



## Bioinformatics Products

Knowledge discovery has long been the driving force for research and advancement of life science. It has evolved into a complex and highly sophisticated field of bioinformatics that engages the expertise from biology, computer science and information technology. The ultimate goal is to enable the discovery of new biological insights. In the process, the life science development and research has been producing an enormous amount of genome data for various organisms.

As a part of its mission to contribute to genomic and proteomic research and advances, Genome has developed four distinct products to help research community in various domains such as pharmaceuticals and drugs, agricultural and seeds, disease discovery and personalized medicines.

### - ExDom

ExDom is a unique database developed for the comparative visualization and analysis of exon-intron structure of protein domains in seven eukaryotic genomes (Homo sapiens, Mus musculus, Bos Taurus, Rattus norvegicus, Danio rerio, Gallus and Arabidopsis thaliana). The ExDom database integrates 3744 protein domains annotated in the Pfam database to their corresponding Exon-Intron structures in 40,390 genes annotated in the RefSeq database and provides a unique platform for integrated comparative analysis of exon-domain relationships. (Refer to our publication in Nucl. Acids Res. Bhasi et al. 37: D703, 2009)

### - EuSplice

EuSplice is a unique resource which provides reliable splice signal and alternative splicing information for 23 eukaryotic genomes. EuSplice contains over 2 million splice signals and 92,710 alternative splicing events associated with more than 270,000 protein-coding eukaryote genes – information being seamlessly integrated with gene-specific annotations extracted from various public databases. (Refer to our publication for detailed product description- Bioinformatics, 23(14):1815-1823, 2007)

### - AspAlt

AspAlt is a unique tool developed for inter-genomic and inter-database comparative analysis of alternate splicing (AS) alternate transcription (AT) events. It provides integrated access to 2.1 million Alternate splicing and Alternate Transcription annotations from over hundred thousand multi-isoform genes of forty six organisms. (Refer to our publication in Genomics, 94(1):48-54, 2009 with commendation in Biotechniques, 46:495, June 2009)

### - RoBust

Root and bulb vegetables (RBV) include carrots, celeriac (root celery), parsnips (Apiaceae), onions, garlic, and leek (Alliaceae) – food crops grown globally and consumed worldwide. Few data analysis platforms are currently available where data collection, annotation and integration initiatives are focused on RBV plant groups. An integrated data collection and annotation platforms focused on specific orphan crop families would be invaluable for researchers working on these crops. RoBuST database and its user-friendly web interface have been developed to address this need. RoBuST is a unique genomics analysis platform to collect and organize genomic information useful for root and bulb researchers. (Publication submitted to Plant Physiology).