Stanford

Douglas Wood

Software Dvlpr 3, Biomedical Data Science-Administration

Bio

CURRENT ROLE AT STANFORD

Working within the School of Medicine, I am developing solutions for the Stanford Bone Marrow Transplant, Lymphoma, and Cancer Institute Research Databases

My Stanford Projects:

- Stanford Cancer Center Research Database (SCIRDB)

Developed a web-based platform to integrate data from the Stanford Cancer Institute (EPIC/Clarity), Stanford Tumor Registry, STRIDE (Tissue Bank & Pre-EPIC Data), and several other systems into a "one-stop shop" for data analysis and annotation by cancer researchers. This cohort-driven system allows users to focus on their patients of interest and provides free-text search of all their notes, reports and narratives as well as a timeline-based view of all events for a patient. Easy exports allow for data analysis in biostatistical tools and the system can perform complex analysis using the open-source R statistical software as a service.

- Lymphoma Program Project (LPP)

Rearchitected an existing legacy database system that tracks Stanford's Non-Hodgkins and Hodgkins Lymphoma cases back to the late 1960's. Enables clinicians to track diagnosis, courses of treatment, long-term follow-up, and clinical responses to the diseases.

- Bone Marrow Transplant Program

Developed replacement web-enabled database based on legacy system in place since 1980s that enhanced data capture abilities by leveraging data feeds from BMT Clinic and Stanford Hospital. Also enabled electronic form submission to national transplant databank via XML-based web-services.

- Transplant Arteriosclerosis, Viral and Host Mechanisms

Developed web-based application and reporting systems Gathered requirements, translated requirements into technical specifications, built reporting tools, designed table schemas, migrated database tables from Access to Oracle, normalizing and validating data in the process. Wrote all SQL scripts for automating data migration.

- Stanford Asian Pacific Program in Hypertension and Insulin Resistance (SAPPHIRe)

Provided on-going maintenance for the project by uploading data, generating reports for statistical analysis and modifying table schema to incorporate new measurements such as creatinine.

- GenePad Project

Developed a web-based tool for quality assurance of scanned form data that allows users to view scanned input and validate it before storing it into final database tables.

The tool dynamically configures itself by examining the structure of the database.

Publications

PUBLICATIONS

- **Alterations in the adhesion behavior of osteoblasts by titanium particle loading: Inhibition of cell function and gene expression** *BIORHEOLOGY*
  Kwon, S. Y., Lin, T., Takei, H., Ma, Q. J., Wood, D. J., O'Connor, D., Sung, K. L.
  2001; 38 (2-3): 161-183

- **Titanium particles inhibit osteoblast adhesion to fibronectin-coated substrates** *JOURNAL OF ORTHOPAEDIC RESEARCH*
  Kwon, S. Y., Takei, H., Pioletti, D. P., Lin, T., Ma, Q. J., Akeson, W. H., Wood, D. J., Sung, K. L.
  2000; 18 (2): 203-211

- **The cytotoxic effect of titanium particles phagocytosed by osteoblasts** *J Biomed Mater Res*
  Pioletti DP, Takei H, Kwon SY, Wood D, Sung K-LP
  1999; 46: 399-407

- **Migration and healing of ligament cells under inflammatory conditions** *JOURNAL OF ORTHOPAEDIC RESEARCH*
  Witkowski, J., Yang, L., Wood, D. J., Sung, K. L.
  1997; 15 (2): 269-277

- **Quantification of adhesiveness of osteoblasts to titanium surfaces in vitro by the micropipette aspiration technique.** *Tissue engineering*
  Nugiel, D. J., Wood, D. J., Sung, K. L.
  1996; 2 (2): 127-140