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Dr. Gaasterland received her Ph.D. in 1992 from the University of Maryland, College Park, Department of Computer Science. From 1992–1998, she was Assistant Scientist at the Argonne National Laboratory (DOE) and, jointly, Assistant Professor at the University of Chicago, Department of Computer Science. Dr. Gaasterland is a Founding Board Member and Founding Officer of the International Society for Computational Biology. Since 1995, she has been a Research Associate of the Canadian Institute for Advanced Research's (CIAR) Evolutionary Biology Program. Her research interests are Automated Genome Annotation, Integration of Sequence Interpretation and Microarray Gene Expression Data, Cooperative and Distributed Databases and High-Performance Computing.

Gene expression meets genome annotation

We are developing methods to integrate genome sequence annotation data with microarray expression data. This effort has two emphases: (i) comparison of clusters of expressed genes with function, genomic location and patterns of evolutionary conservation of proteins from all fully sequenced genomes; and (ii) automatic annotation of cDNAs corresponding to microarray positions. Our goal is to generate explanations of gene clusters built from gene expression data. To construct explanations, we draw on databases of metabolic pathway information, genome annotation and genomic organization (prokaryotic operons). A preliminary version of our system is implemented as a cDNA annotation module of the MAGPIE genome annotation system. This talk will present the use of the cDNA annotation system for *Xenopus,* mouse hypothalamus and Phretameoba cDNA sequences.