

Development of Quick, Precise and Complete Body Scanners

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New body scanners have been developed by the Digital Human Laboratory and Research Institute of Human Engineering for Quality Life (HQL). One of the new scanners can measure the 3D surface shape of the whole head, and another can measure the whole body. These scanners are (1) accurate (0.5 mm for head, 1.0 mm for whole body), (2) precise (resolution : 1.0 mm for head, 2.0 mm for whole body), (3) quick (0.93 sec for head, 1.8 sec for whole body) and (4) complete (reduction of hidden areas such as back of the ear, under the chin, arm pit and crotch). We have been

conducting anthropometric research of 3D body shape and dimensions on 200 senior Japanese with the new scanners. These data will be disclosed to public in June, 2002.



Whole body scanner and scanned data

Homology-Based Prediction of Eukaryotic Gene Structures

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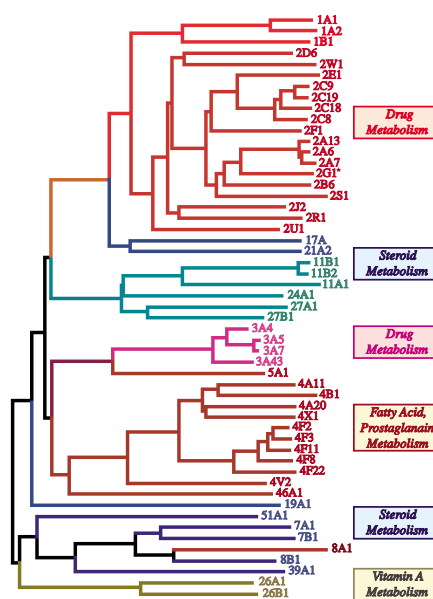
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We have developed a method for prediction of eukaryotic gene structures (exon-intron organizations) based on sequence homology together with several lines of statistical information such as coding potential and signal strength around exon-intron boundaries and translational start sites. Based on testing upon sets of human and *C. elegans* genes of known structures, we found that the method predicts coding nucleotides at an accuracy of 96% or more, when the amino acid identity between the reference and target sequences exceeds 50%. Using this method, we are attempting to identify all genes involved with drug metabolism in organisms whose entire genomic sequences have been determined.



A phylogenetic tree of human cytochrome P450 genes