

**MURC 2019**

**Presentation ID:** 150

**Presentation Format:** 10-Minute Oral Presentation

**Presentation Title:** CounterFlow Hemostatic Spray Halts Upper Gastrointestinal Bleeding in Porcine Model

Upper gastrointestinal bleeding (UGIB), defined as bleeding from the mouth to the duodenum, affects up to 150 per 100 000 adults per year, with approximately 5-30% of cases leading to death. These bleeds are high risk, difficult to stop, and prone to rebleeding. While electrocautery and clamps have become the mainstay in surgical endoscopic bleeding management, they are limited by the precision and skill of the operator and the surface of the bleeding site. Therefore, spray therapies are ideal as they can cover large areas quickly and apply hemostatic agents to inaccessible areas when managing bleeding with an endoscope. Previously, thrombin loaded onto self-propelling particles (CounterFlow) was successfully used to treat femoral arterial hemorrhage without compression in porcine models. This project explores whether CounterFlow can be used to clot arterial UGIBs, reducing the time to hemostasis and the rebleed rates. A sprayable formulation of CounterFlow has been developed specific to gastrointestinal bleeding along with an endoscope compatible spray system. Pilot experiments of gastrointestinal bleeding in a swine model of severe UGIB show that CounterFlow required less than 2% of the powder used by Hemospray (Cook), a spray therapy currently available for use by clinicians, in a similar experiment. CounterFlow’s ability to deliver hemostatics into UGIBs shows promising results to enable effective management of high flowrate bleeds, which could reduce surgical times and the need for blood products.

**Commented [C1]:** Good – you defined UGIB and provided context/significance

**Commented [C2]:** Can you clarify/explain what this means?

**Themes:**

Check (highlight) the most applicable theme according to the abstract.

<input type="checkbox"/> Innovation and Technology	<input checked="" type="checkbox"/> Health and Wellness	<input type="checkbox"/> Culture and Society	<input type="checkbox"/> Sustainability and Conservation
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**Comments:**

Since MURC is a generalist conference, your abstract should be accessible to all audiences. Try to avoid jargon. This is an interesting study.