

Volition Nu.Q® NETs. H3.1 evidence base 2020 to 2026

Basic science, models and assay above the line. Sepsis cohorts below the line. Beyond sepsis bottom row.

2023. Garcia et al.
[Critical Care](#)

Histone neutralisation reduces vasopressor need, IL-6 and H3.1 in septic sheep.

2023. Cayford et al.
[Cayford et al](#)

Understanding NETosis
Priming and Induction through Nucleosome Changes and Real-Time Monitoring in Isolated Neutrophils and in an Ex-Vivo Model.

2024. Zukas et al.
[Zukas et al](#)

First whole-blood ex vivo NETosis model. Three physiological triggers required.

384-well throughput.

2024. Atteberry et al.
[Atteberry et al](#)

ATAC-Seq maps chromatin opening during PMA-induced NETosis.

2025. Retter, Singer, Annane.
[Retter et al](#)

The NET effect - NETs as a central component of the dysregulated host response in sepsis.

2025. Cayford et al
[Cayford et al](#)

Underscores the importance of studying NET formation within a whole blood environment to capture the complexity of neutrophil responses and immune cell interactions.

2025. Wagnies et al.
[Wagnies et al](#)

Validated chemiluminescent immunoassay for circulating H3.1 nucleosomes.

Fully automated. IDS-i10. CE-IVDD.

2026. Cayford et al.
[Cayford et al](#)

Cytokine-induced chromatin accessibility in whole-blood neutrophils links to sepsis transcriptional states.

ATAC-Seq with 5 NFs.

2021. Cavalier et al.
[Cavalier et al](#)

H3.1 and citrullinated nucleosomes rise with COVID-19 severity.

Two cohorts. BE (93 subjects) and DE (52 subjects)

Retrospective Analysis

2022. Morimont et al.
[Morimont et al](#)

Nu.Q H3.1 separates septic shock from critical COVID-19.

46 septic shock. 22 COVID. 48 controls. BE

Observational Study

2023. Haem Rahimi et al.
[Rahimi et al](#)

H3.1 peaks at admission in septic shock. Independent predictor of day 5 and 28 mortality.

151 patients. Median 1515 ng per mL day 1. Fr. Retrospective Analysis

2025. Filippini et al.
[Filippini et al](#)

H3.1 separates sepsis from non-sepsis. Predicts RRT independent of mortality.

MARS. 1,713 patients. HR 2.00 per log10. NL multi-center Observational Study

2026. Neumann et al.
Critical Care Medicine
[Neumann et al](#)

Admission H3.1 independently predicts 28-day mortality and 28-day RRT.

971 patients. 33 ICUs. Adj HR 1.80. DE multi-center Retrospective Analysis

2020. Bouvier et al. Pre-eclampsia
[J Thromb Haemost](#)

Nucleosomes and free DNA rise in pre-eclampsia. Distinct profile from IUGR.

115 women. 3 groups. Fr.

2024. Park et al. Stroke.
[Blood Research](#)

Plasma H3.1 elevated in acute ischemic stroke. Independent risk factor.

89 AIS plus 20 controls. AUC 0.907. Korea.

2025. Navarro et al. Trauma.
[Shock](#)

H3.1 and citrullinated H3R8 elevated after trauma. Higher in patients who develop VTE.

674 patients. H3.1 830.9 vs 259.2 in VTE. Mayo Clinic.

Ongoing SEPSIS Studies

Completed 2026 RHU Records Prospective, multi-center, placebo controlled, bio-marker-guided, adaptive Bayesian design basket trial. ~ 800 ICU sepsis patients

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Sept 2026 launch DETECSEPS: measure the impact of an early screening strategy based on the combination of the measurement of blood concentrations of Nu.Q® H3.1 and the NEWS2 clinical score, on care pathway of patients consulting the emergency department for proven or suspected infection and being at risk of developing sepsis.