

# LASERGENE VERSION COMPARISON

## Lasergene Molecular Biology

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### Cloning, Primer Design, and Gene Detection

Enhanced support for VectorNTI, Geneious, and Clone Manager Suite file types			•
PCR site-directed mutagenesis with ability to predict impact of mutation on protein structure			•
Access SeqBuilder Pro as a standalone application - <b>starting at just \$99</b>			•
Agarose gel simulation in SeqBuilder Pro		•	•
Automated clone verification workflow		•	•
Batch sequence editing built-in to SeqBuilder Pro		•	•
New SeqBuilder Pro application for sequence editing and analysis		•	•
Quick search and selection of enzymes		•	•
Collapsible and sortable feature and primer lists		•	•
Improved handling of large sequence files		•	•
Plasmid auto-annotation (single or batch) using curated database	•	•	•
Streamlined setup and reports for virtual cloning	•	•	•
Automated virtual cloning: site-directed, TA, TOPO, Gateway, InFusion, GeneArt and Gibson Assembly	•	•	•
Design customized primer pairs	•	•	•

### Pairwise and Multiple Sequence Alignment

Perform BLAST and Entrez searching from MegAlign Pro alignments			•
Updated views and enhanced user controls in MegAlign Pro			•
Comprehensive pairwise alignment in MegAlign Pro, powered by ParaSail		•	•
Copy, export, and align subsets of sequences		•	•
Import gapped FASTA alignments		•	•
Export editable images to PowerPoint	•	•	•
Profile alignment functionality to merge alignments or additional sequences	•	•	•
MAFFT, MUSCLE, Mauve, and Clustal Omega alignment algorithms	•	•	•
Align sequences and create phylogenetic trees	•	•	•

**Add our Genomics & Protein Applications to Complete Your Lasergene Package!**  
*See reverse side for added features.*

# Lasergene Genomics

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## Next-Gen Sequence Assembly and Alignment

Enhanced layout and controls in the GenVision Pro genomic browser			•
Integrated DNASTAR Cloud Assemblies for projects that exceed the capacity of your hardware			•
Quick access to NGS and Sanger project setup in the new DNASTAR Navigator			•
Enhanced RNA-Seq statistics with DESeq and edgeR from Bioconductor		•	•
Improved handling of GFF files		•	•
Visualization, browsing , isoform analysis and multi-sample comparison in GenVision Pro	•	•	•
RNA-Seq analysis for model and non-model organisms	•	•	•
Automatic mRNA annotation using RefSeq	•	•	•
Gene panel workflows with control validation	•	•	•
Metagenomic assembly and analysis	•	•	•
Reference-guided assembly for any size genome on a desktop computer	•	•	•
De novo genome and transcriptome assembly	•	•	•

## Variant Detection and Analysis

Model detected variants on protein structure with updated protein design workflow*			•
Combine variant and PDB annotations to predict potential effects on protein structure*		•	•
Enhanced read mapping option to reduce false positives		•	•
Combine SNP and CNV analysis with any workflow	•	•	•
Access to allele and genotype frequencies for SNPs	•	•	•
SNP detection accuracy >99.8%	•	•	•
Import and filter on VCF files and custom SNP data	•	•	•
Direct comparison to dbSNP and GERP and dbNSFP databases	•	•	•

# Lasergene Protein

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## Macromolecular Structure, Motion, and Function

Automated hot spot scanning to locate residues that are important for protein fold stability*			•
Protein design tools to improve fold stability and developability*			•
Integrated BLAST and Entrez searching in Protean 3D			•
Mutation modeling and neighbor search to analyze SNP impact on protein structure		•	•
Protein composition analysis		•	•
Full feature editing capabilities in Protean 3D		•	•
Export editable images to PowerPoint and PDF		•	•
Access to NovaDock® protein-protein docking, analysis and visualization*	•	•	•
Access to NovaFold Antibody structure prediction*	•	•	•
Protein function and ligand binding site prediction*	•	•	•
B-cell epitope prediction	•	•	•

\* Additional subscription may be required to access protein modeling and design programs