

**INNOVECTIS**Ein Unternehmen der  
Johann Wolfgang Goethe-Universität  
Frankfurt am Main

# Technology offer

## Frankfurt Intubation Device

### Benefits

- Increased first-pass intubation success
- Prompt airway securing & less complications
- Final position control
- Less training and practice needed
- Minimized infection risk for medical staff

### Project Status

- Proof of concept very promising
- Prototype can be presented in Frankfurt
- Developed with decades of expertise in the field of emergency and intensive care medicine

### Patents

- German priority patent application filed on 16-Nov-2020
- DE102020130234.7

### Offer

- Collaborations for final development and clinical testing welcome
- Technology can be licensed or assigned

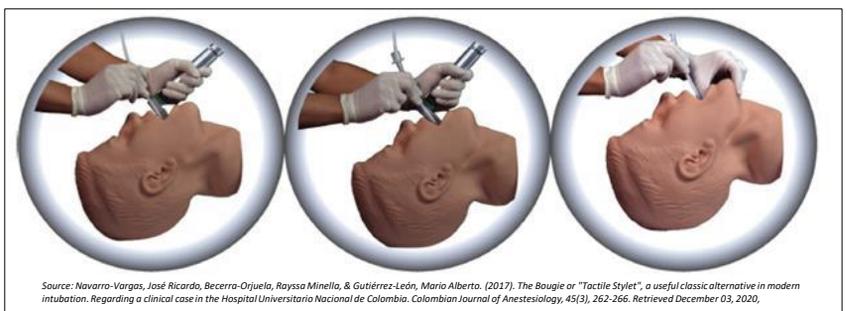
Scientists from the group of Prof. Dr. Dr. Zacharowski at University Medical Center Frankfurt (Germany) have successfully developed a new method for facilitated endotracheal intubation.

Core of the invention is a **new intubation bougie** for facilitated endotracheal intubation and an innovative combination bougie / tracheal tube. Many publications clearly associate a bougie with increased first-pass intubation success which is an huge medical need. A systematic literature [review](#) concluded that first-pass intubation was only achieved in ~78% of intubation attempts whereas medical guidelines for airway management explicitly stipulate first pass success to prevent severe complications.

The Frankfurt Intubation Device meets all requirements for an ideal intubation device:

- Prompt airway securing and thus aspiration protection independent of intubation experience and patient status
- Easy and timely extraction removal by suction
- Rapid oxygen insufflation to prolong apnea tolerance
- Direct position feedback before first ventilation

The demanding process of endotracheal intubation is very challenging even for experienced medical staff causing severe complications for affected patients. With years of experience in the field of intensive care and emergency medicine the Frankfurt team has simplified intubation with an innovative solution. In an emergency situation even medical staff with less practice should be facilitated to promptly secure the airway of patients with much less complications.



One feature of the new bougie is a sealing contact with the trachea to seal it against fluids such as gastric juice. Conventional bougies cannot be blocked and fluids can pass the bougie entering the lungs. The prompt air seal also reduces the patient's urge to cough and thus minimizes the potential risk of infection like Covid-19 for the medical staff. In addition the Frankfurt solution improves the lighting situation. During intubation a light source is located at the end of the laryngoscope blade. However, this positioning of the light source does not allow endotracheal position control and the vocal folds must be displayed. Finally the solution allows for easy switching in between ventilation and suction.

The Frankfurt team would look forward to cooperate with commercial partners to finalize development and enter detailed clinical testing, soon.

### INNOVECTIS

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