer Test for companion animals via Heska's reference laboratories and,
- Exclusive rights to canine cancer monitoring and feline lymphoma tests at the point of care.



The Deal



Our executed agreement provides Volition:

- \$10 million upfront payment (received Q1 2022)
- Up to \$13 million in milestone payments (expected 2022-23)
- Further \$5 million milestone payment (expected 2024)
- ongoing payment for kits and key components (for both reference lab and POC)

EVERY TIME Heska sells a test Volition will make money

Other deals?



- In advanced negotiations with other potential licensing partners
- ... so please watch this space for further details in 2022.

Product Development



Extended Product Claims

Monitoring for disease response and progression

2022

Published new data

VCS 2021:

Monitoring for disease response and progression

Volition's sample enrichment tool, Nu.Q® Capture, in dogs.

Posters available on website Multi-cancer paper accepted for publication

Significant Market Opportunity



- 38% of U.S. Households have a dog the highest rate since measuring began in 1982¹
- Approx. 77 million dogs¹
- Target 7 yrs old+ dogs approx. 20 million dogs¹
 Plus, younger dogs for "at-risk" breeds
- 83% of dogs visit Veterinarian at least once a year¹
- 75% of visits are for routine/preventative care¹

Approx. 2.28 million cancer diagnoses in HUMANS in the U.S. each year³

Approx.6 million cancer diagnoses in DOGS in the U.S. each year²

More than **2.5X**

- 1. 2017-1018 AVMA Pet Ownership and Demographics SourceBook
- 2. https://fetchacure.org/resource-library/facts//
- https://gco.iarc.fr/today/data/factsheets/populations/840-united-states-of-america-factsheets.pdf



Current Focus Areas



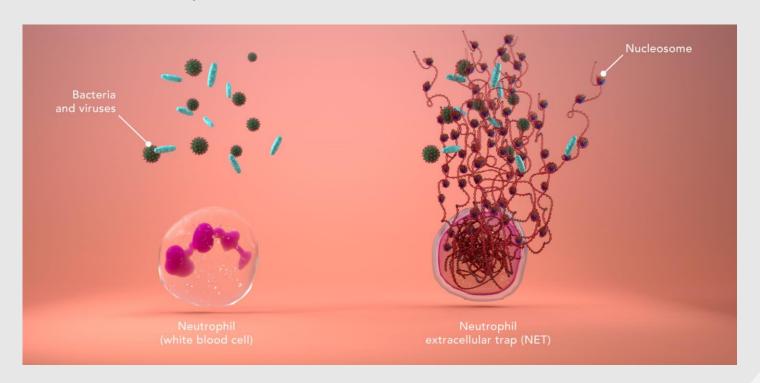
Monitoring the immune system to save lives.



Developing a diagnostic solution for NETosis



An abnormal immune response



Property of Volition[©] 2022

What is NETosis?



- During infection, white cells migrate to the infected tissue to engulf invading pathogens and to produce antibodies against them.
- In addition, white cells called neutrophils unwind their chromosomes and eject chromatin material, consisting of strings of nucleosomes, out of the cell to form NETs (Neutrophil Extracellular Traps).
- Bacteria and viruses become trapped in the NETs and are killed by cytotoxic proteins.
- However, excessive production of NETs can damage the tissue and lead to the formation of potentially dangerous minute blood clots called microthrombi.
- Sepsis & severe COVID-19 are caused by excessive production of NETs.

The ejected NETs can be measured using Volition's Nu.Q® nucleosome assays.

NETs Update



- Wide applicability for monitoring diseases with a NETs component (e.g.COVID-19, influenza, sepsis, autoimmune diseases & cancer)
- Data published show that the level of circulating NETs, as measured using our Nu.Q[®] NETs assays, correlates with current disease severity and mortality in COVID-19 patients.
- In addition, the studies show that our NETs-based tests could be used to predict future disease severity and guide treatment selection in patients, on admission.
- CE Mark for first NETs product, across multiple platforms, expected by summer 2022
- Plan to register with broad 'CRP style' claim "for the detection and evaluation of infection, tissue injury, inflammatory disorders and diseases associated with NETosis".
- Product Manager in place
- Developing U.S. study plan geared toward FDA approval

Developing a diagnostic solution for NETosis



- Working with Santersus technology cleanses blood of NETs as treatment for sepsis
- Animal study using Nu.Q® NETS to monitor treatment response to their developmental plasmapheresis treatment published
 - It demonstrated that Nu.Q[®] is an effective method for monitoring Santersus' highly selective plasmapheresis treatment targeting NETs in sepsis¹.
- Santersus embarking on next phase of studies, using Volition's Nu.Q[®] assays to monitor treatment response, including their first human trial.

