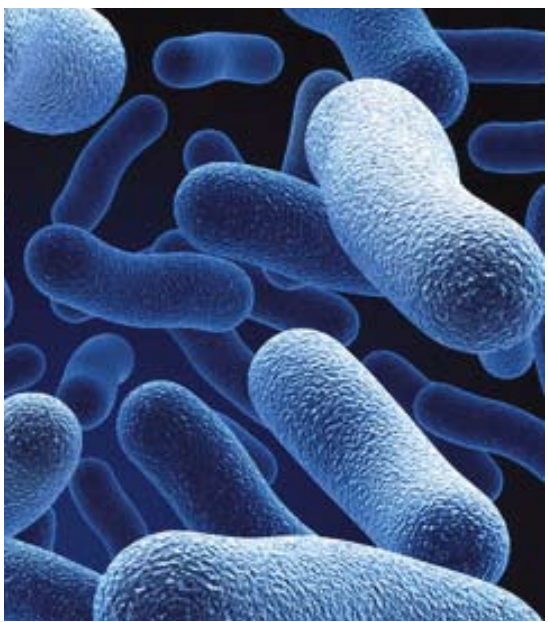








# Strategies to improve the knowledge about antibiotic selection pressure and judicious antibiotic use

SATURN is a 5-year (Jan 2010 - Dec 2014) European collaborative initiative studying the impact of antibiotic exposure on antimicrobial resistance (AMR) to help reduce the burden of AMR in Europe and guide both clinical decision making and policy decisions in this area.



The project proposes a multidisciplinary approach bridging microbiological, clinical, epidemiological and pharmacological research:

-  A randomised multi-facility **intervention study** in the ICU setting to resolve an issue of high controversy: antibiotic cycling vs. mixing.
-  **Three observational studies** on important issues surrounding the effect of antibiotic usage not easily assessable through randomised controlled trials, due to rare outcomes and sample size requirements.
-  **Molecular studies** for new evidence on changes effected by antibiotic therapy on commensal organisms or opportunistic pathogens in the oropharyngeal, nasal and gastro-intestinal flora and for examining AMR mechanisms and the dissemination of successful clones of fluoroquinolone-resistant, carbapenem-resistant or extended-spectrum beta-lactamase harboring Gram-negative bacteria, MRSA and fluoroquinolone-resistant viridans streptococci.
-  A **pharmacodynamic study** modelling the relationships between antibiotic exposure and AMR emergence over time for various classes of agents.

## A consortium of leading international researchers in antimicrobial resistance

The SATURN project, coordinated by Prof. Stephan Harbarth (University of Geneva) unites the best expertise in the field of antimicrobial resistance from 11 countries.



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