†1111 SAFETY AND ANTIGENICITY OF PRP-D VACCINE ADMINISTERED SIMULTANEOUSLY WITH DPT BOOSTER TO 18 MONTH OLD INFANTS. J. Owen Hendley, Jo G. Wenzel, Kathleen M. Ashe, Joel T. Samuelson, Dept. of Peds, Univ. of VA School of Med, Charlottesville, VA, and Connaught Laboratories, Swiftwater, PA.

Hemophilus influenzae vaccine containing polyribose ribitol phosphate (PRP) or PRP covalently linked to diphtheria toxoid (PRP-D) may be licensed for 18 month olds. Since the vaccine will be given at the same time as a DPT booster, reactions and antibody response to PRP-D given simultaneously with DPT were compared to PRP. 94 previously healthy infants 17-20 mo old were given PRP or PRP-D in one thigh and DPT in the other. Reactions were monitored for 48 hrs. Pre- and 1 month post-vaccine sera were analyzed for anti-PRP antibody by radioimmunoassay.

Systemic reactions were similar in the two vaccine groups and resembled those expected with the DPT shot alone. 26 (58%) of 45 PRP recipients and 22 (45%) of 49 PRP-D recipients had a rectal temperature >38°C. Only 6 (13%) and 7 (14%), respectively, of the PRP and PRP-D recipients had any local reaction to the Hemophilus vaccine.

PRP-D was more antigenic than PRP in this age group. Geometric mean levels of antibody to PRP in pre- and post-immunization sera were 0.05 and 0.32 ug/ml, respectively, in 25 PRP recipients, and 0.04 and 1.9 ug/ml, respectively, in 32 PRP-D recipients. 16 (64%) of 25 PRP recipients and 28 (88%) of 32 PRP-D recipients attained a post-vaccine antibody level of $\geq$0.1 ug/ml (p=0.04). 10/25 (40%) PRP recipients and 21/32 (66%) PRP-D recipients achieved an antibody level of $\geq$1.0 ug/ml (p=0.05). In 18 mo old infants PRP-D produced a greater antibody response to capsular polysaccharide than PRP with no increase in reactions.

1112 CRYPTOSPORIDIOSIS: A COMMON CAUSE OF PARASITIC DIARRHEA IN CHILDREN. Preston Holley, Jr., Milton Westphal and Carolyn Dover. Departments of Medicine, Pediatrics and Laboratory Medicine, Medical University of South Carolina, Charleston, S.C.

During an 11 month prospective study of stool samples submitted for ova and parasites, we identified ten cases of cryptosporidiosis in children, five in one family. The diagnosis was made by finding Cryptosporidium oocysts in stool samples which were processed by formalin-ether concentration, examined by direct wet mount and confirmed by modified cold Kinyoun stain. During the study, ten cases of Giardia lamblia were also diagnosed making cryptosporidial infection as common as giardiasis in the pediatric population studied. One child had coinfection with Giardia and Cryptosporidium.

The childrenwith cryptosporidiosis ranged in age from eight months to 5 years and there was an equal number of males and females. The majority of children were in some form of day care program. Family history was positive for diarrheal illness in each case of cryptosporidiosis. Symptoms and signs were variable and included acute and chronic diarrhea, anorexia, vomiting, abdominal pain and weight loss. No child was found to be immunocompromised or immunodeficient.

We conclude that cryptosporidiosis is more common in children than previously thought and should be considered in the differential diagnosis of children with diarrhea. Stools examined for ova and parasites should be routinely examined for Cryptosporidium.

†1113 THE T-CELL PHENOTYPES IN THE SKIN LESION OF PATIENTS WITH CUTANEOUS LEISHMANIASIS. M. HUSZAR*, R. SHOR*, H. TRAU**, E. GAZIT***, J.H. PASSWELL*. (Sponsored by Maureen Hack). Department of Paediatric Immunology*, Dermatology** and Tissue Typing Laboratory***, Sheba Medical Centre, Sackler School of Medicine, Tel-Aviv, Israel.

Cutaneous leishmaniasis is transmitted by the phlebotomus sandfly which injects the promastigate form of the parasite (Leishmania tropica major) into the skin. The organisms are taken up by the skin macrophages and within these cells transform into amastigotes and a chronic mononuclear cell inflammatory response occurs. Although T-cell lymphokines and interferons have been shown to be effective inducers of leishmanicidal capacity of monocytes in vitro, it is unclear why the course of the inflammation is so prolonged in vivo. Therefore, we have performed immunohistological analysis of the lesions in ten patients with cutaneous leishmaniasis. Diagnosis was confirmed by appropriate clinical history and appearance, culture of parasites from the lesion and/or identification of amastigotes in a biopsy specimen of the lesion. Using the technique of either immunofluoresence with the OKT series of antibodies or immunoperoxidase staining with the Leu series of antibodies, we found that the T suppressor lymphocyte was the predominant cell in the mononuclear cell infiltrate (OKT_3/Leu1,4 - 80 $\pm$ 7%;OKT_4/Leu3a - 10 $\pm$ 8%; OKT_8/Leu 2a - 57 $\pm$ 5%). These patients were not immunocompromised, had normal cellular immune functions and had developed specific cellular immunity to the infecting parasite, Leishmania tropica major (Stimulation index range 2.51 $\pm$ 0.42 to 5.03 $\pm$ 1.26; non-immune controls < 1). These findings support the contention that in patients with cutaneous leishmaniasis inappropriate sensitisation of T suppressor lymphocytes occurs, which may by inhibiting the positive inducer signals of T-helper lymphocytes account for the chronicity of these lesions.

