EcoliO157H7andBacteroidescoliO157H7

Luis Kaufman, Elizabeth Riley, Jeffrey Elliott, David Allen, Steven Perez, Joel Buck, Emily Hill, Randy Faulkner, Paula Parker, Stephanie Garcia

Wayne State University

and P. aeruginosa O157:H7 are the two major pathogens of the tropical United States, and are the main targets of cellular parasitical antimicrobial resistance. Previous studies have shown that P. aeruginosa O157:H7 is involved in pathogen- esis of Pseudomonas aeruginosa, and the effect of P. aeruginosa O157:H7 on host cell proliferation and invasion have been described. However, the effect of P. aeruginosa O157:H7 on host cell proliferation and invasion has not been explained. To address the role of P. aeruginosa O157:H7 in host cell proliferation and invasion, we examined the expression of the expression of a protein involved in motility, invasion, and invasion. We found that P. aeruginosa O157:H7 is expressed in the nucleus, and that the surface of the cell is highly vascularized. The expression of the P. aeruginosa O157:H7 protein was significantly reduced in the cells surrounding the nucleus. However, the expression of the P. aeruginosa O157:H7 was significantly increased in the cells surrounding the nucleus. In contrast, the expression of the P. aeruginosa O157:H7 was significantly increased in the cell periphery, and was significantly increased in the cells surrounding the nucleus. Furthermore, the expression of the P. aeruginosa O157:H7 protein was significantly elevated in the cells surrounding the nucleus. Thus, P. aeruginosa O157:H7 is an important target for enhanced host invasion and motility in the virulent pathogen. Assays of the expression of P. aeruginosa O157:H7 proteins showed that the expression of P. aeruginosa O157:H7 was significantly reduced in the cells surrounding the nucleus. P. aeruginosa O157:H7 Expression The expression of the P. aeruginosa O157:H7 protein was significantly increased in the cells surrounding the nucleus, suggesting that P. aeruginosa O157:H7 is involved in invasion and migration. In addition, the expression of the P. aeruginosa O157:H7 protein was significantly decreased in cells surrounding the nucleus. In conclusion, our data show that P. aeruginosa O157:H7 is involved in pathogen-induced host cell proliferation, invasion, and motility. The effect of P. aeruginosa O157:H7 on the expression of the P. aeruginosa O157:H7 protein was shown to be mediated by MMPs. The expression of the P. aeruginosa O157:H7 was significantly reduced in the cells surrounding the Nuclear and cytoplasmic regions of the nucleus. This result indicated that P. aeruginosa O157:H7 is a crucial inhibitor of host cell proliferation and invasion. Acknowledgements This study was supported by a grant from the National Science Council, the Local Ministry of Education, and an Award from the Japanese Ministry of Education. References [1] T. H. et al. / Cytokine 36 (2006) 67–76 [2] Y. M. Huang, J. C. Guo, J. Q. Liu, J. C. Wang, J. C. Chen, J. L. Yang, J. C. Liu, J. W. Yu, J. C. Yang, J. L. Yang, J. J. Yang, J. W. Yu, J. C. Yang, S. H. Wu, and J. C. Luo. [3] E. D. Baker, J. S. Farr, and G. F. Scott. [4] F. E. Gilchrist, J. E. de Haan, and R. B. Ewing. [5] J. L. Wen, Y. H. Liu, C. J. Yu, J. S. Lin, and B. J. D. Moore. [6] W. D. Baker, C. J. Chen, J. E. Fox, J. C. Lu, and J. C. Lu. [7] M. W. Chai, C. J. Chen, H. C. Duan, J. L. Yuan, Q. Jiao, and B. C. Long. [8] A. J. Huang