

## Optimal management of acute otitis media

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**Project description:** Our research focuses on the diagnostics, treatment, and microbiology of acute otitis media. We aim to improve diagnostics of otitis media and to explore new approaches to diagnostics. In our randomized, double blind, placebo-controlled trial we showed that antimicrobial treatment improves the short term outcome of acute otitis media as compared to placebo. Our major aim is to find out clinically meaningful factors to select those children who get the best benefit of antimicrobial treatment. Our collection of over 2000 nasopharyngeal samples together with prospective careful clinical data provides excellent opportunities to study the pathogenesis of otitis media. We also investigate symptom spectrum and relationship between microbes and symptoms. Currently, we are performing whole-genome sequencing of our pneumococcal strains.

### Publications:

- Uitti JM, Tähtinen PA, Laine MK, Ruohola A. Close follow-up in children with acute otitis media initially managed without antimicrobials. **JAMA Pediatr** 2016; Sep 6. [Epub ahead of print]
- Hoberman A, Ruohola A, Shaikh N, Tähtinen PA, Paradise JL: Acute otitis media in children younger than 2 years. **JAMA Pediatr** 2013;167:1171-2.
- Ruohola A, Pettigrew MM, Lindholm L, Jalava J, Räisänen KS, Vainionpää R, Waris M, Tähtinen PA, Laine MK, Lahti E, Ruuskanen O, Huovinen P. Bacterial and viral interactions within the nasopharynx contribute to the risk of acute otitis media. **J Infect** 2013;66:247-54.
- Tähtinen PA, Laine MK, Huovinen P, Jalava J, Ruuskanen O, Ruohola A. A placebo-controlled trial of antimicrobial treatment for acute otitis media. **N Engl J Med** 2011;364:116-26.
- Laine MK, Tähtinen PA, Ruuskanen O, Huovinen P, Ruohola A. Symptoms or symptom-based scores cannot predict acute otitis media at otitis-prone age. **Pediatrics** 2010;125:e1154-61.

**Number of Ph.Ds. supervised 2010-2015:** 2

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