

## Aviva Systems Biology Launches ChIP-GLAS Service for the Simultaneous Detection of 20,000 Human Promoters from a Single Sample

San Diego, CA –August 8, 2006- Due to strong customer demand, Aviva Systems Biology ([www.avivasysbio.com](http://www.avivasysbio.com)) announced the launch of a custom service for their novel ChIP-GLAS system. ChIP-GLAS (**C**hromatin **I**mmunoprecipitation-**G**uided **L**igation **A**nd **S**election) is a very sensitive method for genome-wide detection of promoters and enhancers that interact with proteins or carry modifications, such as methylation, that affect gene expression. This new service allows researchers to send in their cell/tissue samples or chromatin immunoprecipitated (ChIP) DNA samples, and in return, receive a list of potentially enriched genes.

ChIP-GLAS technology was invented in the laboratory of Dr. Xiangdong Fu, a Professor in the Department of Cellular and Molecular Biology at UC San Diego, and licensed exclusively by Aviva Systems Biology. This technology was also selected for inclusion in the NIH ENCODE (ENCyclopedia Of DNA Elements) development project to develop technologies to identify functional DNA elements within the human genome.

In the ChIP-GLAS procedure, DNA that is bound to transcription factors or hypermethylated is captured, either by a protein-specific antibody or a DNA modification-specific antibody, such as ASB's methylation-specific anti-5-methylcytosine monoclonal antibody. The captured DNA is then copied, amplified, and finally hybridized to a promoter microarray to reveal the identity of the genes of interest. A unique feature of the ChIP-GLAS system is the GLAS (**G**uided **L**igation **A**nd **S**election) step. In this step the DNA of interest is specifically selected by annealing to oligonucleotides corresponding to promoters on the microarray. This step decreases the sample complexity, thereby increasing both the sensitivity and the specificity of ChIP-GLAS compared to similar techniques. The annealing step is followed by PCR amplification, labeling, and hybridization to a promoter microarray.

Aviva Systems Biology further developed this technology using its core bioinformatics capabilities to identify and select the basic promoter regions for the microarray oligo designs. 20,000 human and 8000 mouse promoters have been incorporated into DNA microarrays as the H20K and M8K chips, respectively. Mr. Julian Yuan, CEO of Aviva Systems Biology states, "We are pleased to offer this valuable service to our customers. Together with the release of over 1000 new antibodies for human and mouse transcription factors in 2006, we are excited to help accelerate new scientific discoveries". ChIP-GLAS technology has many important applications that are useful for the understanding of transcription factor/DNA interactions: transcriptional regulation, mRNA splicing, DNA damage repair, DNA replication, gene deletion and duplication, and many others.

Based in San Diego, California, Aviva Systems Biology is dedicated to the development of reagents for transcription factor research including antibodies to over 2400 human and mouse putative transcription factors. Aviva Systems Biology also generates antibodies and additional reagents for other important research areas. Learn more about our products and technology at [www.transcriptionfactor.com](http://www.transcriptionfactor.com).