

NucleoCapture

Therapeutic Removal of Neutrophil Extracellular Traps from Blood in a Pig Model of Sepsis

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Overlooked Danger of Neutrophil Extracellular Traps

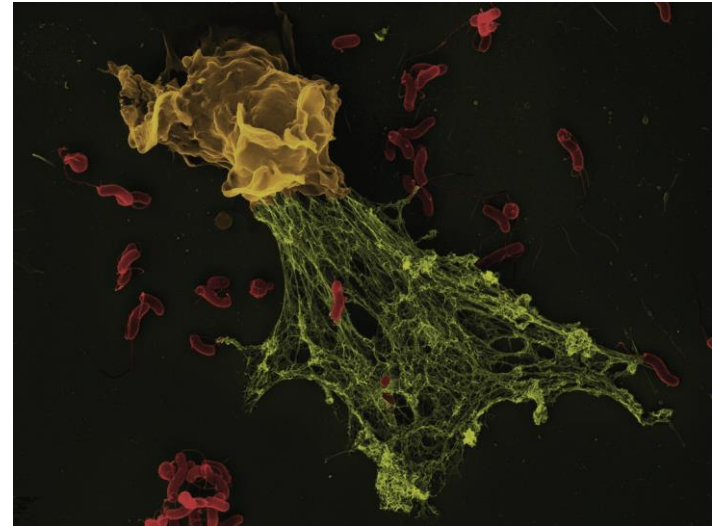
NucleoCapture has the potential to transform the treatment paradigm of unmet medical diseases

Neutrophils make up the largest fraction of blood cells produced by the bone marrow with a 100 billion cells produced daily. This amount might triple in certain conditions including infection, inflammation, autoimmunity and cancer.

NETosis is a unique form of neutrophil cell death that is characterized by the release of Neutrophil Extracellular Traps (NETs) composed of DNA web-like structures decorated with highly cytotoxic protein components.

Recent studies have pointed to the massive release of NETs into the bloodstream as playing a pivotal role in the progression of certain acute, chronic debilitating and fatal conditions, costing healthcare systems around the world billions a year:

- Sepsis [42M cases, 11M deaths]
- Severe trauma [40M cases, 8M deaths]
- Metastatic Cancer [20M cases, 10M deaths]
- Alzheimer's Disease [44M cases, 2.4M deaths]



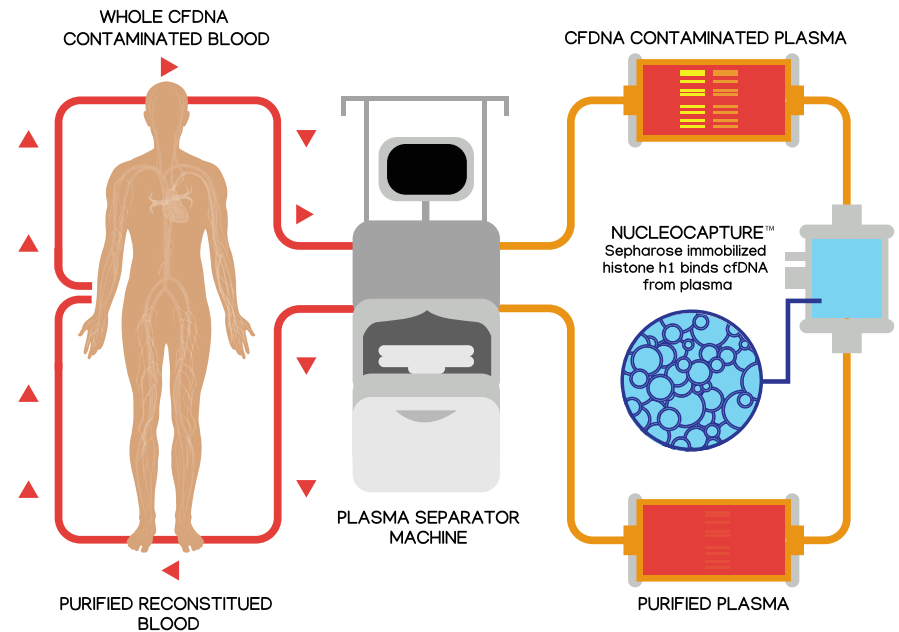
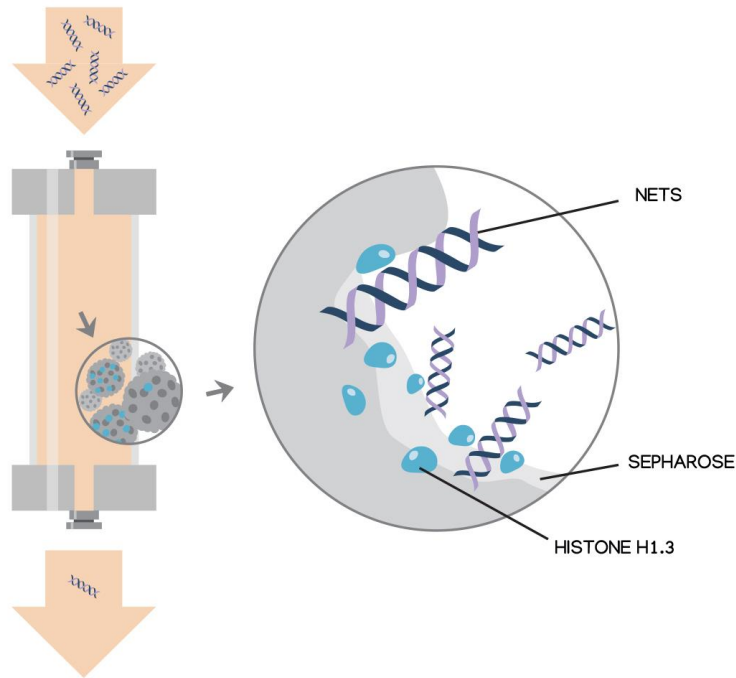
Neutrophil releasing NETs

