

## **ANVITA EREFERENCE: INTEGRATING GERIATRICS WITH MOLECULAR GERONTOLOGY**

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Anvita eReference (formerly Senex) is a computer application integrating geriatrics and molecular gerontology (from bench to bedside). It is currently in use in clinical, educational and research settings by more than 80 individuals worldwide; about half are scientists and half clinicians. Information is needed from laboratory bench to patient bedside, during contact between physician and patient, educator and student, scientist and technician. The information needs to be structured so that specific and real-time retrieval is achievable. An information system should display a certain degree of intelligence, including flexibility in accepting input from the user, the capacity to reason with structured information, and display of context-specific information in a manner that facilitates conceptual understanding. We have used a strategy to achieve these goals that involves knowledge representation and interface development in the two domains of basic science and clinical medicine, and integration of the two. This strategy facilitates storage, retrieval and display of practical information about disease processes (clinical and molecular), pharmaceuticals, and laboratory testing. Anvita functions independently of the internet, but also provides direct links to internet-based molecular and clinical databases and to the original literature via point-and-click. Anvita is a large application with: 1523 organisms, 2757 anatomic structures, 230 cells, 134 cellular compartments, 14,734 molecules, 11088 proteins, 644 genes, 887 motifs, 67 molecular pathways, 6294 diseases, 552 clinical laboratory tests, 22,791 database links (7477 Swiss Prot, 7339 OMIM, 947 Prosite, 4229 Locus Link, 598 Kegg, 2201 Pfam). Anvita allows a user to add proprietary information on top of the core Anvita knowledge base, thus customizing the application for a user's own information needs. Anvita runs on Macintosh and Windows computers. The Macintosh version has a microarray data analysis and data mining module. Reference: <http://www.anvita>