tion is defining the biological mechanisms that underlie individual differences in recidivism. Studies of these mechanisms have mainly focused on the brain, yet we demonstrate here a significant influence of the peripheral immune system on this phenomenon. Lewis (LEW) and Fischer 344 (F344) rats have different immunological profiles and they display a distinct vulnerability to the reinforcing effects of cocaine, with F344 more resistant to reinstate cocaine-seeking behavior. Methods: Bone marrow from male LEW and F344 rats was transferred to male F344 rats (F344/LEW-BM and F344/F344-BM), and these rats were trained to self-administer cocaine over 21 days. Following extinction, these animals received a sub-threshold primer dose of cocaine to evaluate reinstatement of drug-seeking behavior. Results: F344/LEW-BM but not F344/F344-BM rats reinstated cocaine-seeking behavior, in conjunction with changes in their peripheral immune cell populations to a profile that corresponded to that of the LEW donors. Cocaine treatment increased the CD4+ T-cells in F344/LEW-BM rats, and the splenic expression of Il-17A, Tgf-b, Tlr-2, Tlr-4 and Il-1b was altered in both groups. Discussion: We propose that peripheral T-cells respond to cocaine, with CD4+ T-cells in particular undergoing Th17 polarization and generating long-term memory, these cells releasing mediators that trigger central mechanisms to induce reinstatement after a second encounter. Conclusion: This immune response may explain the high rates of recidivism observed despite long periods of detoxification, shedding light on the mechanisms underlying the vulnerability and resilience of specific individuals, and opening new perspectives for personalized medicine in the treatment of relapse.

**398.** (36) **DETECTION OF SERUM ANTI-LIPOPOLYSACCHARIDES (LPS) ANTIBODIES FROM ENTEROHEMORRHAGIC *E. COLI* (EHEC) IN ASYMPTOMATIC KINDERGARTEN TEACHERS OF BUENOS AIRES PROVINCE.**

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EHEC is responsible for developing typical Hemolytic Uremic Syndrome (HUS) and Argentina has the highest incidence in the world. The endemo-epidemic behavior that HUS presents in our country was associated with person-to-person transmission. Since children below 5 years old are the most affected, our objective was to determine the frequency of kindergarten teachers with anti-LPS-EHEC antibodies in serum.

One hundred and fifty teachers from J.C. Paz district from Buenos Aires Province participated in an informative talk given by LuSUH, a non-governmental association, about good practices to reduce HUS transmission. Then, 63 of them voluntarily gave, under a signed written informed consent, a sample of blood obtained by finger puncture. A commercial ELISA (Chemtest, Arg) was used to detect specific IgM and IgG isotypes against 4 types of LPS-EHEC: O157, O145, O121 and O103. These variants represent approximately 87% of the EHEC serotypes associated with HUS in Argentina. The IgM finding was considered as indirect evidence of current infection with the EHEC specific serotype.

Forty-two samples were evaluated, 60% (25/42) of them were positive for at least one type of LPS. Fifty-six percent of them (14/25) were IgM positive. Fifty percent of the positive samples were reactive for LPS O157, 26% for LPS O121, 12% for LPS O145 and 2% for LPS O103. Among the samples positive for LPS O157, 5% belonged to IgM isotype, 31% to IgG and 14% had both. The IgG isotype was the unique detected for LPS O145 and O103 (12 and 2%, respectively). For LPS O121, the IgM isotype was detected in 2%, IgG in 12% and both isotypes in 12% of the samples.

The elevated frequency of LPS-EHEC reactive samples (60%) reflects the high circulation of EHEC strains in our country. This agrees with the prevalence of anti-Stx2 antibodies reported in our population previously. Very strikingly, nearly half of these individuals carry IgM, suggesting that they would be in the active phase of infection.

**399.** (47) **INFLUENCE OF THE INTESTINAL ENVIRONMENT ON *ESCHERICHIA COLI* O157:H7 PATHOGENICITY AND INFECTIVITY**

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We previously demonstrated a different outcome post *E. coli* O157:H7 (O157) infection between weaned C57BL and BALB mice. Although bacterial burden is similar, C57BL show increased tissue damage and mortality. The aim of this work is to investigate how intestinal environment affects pathogen virulence and horizontal transmission in both strains.

3 days post infection (pi), we analyzed the Stx production of recovered O157 from C57BL and BALB feces. Results showed similar Stx production by VERO and ELISA assays. Besides, we determined the inflammatory activity of feces through a LPS-dependent Hek-Blue-hTLR4 reporter line assay. Feces from C57BL showed inflammatory activity at day 1, 2 and 3 pi ($p<0.0001$, $p<0.001$ and $p<0.01$ respectively vs control). The maximal activity was statistically different from BALB at day 1 ($p<0.0001$). Feces from BALB showed inflammatory activity only at day 2 pi ($p<0.01$) [2way-ANOVA].

We tested infectivity of O157 in C57BL and BALB through co-housing experiments (2 infected + 5 non infected mice of the same strain were co-housed). The number of infected naive mice was recorded by O157 shedding. Despite all O157 inoculated C57BL died, 60% and 100% of naive mates were infected at day 3 and 7 pi respectively (one of them died). All inoculated BALB survived and only 1 out of 5 naive mates was infected at day 3 pi; this mouse recovered and negativized. At day 5 pi, a second mouse resulted infected (none of them died).

The local anti-O157 IgA response was assessed in feces from both strains. A significant population of IgA-coated bacteria was detected in pellets from infected BALB at day 3 pi by cytometry (infected vs control $p<0.05$; 2way-ANOVA). Besides, anti-O157 IgA was detected in all surviving BALB at day 7 pi by ELISA (infected vs control $p<0.05$; Student's t test).

BALB mice showed reduced horizontal transmission, lower and delayed inflammatory response and a specific and early local humoral response in feces compared to C57BL.

**400.** (91) ***TRYPANOSOMA CRUZI* PROMOTES MATURATION OF DENDRITIC CELLS AND THE RECRUITMENT OF PROTEINS INVOLVED IN ANTIGEN CROSS-PRESENTATION TO THE PARASITOPHOROUS VACUOLE**

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$CD8^+$ T cells are crucial in the defense against *Trypanosoma cruzi* infection. Efficient priming of $CD8^+$ T cell responses requires not only the processing and presentation of antigens, but the expression of costimulatory molecules by activated dendritic cells (DCs).

To analyze whether the interaction of *T. cruzi* with DCs promotes cell maturation, primary cultures of DCs were generated from mouse