Background and Aims Transmission of immune competence from mothers to newborns is crucial for optimal development of neonate immune system. Maternal perinatal probiotics supplementation having been observed to be able to modulate this process, the goal of the present study was to investigate the importance of the time window of probiotics intervention (pregnancy/lactation) on early-life immune maturation and response to immunization.

Methods Pregnant C57/BL6 mice were supplemented with Bifidobacterium lactis CNCM I-3446, 2.5x10^8 CFU/day, during either end of gestation and lactation, end of gestation only or lactation only. Maltodextrin was given during both periods (placebo) or in replacement of probiotics when not administered. Immune maturation was assessed by measuring natural mucosal IgA production (ELISPOTS) at weaning and 6 weeks later. Pups were mucosally immunized at weaning, and again four weeks later, with live attenuated Salmonella typhimurium ΔaroA. Two weeks after the second immunization, specific antibody responses in serum were analyzed.

Results All probiotic regimens significantly enhanced natural IgA production in pups in comparison to placebo, an effect observed up to the end of study, 6 weeks post-weaning. Supplementation during end of pregnancy and lactation, or lactation only provided significantly highest values. Specific antibody titers tended to be potentiated by all three regimens in pups responding to immunization, with highest values being obtained after supplementation during both periods.

Conclusions This study further supports the benefit of maternal perinatal intervention with probiotics on neonatal immune maturation, moreover emphasizing that supplementation during both pregnancy and lactation is needed to achieve overall optimal effects.

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**Abstracts**

269 **SHIFTING SEROPOSITIVITY FOR HEPATITIS A IN CHILDREN IN ISTANBUL, TURKEY FROM 1996 TO 2011**

In 1996, the overall seropositivity was 41.3%. In the 1996 study, the seropositivity was 35.2% in 2- to 6-year-old group, 13.2% in the 10- to 18-year-old group. The seropositivity increased with increasing age: 11.5% in the 2- to 6-year-old group and 13.2% in the 10- to 18-year-old group.

Conclusions There was a significant decline in the overall seropositivity for anti-HAV between 1996 and 2011 (p<0.001), and the pediatric age group has a high risk of HAV infection.

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268 **SEROTYPE AND ANTIMICROBIAL SUSCEPTIBILITY DISTRIBUTION OF INVASIVE STREPTOCOCCUS PNEUMONIAE ISOLATED FROM CHILDREN IN TURKEY**

Streptococcus pneumoniae is a major cause of invasive infections. The aim of this study was to evaluate the serotype and antimicrobial susceptibility of invasive pneumococci isolated at 14 different centers in Turkey between January 2011–April 2012. Totally 79 clinical isolates from invasive infections were investigated, which were isolated from cerebrospinal fluid (CSF) (53, 42%), blood (51, 39%) and the other sterile body fluids (15, 19%). Susceptibility to penicillin, cefotaxime and erythromycin was determined by E-test (bioMérieux, France) according to CLSI standards. Latex agglutination method was used for determination of serogroups. Serotypes were determined by the capsular swelling (Quellung reaction) method (Denmark, Statens Serum Institute). It was found that most common serotypes among 79 strains were 19F (12, 15%), 6A (7, 9%), 23F (8, 6%), 6B (4, 5%), 19A (4, 5%), and 3 (4, 5%). For all invasive pneumococcal diseases, during the first 2 years of age, the potential coverage rates of PCV7, PCV10, and PCV13 were 47.8%, 56.5%, and 82.6%, respectively, meanwhile 40.5%, 44.3%, and 63.3% for the pediatrics age group (0–18). Serotypes 19F, 6A, 19A, 23F, 6B, 14 and 3 were predominate. All pneumococcal conjugate vaccine formulations cover these serotypes with the exception of serotype 19A which is covered only by PCV18. Serotype 19A has steadily increased in prevalence and become increasingly resistant to common antibiotic classes. Rational antibiotic use and vaccination of infants with pneumococcal conjugate vaccines should be considered as essential strategies for prevention of pediatric infections in Turkey.