†1114 CONGENITAL HERPES SIMPLEX VIRUS (HSV) INFECTION - EARLY VERSUS LATE GESTATIONAL ACQUISITION. Cecelia Hutto, Lynn Willett, Anne Yeager, Richard Whitley, The University of Alabama School of Medicine, Department of Pediatrics, Birmingham, Alabama, and Stanford University School of Medicine, Department of Pediatrics, Stanford, California.

Neonatal HSV infection is usually acquired at birth but a few reports have implied intrauterine infection. Of 155 cases of neonatal herpes, 13 (8.4%) had evidence of HSV acquisition prior to labor. Clinical manifestations defined two groups: 8 babies with early evidence of infection and 5 with late in utero acquisition. Of the 8 infants, all were premature. Manifestations included skin lesions/scars at birth (5/8), chorioretinitis (2/4), microphthalmia (3/7), microcephaly (5/8), and other CNS abnormalities on CT scan (6/8). Two infants died; the 6 surviving had severe neurologic sequelae. Four mothers had a history of primary genital HSV infection between 6-16 weeks. Signs of infection in the latter group were skin lesions at birth (5/5), hepatosplenomegaly (3/5), and other organ involvement (3/5). Two were prematures. One died from HSV pneumonia while the other 4 had no documented CNS sequelae. For this group, rupture of membranes >4 hours occurred in 1 case. Only 1 mother had a history of genital HSV infection (28 weeks) but 3 fathers of other babies reported genital lesions. Other etiologies for congenital infection were excluded. These findings indicate transmission of HSV can occur at any time during gestation. Although skin lesions are the hallmark of infection, regardless of time of acquisition, surviving newborns of early in utero infection are likely to have severe neurologic sequelae.

1115 CHARACTERIZATION OF THE INFANT'S ANTIBODY RESPONSE TO H. INFLUENZAE B OLIGOSACCHARIDE-DIPHTHERIA TOXOID CONJUGATE VACCINES. Richard A. Insel, Porter W. Anderson. Univ Rochester Med Ctr, Dept Peds, Rochester, NY.

Repetitive immunization (imm) with vaccines (vax) composed of H. influenzae b capsular polysaccharide (PRP) oligomers coupled to diphtheria toxoid (DTd), designated DTd-ol, induces anti-PRP antibody (Ab) with booster responses in infants at ages at which there is no response to PRP vax. To further examine the Ab response of infants 2-30 mo-old to imm with DTd-ol, the isotype, IgG subclass distribution, and IgG diversity of Ab were analyzed by enzyme immunoassay with monoclonal subclass-specific Ab using human hybridoma Abs as standards and by analytical isoelectric focusing (IEF). Ab of the IgG isotype predominated and was preferentially boosted in sera of the highest responders of 2-6 mo-old infants imm with DTd-ol. Ab of both the IgG_1 and IgG_2 subclass were detected after imm with DTd-ol, but there was a predominate IgG_1 subclass Ab response in 13/14 infants. In contrast, imm with PRP vax induced a predominate IgG_2 subclass response in 4/7 infants, 24 mo-old, and 3/7 children, 48-55 mo-old. The IEF Ab spectrotypes had a pI of 8.5-9.5 and showed restricted diversity with usually an increase after booster imm of the same clonotype that was induced by the 1° imm. These results suggest that imm with DTd-ol is inducing predominately an IgG_1 restricted Ab response from clones that are reactivated following repeat imm, without other clonal recruitment, and may be activating a different B cell subset than is activated by imm with PRP.

1116 LIVE ATTENUATED VARICELLA VACCINE IN HEALTHY 12-24 MONTH-OLD CHILDREN. C.E. Johnson, P.A. Shurin, C.D. Marchant, C.S. Strieter, D. Murdell-Panek, M.L. Kumar, Case Western Reserve University Dept. of Pediatrics and Cleveland Metropolitan General Hospital, Cleveland.

A safety and immunogenicity study of the Oka/Merck live attenuated varicella vaccine was conducted among 51 healthy children 12-24 months, with a negative clinical history of varicella. Parents maintained a detailed medical diary for 6 weeks following immunization, and all children with fever or rash were seen by a physician. 11 children had fever > 38 C during the 6 week follow-up period, including 3 children with documented bacterial infections. 3 children in the 1st week and 6 in the 3rd-4th week developed non-specific maculopapular rashes. Only one child had swelling and pain at the injection site.

Pre-immunization and 6 week post-immunization sera were titered simultaneously by an indirect fluorescent antibody test which detects antibody to membrane antigen (modified FAMA). 48 of 51 children (94.1%) demonstrated sero-conversion with a $\geq$ 4 fold rise in antibody titer. Sero-conversion was less in 12-15 month old infants (14/16, 87.5%) than in 15-24 month old infants (34/35, 97.1%). Geometric mean titers (expressed as the reciprocal of the mean) were not related to age: 12-15 months, 57.4 (n = 14); 15-18 months, 35.3 (n = 8); 18-21 months, 43.9 (n = 11), and 21-24 months, 44.5 (n = 15). Oka/Merck varicella vaccine appears safe and immunogenic in children 12-24 months. Further study is indicated to determine the optimal age for vaccination.