Why Immune Cells Extrude Webs of DNA and Protein, The Scientist, Oct 1, 2019

NucleoCapture: Novel first-in-class NET depletion Utilising Linker Histone H1.3 binding

SELECTIVE CAPTURE OF NETS WITH NUCLEOCAPTURE

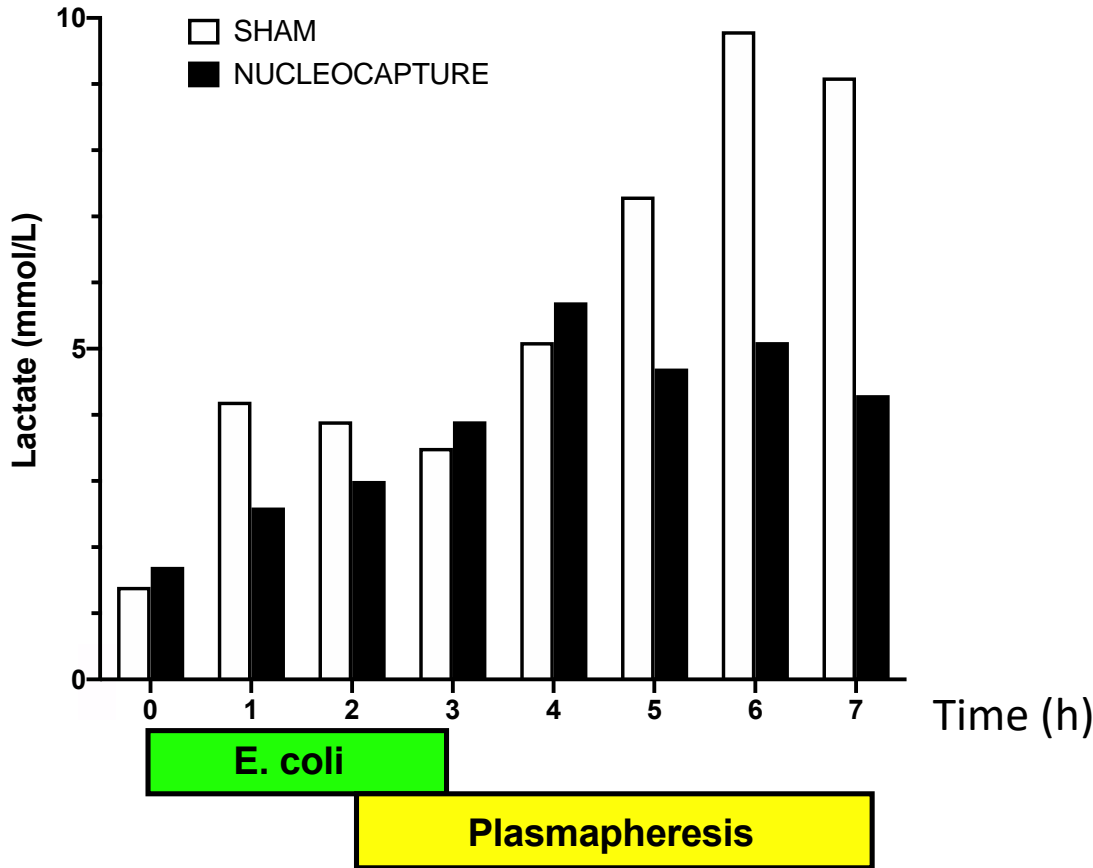
NUCLEOCAPTURE



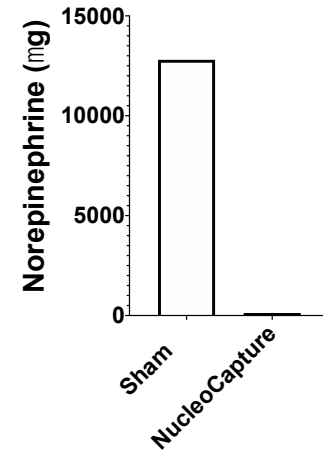
- In contrast to any potential NET-focused pharmacological interventions NucleoCapture allows the safe removal of excess NETs from blood without compromising the defensive functions of neutrophils
- **NucleoCapture was evaluated in a clinically relevant porcine critical care model of sepsis**

