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Education:

2000 Ph.D., Bacteriology, University of Wisconsin-Madison, Madison, WI
1994 B.Sc., Zoology, University of Wisconsin-Madison, Madison, WI

Professional Career:

6/10-current Microbiologist, Center for Veterinary Biologics, USDA, Ames, IA
6/09-6/10 Biosafety Manager, Center for Veterinary Biologics, USDA, Ames, IA
10/03-6/09 Microbiologist, National Animal Disease Center, USDA, Ames, IA
5/03-9/03 Postdoctorate, Biochemistry Dept., Univ. of Minnesota-St. Paul
11/00-5/03 Postdoctorate, Plant Pathology Dept., Univ. of California-Riverside

Publications:

Scupham, A. J, Jones, J. A., Rettedal, E. A., and Weber, T. E. (2010) Antibiotic manipulation of intestinal microbiota to identify microbes associated with *Campylobacter* exclusion in poultry. *Appl Environ Microbiol.* 76(24):8026-32.

Scupham, A. J. (2009) *Campylobacter* colonization of the turkey intestine in the context of microbial community development. *Appl Environ Microbiol.* 75(11):3564-71.

Patton, T. G., Scupham, A. J, Bearson, S. M. D. and Carlson, S. A. (2009) Characterization of fecal microbiota from a *Salmonella* endemic cattle herd as determined by oligonucleotide fingerprinting of rDNA genes. *Vet Microbiol.* 136(3-4):285-292.

Jeon, B., Muraoka, W., Scupham, A., Zhang, Q. (2009) Roles of lipooligosaccharide and capsular polysaccharide in natural transformation and antimicrobial resistance in *Campylobacter jejuni*. *J Antimicrob Chemother.* 63(3):462-468.

Scupham, A. J, Patton, T.G., Bent, E. and Bayles D.O. (2008) Comparison of the cecal microbiota of domestic and wild turkeys. *Microbial Ecol.* 56:322-331.

Borneman, J., Becker, J.O., Bent, E. Lanoil, B. D., McSpadden Gardener, B., Olatinwo, R., Presley, L.L., Scupham, A.J, Valinsky, L. and Yin, B. (2007) Identifying microorganisms involved in specific *in situ* functions: experimental design considerations for rRNA gene-based population studies and sequence-selective PCR assays. In *Manual of Environmental Microbiology*. Hurst, C. J. (ed). Washington, D.C.: ASM Press, pp. 748-757.

- Scupham, A. J. (2007) Succession in the intestinal microbiota of preadolescent turkeys. *FEMS Microbiol Ecol.* 60: 136-147.
- Scupham, A. J. (2007) Examination of the microbial ecology of the avian intestine *in vivo* using bromodeoxyuridine. *Environ Microbiol.* 9: 1801-1809.
- Scupham, A. J, Jones, J.A. and Wesley, I.V. (2007) Comparison of DNA extraction methods for analysis of turkey cecal microbiota. *J Appl Microbiol.* 102: 401-409.
- Scupham, A. J, Presley L.L., Wei, B., Bent, E., Griffith, N., McPherson, M., *et al.* (2006) Abundant and diverse fungal microbiota in the murine intestine. *Appl Environ Microbiol.* 72: 793-801.
- Scupham, A. J and Triplett, E.W. (2006) Determination of the amino acid residues required for the activity of the anti-rhizobial peptide antibiotic trifolitoxin Structure-activity relationships of the rhizobial peptide antibiotic trifolitoxin. *Journal of Applied Microbiology* 100(3):500-507.
- Scupham, A.J, Presley, L.L., Wei, B., Bent, E., Griffith, N., McPherson, M., Zhu, F., Oluwadara, O., Rao, N., Braun, J., and Borneman, J. (2006) Abundant and diverse fungal microbiota in the murine intestine. *Applied and Environmental Microbiology* 72(1):793-801.
- Valinsky, L., Scupham, A.J, Della Vedova, J., Liu,Z., Figuerosa, A., Jampachaisri, K., Yin, B., Press, J., Jiang, T., and Borneman, J. (2004) Oligonucleotide Fingerprinting of Ribosomal RNA Genes (OFRG), p. 569-585. *In* G. A. Kowalchuk, F. J. de Bruijn, I. M. Head, A. D. L. Akkermans, and J. D. van Elsas (ed.), *Molecular Microbial Ecology Methods*, 2nd ed, vol. 1. Kluwer Academic Press, The Netherlands.
- Yin, B., Scupham, A.J, Bent, E. and Borneman, J. (2004) BrdU Substrate Utilization Assay, p. 1651-1659. *In* G. A. Kowalchuk, F. J. de Bruijn, I. M. Head, A. D. L. Akkermans, and J. D. van Elsas (ed.), *Molecular Microbial Ecology Manual*, 2nd ed, vol. 2. Kluwer Academic Press, Dordrecht, The Netherlands.
- Yin, B., Scupham, A.J, Menge, J.A. and Borneman, J. (2004) Identifying microorganisms that fill a niche similar to that of the pathogen: a new investigative model for biological control research. *Plant and Soil.* 259(1):19-27.
- Scupham, A. J, Dong, Y. and Triplett, E.W. (2002) Involvement of *tfxE* and *tfxG* in trifolitoxin resistance. *Appl. Env. Microbiol.* 68(9): 4334-4340.
- Valinsky, L., Della Vedova, G., Scupham, A.J, Chrobak, M., Jiang, T., Figueroa, A., Hartin, J., Yin, B. and Borneman, J. (2002) Oligonucleotide Fingerprinting of Ribosomal RNA genes. *Appl. Env. Microbiol.* 68(7): 3243-3250.

Scupham, A. J, Robleto, E. A. and Triplett, E.W. (2000) Solving the competition problem: Genetic and field approaches to enhance the effectiveness of the *Rhizobium*-legume symbiosis. In Prokaryotic Nitrogen Fixation: A Model System for the Analysis of a Biological Process. p251-278. Horizon Scientific Press, Wymondham, England.

Scupham, A. J and Triplett, E.W. (1997) Isolation and characterization of the UDP-glucose 4'-epimerase-encoding gene, *galeE*, from *Brucella abortus*. *Gene* 202:53-59.

Robleto, E. A., Scupham, A. J and Triplett, E.W. (1996) Trifolitoxin production in *Rhizobium etli* strain CE3 increases competitiveness for rhizosphere colonization and root nodulation. *Molec. Plant Microbe Interact.* 10(2):228-233.

Scupham, A. J, Bosworth, A.H., Ellis, W.R., Wacek, T.J., Albrecht, K.A. and E.W. Triplett. (1996) Inoculation with *Sinorhizobium meliloti* RMBPC-2 increases alfalfa yield compared with a non-engineered wild-type strain. *Appl. Env. Microbiol.* 62(11): 4260-4262.