Therapeutic Removal of NETs from Blood in a Pig Model of Sepsis. E-ISFA conference A. Aswani3, 2, D. Genkin2, P. Skorup 4, J. Micallef 1, M. Wargnies 1, R. Varsebroucq 1, M. Lipcsev

Developing a diagnostic solution for NETosis



- Given broad range of potential use case settings for Nu.Q[®] NETs, currently driving forward commercialization plans.
- Product Manager appointed
- Aim to launch a CE Marked Nu.Q® NETs product later this year, across multiple platforms, followed by FDA approval.

Developed a Clinical Study and Regulatory plan including FDA.

discover



Nu.Q® Discover



- Nu.Q® Discover gives clinicians, patients, and researchers access to a range of state-of-the-art assays, built on our proprietary Nucleosomics™ platform, for rapid epigenetic profiling in disease model development, preclinical testing and clinical trials.
- Existing and potential customers include both pharmaceutical companies and academic research institutions.

Hit our milestone - signing our first Nu.Q Discover Agreement in 2021

- Great momentum signed further five deals in Q1 2022
- Demonstrates the adaptability of our platform

What sets us apart?

Our **key** differentiator is our Intellectual Property



- Our products are protected until at least 2031 including animal diagnostics
- Further breakthrough patents ongoing

102 patents pending worldwide



32 patent families

63 additional patents granted worldwide in growing IP portfolio

12 patents granted in the U.S.

15 patents granted in Europe

Property of Volition[©] 2022 Slide 29



Total Addressable Market \$70 billion*

*subject to fluctuations based on numerous assumptions, which, if prove incorrect could materially impact our estimations and results.

Nu.Q[®] Vet



- approximately \$11 billion* per annum worldwide
- based on global canine and feline populations that are eligible for screening and monitoring
- and a price assumption of \$50 per test to the consumer

Nu.Q® Discover

- >\$200 million* per annum worldwide
- based on drug pipeline data of registered clinical trial programs for relevant epigenetic targets

Nu.Q® NETs

- approximately \$22 billion* per annum worldwide
- based on estimated hospital admissions & discharges for sepsis and the associated average length of stay.

Nu.Q® Cancer

- approximately \$37 billion* per annum worldwide
- based on eligible populations for annual screening, target participation rates and incidence/prevalence of specific cancers and risk stratification use cases.

*subject to fluctuations based on numerous assumptions, which, if prove incorrect could materially impact our estimations and results.

Priorities



Focus on driving revenue in the following areas:

- Licensing of its technology, with a particular but not exclusive focus on Nu.Q[®] Vet.
- Complete Heska Corporation agreement milestones in order to receive further milestone payments.
- Sales of key components of Point of Care test with Heska.
- Sales of kits from non-exclusive agreements for the use of Nu.Q[®] Vet via central reference labs.
- Ongoing and new Nu.Q[®] Discover agreements.
- Sales of its disease monitoring tests (e.g. sepsis, COVID-19).



Key Financials Q1 2022

NYSE American: VNRX

Market Cap: \$142.01m*

52-week range: \$2.38-\$4.14*

Monthly Burn: Approx. \$2m**

Cash-on-hand: ~\$23.7m**

* As of May 9th, 2022

**Q1 2022 As of March 31, 2022



What sets us apart?

Our team are leading experts in epigenetics

- +10 years mastering our understanding of nucleosomes.
- Developed proprietary, broad-reaching platform technology
- Purpose-built R&D & production facilities in Belgium & U.S.
- High-throughput, low-cost diagnostic and monitoring solutions which meet unmet clinical needs resulting in huge commercial opportunity
- Seasoned executive team
- Well-positioned for commercialization

Executive Team



Dill Faulkes PhD, Executive Chairman - Dill Faulkes has over 30 years of entrepreneurial and managerial experience as the founder and CEO of several software companies within the United Kingdom and the United States. As the Founder and one of the Benefactors of the Dill Faulkes Educational Trust, a UK registered charity, Dill also focuses on charitable activities.



Cameron Reynolds MBA, President & Grou Chief Executive Officer - Cameron has extensive experience in the management, structuring, and strategic planning of start-up companies and has held positions including Chief Executive Officer, Chief Financial Officer, and Non-Executive Director of public and private enterprises. Cameron was educated at the University of Western Australia receiving both a B.Com. and an MBA.



Terig Hughes, Group Chief Financial Officer – Terig is a seasoned finance professional with over twenty-five years of accounting, finance and business management experience gained through an international career spanning US, Europe and Asia. Terig received a Bachelor's degree in Accounting and Law from De Montfort University, Leicester, UK.



