Abstract for Immunology Conference, Seattle WA, May 2016

BIGG DATA: An accessible web portal for the analysis of immunologic repertoires.

The immune repertoire is an important resource for immunology research and for various clinical purposes. Technological advances over the past several years have led to an explosion of new techniques to capture the wealth of information contained in individuals' Immunoglobulin and T-Cell Receptor repertoires, and large public datasets using these sequencing techniques have been made available in the last few years. However, a major challenge to understanding immune repertoire data is the high-level knowledge of computational infrastructure required to analyze these datasets, often requiring computationally-focused individuals to be recruited ad-hoc rather than simply being performed by the immunologists gathering the data. Herein, we have developed a simple, accessible web portal to aid in the analysis of these datasets. Our system allows users to bring their own raw datasets (in the form of FASTQ data), and utilize various popular, well-developed tools to derive VDJ recombination annotations as well as to summarize statistical profiles of the full repertoire. This system provides an important, utilized resource that is employed by our lab for immunorepertoire analysis and is also available to the public in order to facilitate research in this area.