



protecturo

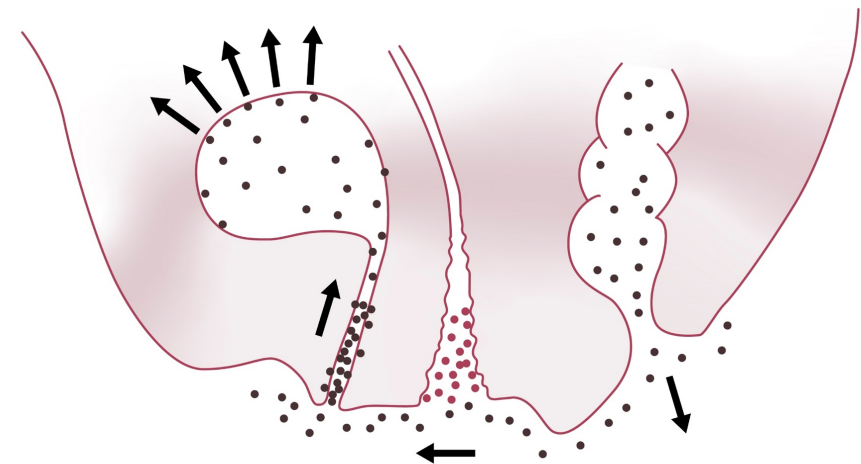
1. The Issue

Urinary Tract Infections (UTI)

- **2nd** most common bacterial infection world-wide¹.
- Almost **only women** due to anatomy (8:1)¹.
- Leads to **significant complications** or even death if untreated.
- **> 14 Mio. women** in EU&USA are estimated to have recurrent UTI (meaning 3 or more episodes per year).
- In the USA also, 7 mio office visits, 100'000 hospitalizations and USD 1.6 billion costs p.a.¹

¹ Foxman, B. et al., Ann Epidemiol. 2000;10:509–15.

² Lautenbach, E., Clin Infect Dis. 2013 Nov. 57(9):1266-9.



Bacteria are moving from anus to urethra. The vagina is protected by lactic acid bacteria. *E.coli* bacteria are responsible for at least 80% of all infections².