Gaetan Michel PhD, Chief Operating Officer – Gaetan has over 15 years' project management, manufacturing and operational experience at AAT (Advanced Array Technology), EAT (Eppendorf Array Technology), KitoZyme a global manufacturer of biopolymers of fungal origin and latterly Volition. Gaetan was educated at the University of Namur, Belgium receiving both a Bachelor of Science and a PhD.



Nick Plummer, Group General Counsel - Nick has over 25 years experience as a corporate and commercial lawyer, specializing in healthcare. Nick qualified with the international law firm, Ashurst, and has since worked in-house for companies such as Novacyt, Ark Therapeutics PLC and Patheon, which is part of Thermo Fisher Scientific.

Executive Team



Jake Micallef PhD MBA, Chief Scientific Officer - Jake is an experienced scientist with expertise in research and development and in the management of biotechnical companies, including manufacturing and establishing operations. He received his BSc and a PhD in Physical Chemistry from King's College London. In addition, he received his MSc in Chemical Pathology, and an MBA from Imperial College Management School.

Jasmine Kway PhD, Chief Executive Officer, Singapore Volition - Jasmine has a proven track record in achieving positive business results by developing strategic business alliances and identifying new markets. She has successfully commercialised and expanded companies into the Asian markets. Jasmine has a B.Eng and a PhD in Oceanography from the National University of Singapore.

Tom Butera DVM, Chief Executive Officer of VVDD – Tom is a Doctor of Veterinary Medicine with more than 40 years of experience in equine and small animal health in private practice, as well as extensive work in both business development and management of veterinary companies. He earned his Doctor of Veterinary Medicine from the University of Missouri Veterinary School, going on to serve as an Assistant Professor at Tufts University Veterinary School. Tom is an honorary member of the American Veterinary Medical Association and a licensed veterinarian in the Commonwealth of Massachusetts.



Heather Wilson-Robles DVM, Chief Medical Officer of VVDD — Heather is a well-established veterinary medical oncologist specializing in canine models of human cancer. Her research over the past 15 years has focused on improving canine models of pediatric and adult cancers and translating these findings to the mutual benefit of both species. Her basic research focuses on the identification and targeting of the tumor-initiating cells in osteosarcoma, melanoma and mammary/breast cancers in both canines and humans.

Gael Forterre MBA, Chief Commercial Officer - Gael has extensive experience investing in and scaling fast-growing companies, most recently as CEO of Path Inc. He is currently a non-executive board member of Integrated Wellness Holdings. Gael started his career as a hedge fund analyst in Paris and worked in a number of investment banking and more recently executive roles over fifteen plus years. Gael received a master's in finance from Sorbonne Paris I and a double MBA from Columbia Business School and the London Business School.

Executive Team



Jason Terrell MD, Chief Medical Officer & Chief Executive Officer of Volition America, Inc. - Jason has expertise in clinical medicine and in laboratory diagnostics in the areas of business development, clinical trials, regulatory affairs, and commercialization strategies. He was educated at Hardin-Simmon University where he graduated Summa Cum Laude, also receiving the Holland Medal of Honor. He received his MD from the University of Texas Medical School an affiliate of the MD Anderson Cancer Center.



Mark Eccleston PhD, MBA Chief Technology Officer - Mark is an enthusiastic and passionate biotechnology entrepreneur with over 20 years experience in the sector. He holds a PhD in Polymer Chemistry for biomedical applications and gained an MBA (entrepreneurship) from the University of Dundee in 2008.



Marielle Herzog PhD, Research & Development Director – Marielle is an epigeneticist with nearly 15 years research experience at the Institute of Genetics and Molecular and Cellular Biology (IGBMC), Strasbourg, the Laboratory of Cancer Epigenetics, Free University of Brussels and as the R&D director at Volition. She manages a team of project managers and coordinates several external academic collaborations as well as outsourced commercial R&D and clinical programs.



Theresa Kelly PhD, Chief Scientific Officer of Volition America, Inc. - Terry has over 10 years of experience in Epigenetics including developing novel technologies and seeing them through to commercialization. She previously was the R&D Director at Active Motif and the Global leader for custom assays and services and Agena Bioscience. She received her PhD from UCLA and did Post-doctoral training at USC's Norris Cancer Center where she studied epigenetic regulation in Cancer.

Rod Rootsaert LLB, Corporate Secretary - Rod is an experienced legal and corporate secretary with over ten years experience in providing corporate, legal and administrative services to start-up companies. He previously served as corporate secretary for several junior mining companies in the United Kingdom. Rod received a LLB from the University of Western Australia.

Scott Powell PhD, EVP, Investor Relations & CFO of Volition America, Inc. - Scott has over 20 years of experience in the U.S. capital markets and investor relations. Scott worked for several years as an investment banker. He earned his B.S. in Business Administration from Bryant University and his MA and PhD degrees from Brown University.



Thank you for your interest in Volition.

For more details, please visit www.volition.com