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tranSMART: Knowledge Management Platform for Translational Medicine

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This introductory lecture will focus on tranSMART functionalities for data storage, access, browsing and analysis. Data loading options and free data sets available for loading will also be reviewed.

tranSMART platform is an open source integrated analytics and data-sharing platform for clinical and translational research. The system offers a Web portal data repository which handles both clinical and molecular data, supported by indexed search and analytical tools for OMICs data and can be installed as either Oracle or PostreSQL version. tranSMART is designed as an environment for biomedical researchers, physicians, and bioinformaticians to store patients’ OMICs data (genomics, transcriptomics, proteomics, etc.) and correlate them with phenotypic data of clinical relevance (disease subtypes, drug response biomarkers, survival expectancy, etc.). Within tranSMART, researchers can generate hypotheses on efficacy and toxicity biomarkers, novel drug targets, patient stratification; understand reasons for different response of individual patients, and other clinical applications. Its further evolution is supported by a growing community of developers and biologists (<http://transmartfoundation.org/>).