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Measuring Nucleosomes Using Nu.Q® NETs is a Promising Biomarker for Septic Shock

HENDERSON, Nev., Oct. 19, 2023 /PRNewswire/ -- VolitionRx Limited (NYSE AMERICAN: VNRX) ("Volition"), a multi-national epigenetics company, announces the publication of a clinical paper¹ which shows that Volition's Nu.Q® NETs test is a promising biomarker for the evaluation of disease severity in septic shock patients and could play an important role in sepsis prognosis.

The 150-patient study published in [Annals of Intensive Care](#) was led by Professor Guillaume Monneret, Head of Clinical Immunology Laboratory at Hospices Civils de Lyon in France.

Professor Monneret and his team used Volition's automated nucleosome quantification assay, Nu.Q® NETs, to measure nucleosome levels in patients with septic shock and to determine whether there is an association with mortality.

Nu.Q® NETs is a simple, low cost and routine blood test which can detect clinically elevated levels of NETs by identifying the unique biomarker H3.1. Composed of decondensed chromatin, NETs play an important role in the immune system, trapping and killing bacteria, fungi and viruses. However, excessive production can lead to tissue damage and, in severe cases, sepsis, organ failure, and death.

Professor Guillaume Monneret, Head of Clinical Immunology Laboratory at Hospices Civils de Lyon, said:

"This was the first study to investigate both nucleosomes and immunological parameters in septic shock. We saw a significant elevation of nucleosomes in septic shock patients. We also found a significant positive correlation between nucleosome levels and a range of disease severity indicators including SOFA, SAPS II, IL-6 concentrations, and neutrophil count. Additionally, significantly elevated nucleosome levels were independently associated with both five and 28-day mortality, even after adjusting for typical confounding factors such as age, severity scores, and IL-6.

"In summary, we were able to show an association of increased circulating H3.1 nucleosomes with severity and mortality in septic shock patients."

Remi Rabeuf, Lifecycle Leader at Volition, said: "This is the first published data from our global centers of excellence program and we are delighted that Professor Monneret's findings show that Nu.Q® NETs is a promising biomarker for the evaluation of disease severity and could support sepsis prognosis."

There are an estimated 11 million sepsis-related deaths worldwide each year, accounting for 20% of all global deaths.²

Volition is developing simple, easy-to-use, cost-effective blood tests to help diagnose and monitor a range of life-altering diseases including cancer in both humans and animals. For more information about Volition's Nu.Q® technology go to: www.volition.com

Notes:

1. [Haem Rahimi M; Bidar F; Lukaszewicz AC; Garnier L; Payen-Gay L; Venet F; Monneret G, Association of pronounced Elevation of NET formation and Nucleosome Biomarkers with Mortality in Patients with Septic Shock, *Annals of Intensive Care* \(2023\) 13:102](#)
2. [World Health Organisation](#) October 2023

About Volition

Volition is a multi-national epigenetics company powered by Nu.Q®, its proprietary nucleosome quantification platform. Through its subsidiaries, Volition is developing simple, easy to use, cost effective blood tests to help diagnose and monitor a range of life-altering diseases including some cancers and diseases associated with NETosis such as sepsis and COVID-19. Early diagnosis and monitoring have the potential to not only prolong the life of patients but also improve their quality of life. The tests are based on the science of Nucleosomics™, which is the practice of identifying and measuring nucleosomes in the bloodstream or other bodily fluid - an indication that disease is present.

Volition's research and development activities are centered in Belgium, with an innovation laboratory and office in the U.S. and additional offices in London and Singapore.

For more information about Volition's Nu.Q® technology go to: www.volition.com

The contents found at the Volition and World Health Organisation website addresses are not incorporated by reference into this document and should not be considered part of this document. The website addresses are included in this document as inactive textual references only.

Safe Harbor Statement

Statements in this press release 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, among other topics, Volition's expectations related to the timing and launch of product sales, and the potential uses, benefits and effectiveness of its Nucleosomics™ technology platform, including the Nu.Q® NETs test. 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, a failure by the marketplace to accept Volition's, Nu.Q® NETs test or other products based on its Nucleosomics™ platform; Volition's failure to secure adequate intellectual property protection; Volition's failure to obtain

necessary regulatory clearances or approvals to distribute and market future products; Volition will face fierce competition and its intended products may become obsolete due to the highly competitive nature of the diagnostics and disease monitoring markets and their rapid technological change; downturns in domestic and foreign economies; and other risks, including those 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. For instance, if Volition fails to develop and commercialize diagnostic, prognostic or disease monitoring products, it may be unable to execute its plan of operations. Forward-looking 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.

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