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SeeSpot: A Bioinformatics Software Solution for 2D-PAGE

ABSTRACT

As researchers are able to more efficiently identify the proteins expressed in specific tissues via 2D-PAGE gels, data access and organization plays a key role in understanding and interpreting their findings. To aid in this issue, we have developed SeeSpot, a software tool that provides a Java graphical user interface to proteomic data with a MySQL database for data storage. SeeSpot provides researchers with interactive gel images that include links between protein spot location, identification information, as well as links to public data repositories (such as NCBI and SWISS-PROT). SeeSpot provides privileged users the ability to manage the available gel images, as well as the functionality to load and edit identification information for individual spots and bulk uploads. Non-privileged users are offered a public version that restricts data access and modification privileges. Although this tool is used primarily for ophthalmic research, it is capable of handling any 2D-PAGE based projects. The software will be used to deploy the first catalogue of protein expression in ocular tissues.