Strand was founded in 2000 by computer science and mathematics professors from India's prestigious Indian Institute of Science who recognized the need to automate and integrate life science data analysis through an algorithmic and computational approach. Strand's segue into the life sciences was through informatics products and services for research biologists, chemists, and toxicologists that combine advanced visualization, predictive systems modeling, data integration and scientific content management - over 2000 research laboratories worldwide (about 30% of global market share) are licensees of Strand's technology products, including leading pharmaceutical and biotechnology companies, research hospitals and academic institutions. With a recent investment by Biomark Capital, Strand has grown its established team to over 200 employees, many with multidisciplinary backgrounds that transcend computation and biology.

Since 2012, Strand has been expanding its focus to include clinical Genomics, spanning sequencing, data interpretation, reporting and counseling. Strand operates a 10,000 square foot laboratory space with state-of-the-art clinical Genomics capabilities and is also establishing Strand Centers for Genomics and Personalized Medicine in several hospitals around the world to serve as outreach points for genomic counseling. Based on the experience gained from sequencing, analyzing, interpreting and reporting on clinical samples over a wide variety of clinical indications, Strand has developed a end-to-end solution for clinical labs that handles all stagefrom analysis to reporting. The interpretation and reporting software platform has been designed and developed specifically for the medical professional, ranging from the molecular pathologist to the physician. By enhancing sequence-based diagnostics and clinical Genomic data interpretation using a strong foundation of computational, scientific, and medical expertise, Strand is bringing individualized medicine to the world.

For more information about Strand, please visit www.strandls.com or follow us on twitter @StrandLife.
Comprehensive Annotations

- Pre-packaged gene and transcript annotations from UCSC, RefSeq and ENSEMBL for all model organisms.
- SNP annotations from dbSNP and COSMIC, SIFT/Polyphen scores from dbNSFP, small RNA annotations, miRNA target prediction databases, screening databases and more.
- Ability to create annotations for other organisms from gbk/gtf files or FASTA files.

Import Data

- File Formats – FASTA/FASTQ, Unaligned BAM, SAM/BAM, Counts data.
- Library Layouts – Single End, Paired End, Mate Paired as well as Directional layouts.
- Vendor Platforms – Illumina, Ion Torrent, 454 Roche, SOLiD, PacBio.

Alignment with Strand NGS aligner

- Alignment for small RNA, DNA-Seq, ChIP-Seq and RNA-Seq data.
- Targeted region alignment for resequencing applications. Handles variable length reads, arbitrary number of gaps and mismatches and paired reads as well.
- Split read alignment for detecting long InDels and translocations.
- Options for trimming adaptors, low quality bases and screening reads against standard databases.
- Aligns ~8 million DNA reads against hg19 per hour per core on a 64GB RAM machine.

Quality Control Plots

- Base and read quality distributions.
- Base composition and quality distributions by position in read.
- Read length and insert length distributions.
- Alignment score and mapping quality distributions.
- Mate status QC plot.
- Vendor-specific QC plots.
- Targeted region QC.
Quality Control Manager: Library QC

- Multiple quality inspection options including pre-alignment, post-alignment, vendor-specific QC and Library QC.
- Automatically generates a QC report for every sample.
- Export QC report as a pdf document.

Quality Control Manager: Target Enrichment QC

- Efficiently analyze data generated from targeted resequencing experiments.
- Target region-based quality control for your customized panels.
- Assess coverage distribution across target regions including target enrichment profile plot, metrics, summary table, and sample-wise base frequency coverage distribution.

Filter Low Quality Reads

- Filter by read quality metrics.
- Filter by targeted regions of interest.
- Filter duplicate reads and multiple mapping reads.
- Filter by samples.
About Strand
A History of Innovative Genomic Research

Strand Life Sciences is a global genomic profiling company and leader in precision medicine diagnostics, aimed at empowering cancer care and genetic testing for inherited diseases. Strand works with physicians and hospitals to enable faster clinical decision support for accurate molecular diagnosis, prognosis, therapy recommendations, and clinical trials. The Strand Center for Genomics & Personalized Medicine is India’s 1st and only CAP & NABL accredited NGS laboratory.

www.strandls.com

A Trusted Partner to Companies Worldwide

For 15 years, our genomics products and solutions have facilitated the work of leading researchers and medical geneticists in over 2,000 laboratories and 100 hospitals around the world.

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