1. The Issue

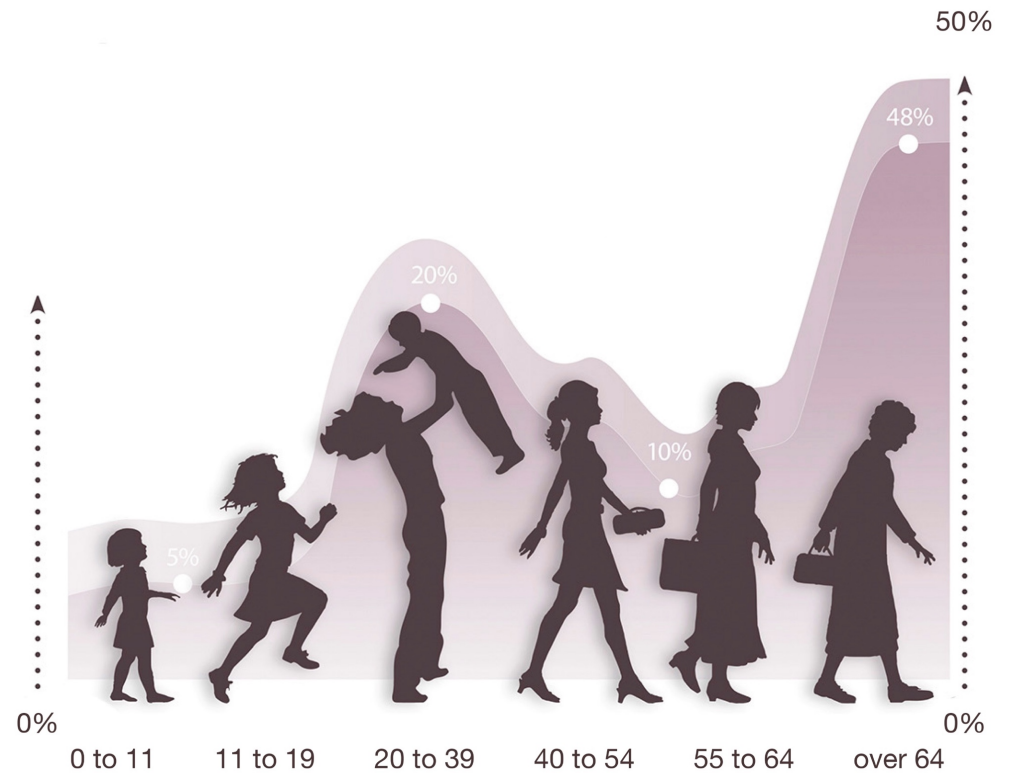
UTI in Women

10% yearly UTI incidence rate in women¹:

- **Peak age 17–40:** Sexually active women.
- **Peak age 60+:** Hormone change, increasing incontinency, staying in elderly home, less hygiene.

¹ Foxman, B., The Am. J. of Medicine, Vol. 113 (1A), 2002

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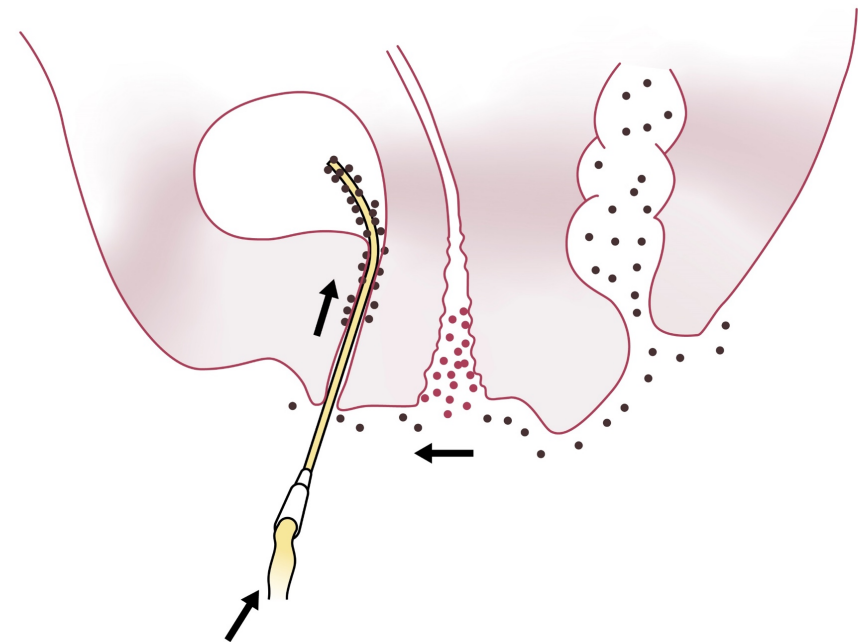


1. The Issue

Catheter Associated UTI (CAUTI)

- Insertion of a catheter pushes bacteria from urethra into bladder.
- Affects men and women equally.
- Catheter associated UTI is the source for about **20%** of episodes of health-care acquired bacteremia in acute care facilities and 50% in long term care facilities¹.
- Associated costs are **3 bn USD** p.a. in the USA alone.

¹ Scott, R.D., The direct medical costs of healthcare-associated infections in U.S. hospitals and the benefits of prevention, 2009