Shock Resolution With NucleoCapture

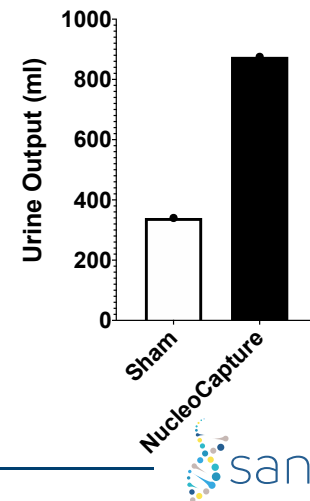
Lactate 50% lower



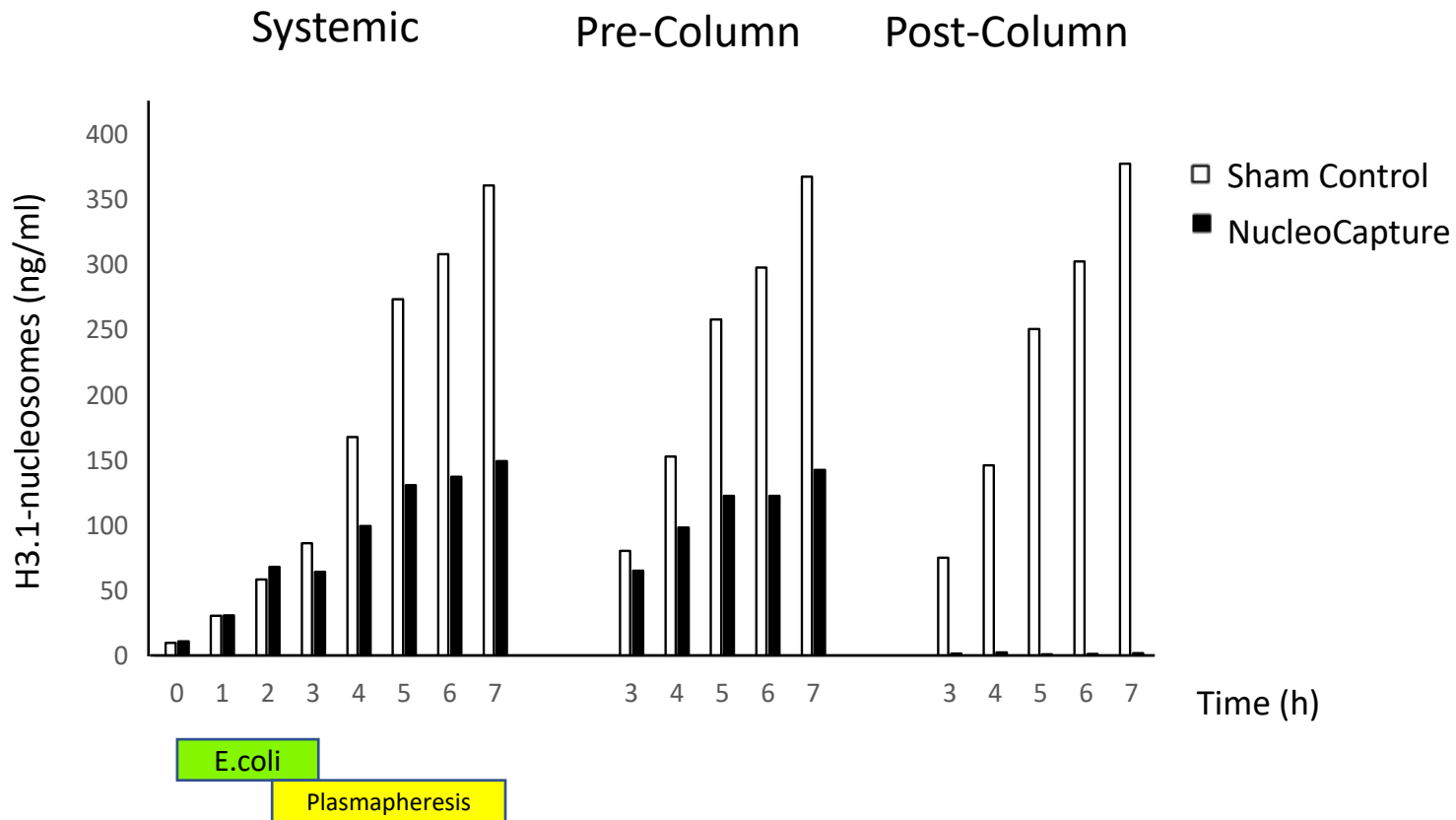
Vasopressor Use
100-fold lower



Urine Output
2-fold higher



Marked NET Clearance with NucleoCapture: Up to 99% removed from Plasma



Immunoassay of cell free nucleosomes using the Volition Nu.Q®-H3.1 assay was found to be the best proxy measurement for monitoring levels of circulating NETs