Fall 2012

Translocation of Candida Species Across Cultured Neonatal Enterocytes Following Treatment with Steroids or Curcumin

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Recommended Citation
Harries, Michael, "Translocation of Candida Species Across Cultured Neonatal Enterocytes Following Treatment with Steroids or Curcumin" (2012). Washington University Undergraduate Research Digest, Volume 8, Issue 1.
http://openscholarship.wustl.edu/vol8_iss1/59

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Toward a Better Understanding of

Translocation of Candida Species Across Cultured Neonatal Enterocytes Following Treatment with Steroids or Curcumin

Michael Harries

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Candidiasis often presents itself as a yeast infection of the small intestine of very low birth weight infants (VLBW). Translocation of the colonizing yeast across either healthy or damaged intestinal epithelial cells can have devastating effects on infants, specifically neonates, and can result in death. We have demonstrated in past experiments that C. albicans, the predominant yeast species recovered in VLBW infant infections, translocates at higher rates across neonatal enterocyte monolayers than adult enterocyte monolayers. We have also shown that secretion of IL-8 is also increased following exposure to this species. We hypothesize that the increase of IL-8 secretions plays a role in the translocation rate difference between neonatal and adult enterocytes. To test this hypothesis we examined the effects of anti-inflammatory pretreatments with both neonatal and adult enterocyte monolayers on candidal translocation and IL-8 expression. This data will help point our group in new directions concerning disseminated candidiasis as we search for the underlying mechanism causing the dissemination.