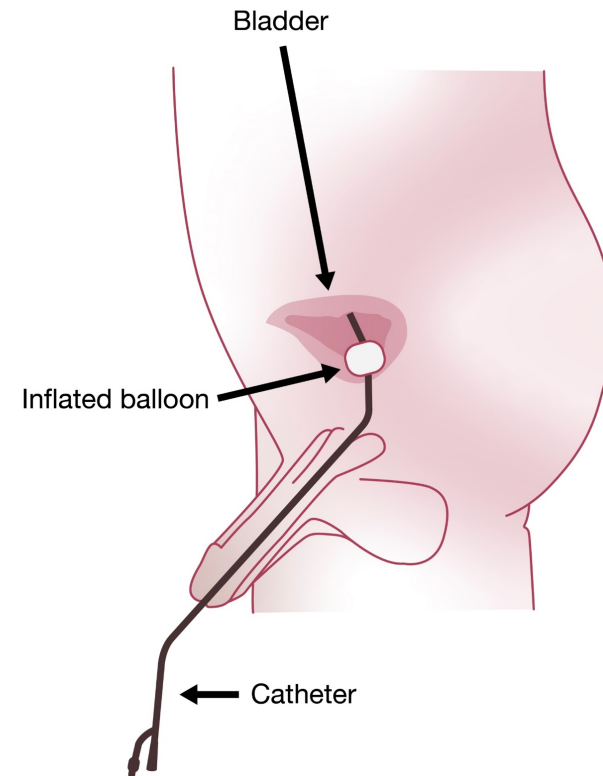
Insertion of a catheter pushes bacteria into bladder.

1. The Issue

In-dwelling / balloon catheters

- Used during hospital stays or for incontinent patients.
- Due to costs, catheters are not being replaced often enough leading to bacteria growth on catheter.
- **One of the most common infections acquired by patients in health care facilities.**

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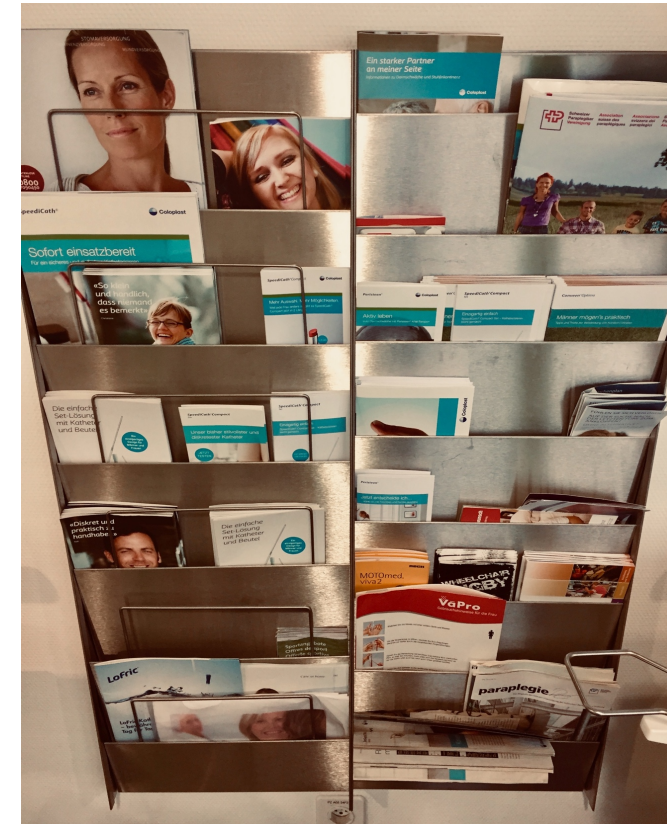


1. The Issue

Intermittent catheters

- Intermittent catheters (4x per day) often needed by paraplegic patients.
- 244 mio catheters are used per year world-wide.
- Infection rate is 20%¹, resulting in several UTI per patient and year.
- **CAUTI is the second most common cause of death among paraplegic patients.**

1 Thietje, R. et al., J Spinal Cord Med. 2011 Sep; 34(5): 482–487.



Brochures at entrance of paraplegic university hospital station:
focus catheterization

1. The Issue

Today's preventative methods are not satisfactory

- Teaching of good daily hygiene practices
- Changing the hormone regiment
- Use of cranberry or D-Mannose
- Vaccination against *E.coli*

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As consequence, in over 90% of all cases **antibiotics** are being prescribed.

