

Shelley R. Cooper

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Organized, versatile research scientist with proven ability to apply innovation to solve complex problems in a team environment. Strong background in molecular biology and genetics and capacity to quickly learn new techniques. Research skills include:

- Polymerase Chain Reaction (PCR)
- Restriction Fragment Length Polymorphism (RFLP)
- Single-Stranded Conformation Polymorphism (SSCP)
- Fluorescence *in-situ* Hybridization (FISH)
- FISH Probe Design
- RNA Transcription & Amplification
- Genetic Linkage Mapping
- Cloning Techniques

EXPERIENCE

Engineer of Young Minds (Full-Time Mother) **1999 to Present**

With both of my children now in school, I am looking to transition back into the science industry. For the past several years I have also served as a Girl Scout Leader, PTO Vice President, and a school volunteer for science education.

Research Associate II at Vysis, Inc., Downers Grove **1996 to 1999**

Multinational genomic disease management company specializing in products for research use, cancer detection and prenatal testing.

Designed and tested FISH probes for diagnosis of leukemias and lymphomas. Conducted extensive research and development of a commercial assay for cancer diagnosis and patient monitoring. Managed and maintained laboratory operations and processes.

- Designed and optimized novel format and conditions for RNA amplification utilizing Q-Beta replicase, resulting in small, bright RNA colonies for easy quantitation.
- Learned new techniques encompassing all project aspects, improved project productivity, and became an essential team member during a co-worker disability.
- Promoted from Research Associate I in 1998 for excellent efficiency and trouble-shooting abilities.

Graduate Research Assistant at The University of Illinois at Urbana-Champaign **1994 to 1996**

Renowned educational and research organization with significant staff contributions to scientific knowledge.

Examined genetic mutations and collaborated to compile a comprehensive bovine gene linkage map.

- Improved the bovine gene map using comparative mapping methods by identifying unique polymorphisms and genetic linkage maps of structural genes.
- Trained and supervised an unpredictable undergraduate student in new SSCP techniques while completing and defending graduate thesis.
- First Place Undergraduate Research Award and Scholarship for research and technical writing.

Veterinary Technician at Animal Hospital of West Lake Forest, Lake Forest **Summers 1992, 1993, 1996**

Veterinary Technician at Preiser Animal Hospital, Northbrook **Summer and Winter 1991**

Conducted veterinary and surgical techniques, handled and treated many breeds of animals.

EDUCATION

Master of Science in Molecular Genetics, 1996

University of Illinois at Urbana-Champaign

Bachelor of Science in Animal Science, 1994

University of Illinois at Urbana-Champaign

THESIS

Fisher, S. R. (1996). Comparative genome mapping of *COL3A1* to bovine chromosome 2 and five loci from human chromosome 4 to bovine chromosomes 6 and 17.

PUBLICATIONS

Ma, R. Z., J. E. Beever, Y. Da, C. A. Green, I. Russ, C. Park, D. W. Heyen, R. E. Everts, S. R. Fisher, K. M. Overton, A. J. Teale, S. J. Kemp, H. C. Hines, G. Guerin, and H. A. Lewin (1996). A male linkage map of the cattle (*Bos Taurus*) genome. *Journal of Heredity*, **87**:261-271.

Fisher, S. R., J. E. Beever, and H. A. Lewin (1996). Genetic mapping of *COL3A1* to bovine chromosome 2. *Mammalian Genome*, **8**:76-77.

Beever, J. E., S. R. Fisher, G. Guerin, and H. A. Lewin (1997). Mapping of eight chromosome 1 orthologs to cattle chromosomes 3 and 16. *Mammalian Genome*, **8**:533-536.

Beever, J. E., S. R. Fisher, and H. A. Lewin (1997). Polymorphism identification in the *ACADM*, *AT3*, *IL10*, *MYOG*, and *TSHB* genes of cattle. *Animal Genetics*, **28**:370-383.

Fisher, S. R., J. E. Beever, and H. A. Lewin (1997). Comparative genome mapping of five loci from human chromosome 4 orthologues to bovine chromosomes 6 and 17. *Animal Genetics*, **28**:253-257.

van Eijk, M. J. T., M. A. van Rooijen, S. Modina, L. Scesci, G. Folkers, H. T. A. van Tol, M. M. Beevers, S. R. Fisher, H. A. Lewin, D. Shehu, C. Galli, C. de Vaureix, A. O. Trounson, C. L. Mummery, and F. Gandolfi (1997). Molecular cloning, genetic mapping, and developmental expression of bovine octamer-binding transcription factor-3/4. *Biology of Reproduction*, submitted.

ABSTRACTS

Beever, J. E., Y. Da, S. R. Fisher, M. Ron, R. T. Stone, S. M. Kappes, S. J. Kemp, A. M. Crawford, and H. A. Lewin (1994). A genetic map of 17 loci on bovine chromosome 2. 24th International Conference on Animal Genetics, Prague, Czech Republic. *Animal Genetics*, **25** (suppl 2):44-45.

Lewin, H. A., J. E. Beever, and S. R. Fisher (1995). The genome lottery and comparative genomics. First International Swine Chromosome 6 Workshop, St. Paul, MN. *Animal Genetics*, **26**:392-393.

Ma, R. Z., J. E. Beever, Y. Da, C. A. Green, I. Russ, C. Park, D. W. Heyen, R. E. Everts, S. R. Fisher, A. J. Teale, S. J. Kemp, G. Guerin, and H. A. Lewin (1995). A male linkage map of the cattle (*Bos Taurus*) genome. Beltsville Symposium XX, Biotechnology's Role in the Genetic Improvement of Farm Animals, Beltsville, MD.