

# Antimicrobial Resistance

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**Project description:** Antimicrobial resistance (AMR) is a global health threat. It does not respect the borders of nations, or differentiate between hospitals and outpatient care, or see the difference between human and animal healthcare. The aim of our group is to detect and understand better the epidemiology and mechanisms of bacterial resistance to antimicrobials in order to tackle it. The major research topics in the project include 1) epidemiology and mechanisms of antimicrobial resistance 2) development of microbiological detection techniques 3) understanding the links between the consumption of antimicrobials and resistance and 4) normal microbiota and its impact on health and how antimicrobial use impacts on it.

## Publications

- Lehtopolku M, Kotilainen P, Haanperä-Heikkinen M, Nakari U-M, Hänninen M-L, Huovinen P, Siitonen A, Eerola E, Jalava J, Hakanen AJ: Ribosomal mutations as the main cause of macrolide resistance in *Campylobacter jejuni* and *Campylobacter coli*. **Antimicrob Agents Chemother.** 2011;55:5939-41.
- Stenholm T, Hakanen AJ, Salmenlinna S, Pihlasalo S, Härmä H, Hänninen PE, Huovinen P, Vuopio J, Kotilainen P: Evaluation of the TPX MRSA assay for the detection of methicillin-resistant *Staphylococcus aureus*. **Eur J Clin Microbiol Infect Dis.** 2011;30:1237-43.
- Österblad M, Kirveskari J, Hakanen AJ, Tissari P, Vaara M, Jalava J. Carbapenemase-producing Enterobacteriaceae in Finland: the first years (2008-11). **J Antimicrob Chemother.** 2012;67:2860-4.
- Österblad M, Hakanen AJ, Jalava J: Evaluation of the Carba NP test for carbapenemase detection. **Antimicrob Agents Chemother** 2014;58:7553-6.
- Gunell M, Aulu L, Jalava J, Lukinmaa-Åberg S, Österblad M, Ollgren J, Huovinen P, Siitonen A, Hakanen AJ: Cefotaxime-resistant *Salmonella enterica* in travelers returning from Thailand to Finland. **Emerg Infect Dis** 2014;20:1214-7.

**Number of PhD Theses supervised 2010-2015:** 3

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