2. Our Solution

Our New Approach: Disinfection of the Urethra

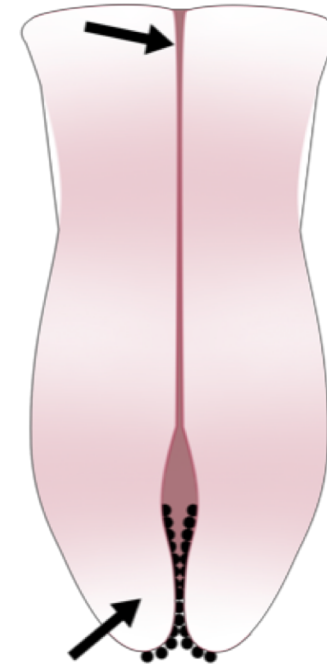
- Bacteria colonize the urethra, mainly the first 2 cm. These bacteria are moving into the bladder or are being pushed into the bladder when a catheter is being applied. By killing these bacteria, UTI should be massively reduced.

Prof. Dr. J. Pannek, head urologist at Swiss Paraplegic Center, Nottwil:

- The presented concept of decontaminating the distal part of the urethra is very promising and based on findings in scientific literature.
- The method to use an antibacterial stick for decontamination is independent of any catheter type.

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Urethra



Bacteria accumulation
within first 2cm.

2. Our Solution

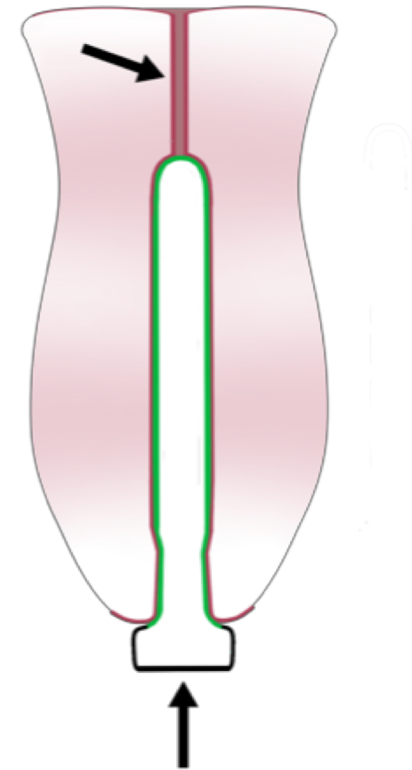
Our Solution UTINO™

- **UTINO™ is inserted for 1min. prior to catheterization or risk behavior.**
- Bacteria killing coating reduces bacteria load in the urethra.
- Less living bacteria will reach bladder. -> significant less Urinary Tract Infections.

Patient acceptance of a urethral suppository was successfully tested in the US in 2015. 10 healthy women were asked to wear the product for 30min (10min side-lying, 10min. sitting, 10min walking).
8 out of 10 patients would be willing to insert such a device to treat a disease.

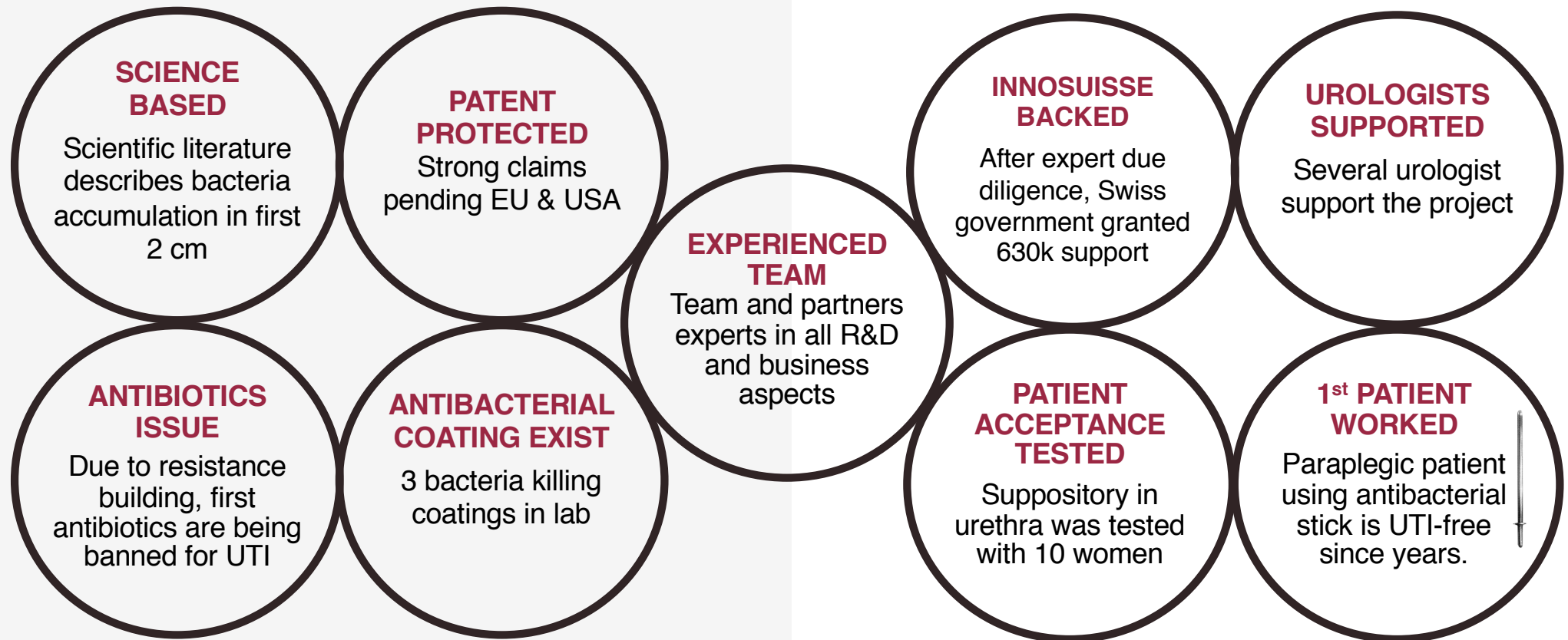
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Urethra



Urethral stick + antibacterial coating

Our Success Factors



3. The Team

Management & Board



Jean-Jacques Becciolini

Founder & President
Dipl. Ing. ETH

Successful Entrepreneur in
Urology
(Swiss Medical Solution AG,
Tecuro AG, Inura AG).



Dr. Kurt Ruffieux

CEO, Board Member
Dipl. Ing. ETH

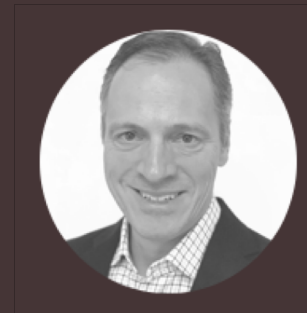
Founder & CEO of Degradable
Solutions AG, CTO Sunstar.
Has developed and registered
11 medical devices.



Dr. Gerd Ries

Regulatory & Medical
Officer, Board Member
Biochemist

Various management positions
at J&J: European and Global
level in R&D, QA, Regulatory
Affairs.



Dr. Wolf-Friedrich Bähre

Board Member
Dipl. Ing. ETH

Serial Entrepreneur and Board
Member,
Former owner and CEO of
Urokink Industries, Germany.



Stephan Stirnimann

CFO, Board Member
Lic. Oec. HSG

Certified public accountant,
specialized in controlling and
supporting start-up companies.

4. The Project

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Competent Partners



R&D Partner

Injection moulding partner

Injection moulding partner

Clinical Partner

Clinical Partner

QA /RA Partner

Lab of Bio-interfaces

Plasma & Coating Group

Lab of Bio-mimetic Membranes & Textiles

5. The Summary

Summary

- Unique product idea addressing a major health issue with millions of patients.
- Providing urologists with an additional therapy to fight against UTI.
- Reducing the use of antibiotics
- Development and testing of product is running with expected registration in 2023.

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Thank you very much for your attention!