

Panorama Public: A public repository for Skyline documents

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<https://panoramaweb.org/>

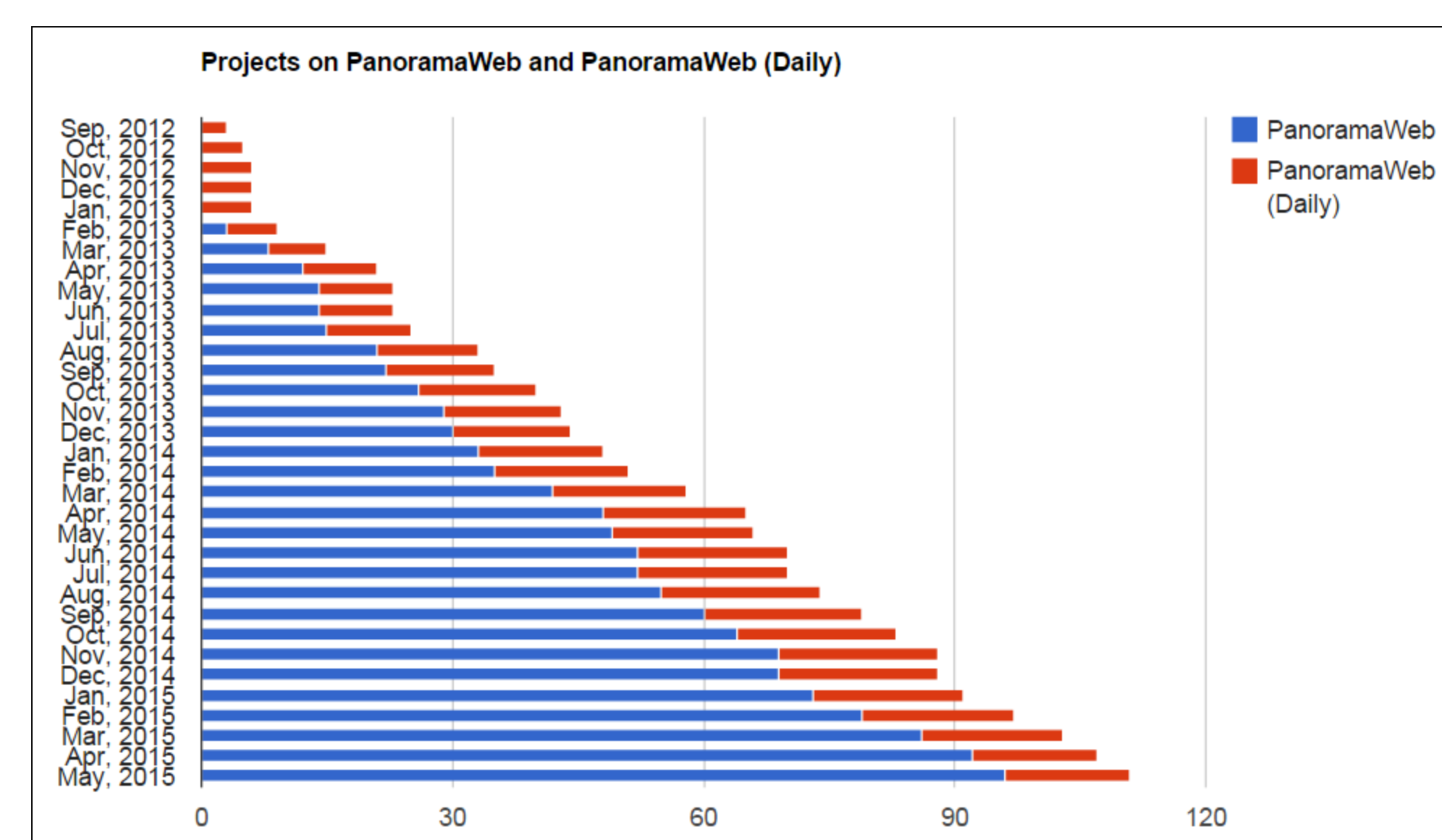


Overview

Panorama¹ is an open-source repository software project for targeted proteomics data processed with Skyline that has been adopted by a number of laboratories and organizations. PanoramaWeb (<https://panoramaweb.org>), the Panorama server hosted at the University of Washington, has become a popular choice with laboratories lacking the resources to set up their own Panorama servers. Users can request free projects on PanoramaWeb where they can manage data access permissions. To fulfill journal submission requirements, researchers have used their own projects on PanoramaWeb to provide public access to data. We present a new mechanism that allows users to publish their data to a public repository on PanoramaWeb that provides a new central resource to the community for published data processed with Skyline.

Introduction

Usage of PanoramaWeb has grown since it became available in January 2013. As of May 2015, the server hosts projects for over 100 different laboratories.



Growth of projects on PanoramaWeb.

Several projects on PanoramaWeb contain Skyline documents associated with peer-reviewed publications that the project owners have made publicly available using the access control features implemented in Panorama. Google Scholar identifies around 18 publications that have references to data on PanoramaWeb. However, these publicly accessible datasets are dispersed across several projects, which makes it difficult to provide a comprehensive listing and impossible to guarantee continued availability of the datasets in their original form. The availability of the Panorama Public repository on PanoramaWeb allows users to submit their data to a central resource of data processed with Skyline that can be searched using various criteria.

Methods

PanoramaWeb has become a popular choice with researchers for hosting Skyline documents associated with publications. However, these documents remain part of user projects on PanoramaWeb where the user can make changes, including removing this supplementary data entirely. When data contained in a user project is submitted to Panorama Public a snapshot of the data is created, to which the submitting authors have read-only access. Panorama Public provides a permanent location for supplementary data to reference in publications, in its original form as it was intended for publication. Access to data in the repository is managed as required. If requested, data can be private with access only to authors and reviewers during the manuscript review process. Data is made publicly accessible upon publication.

Researcher uploads Skyline documents to a folder in their project on PanoramaWeb

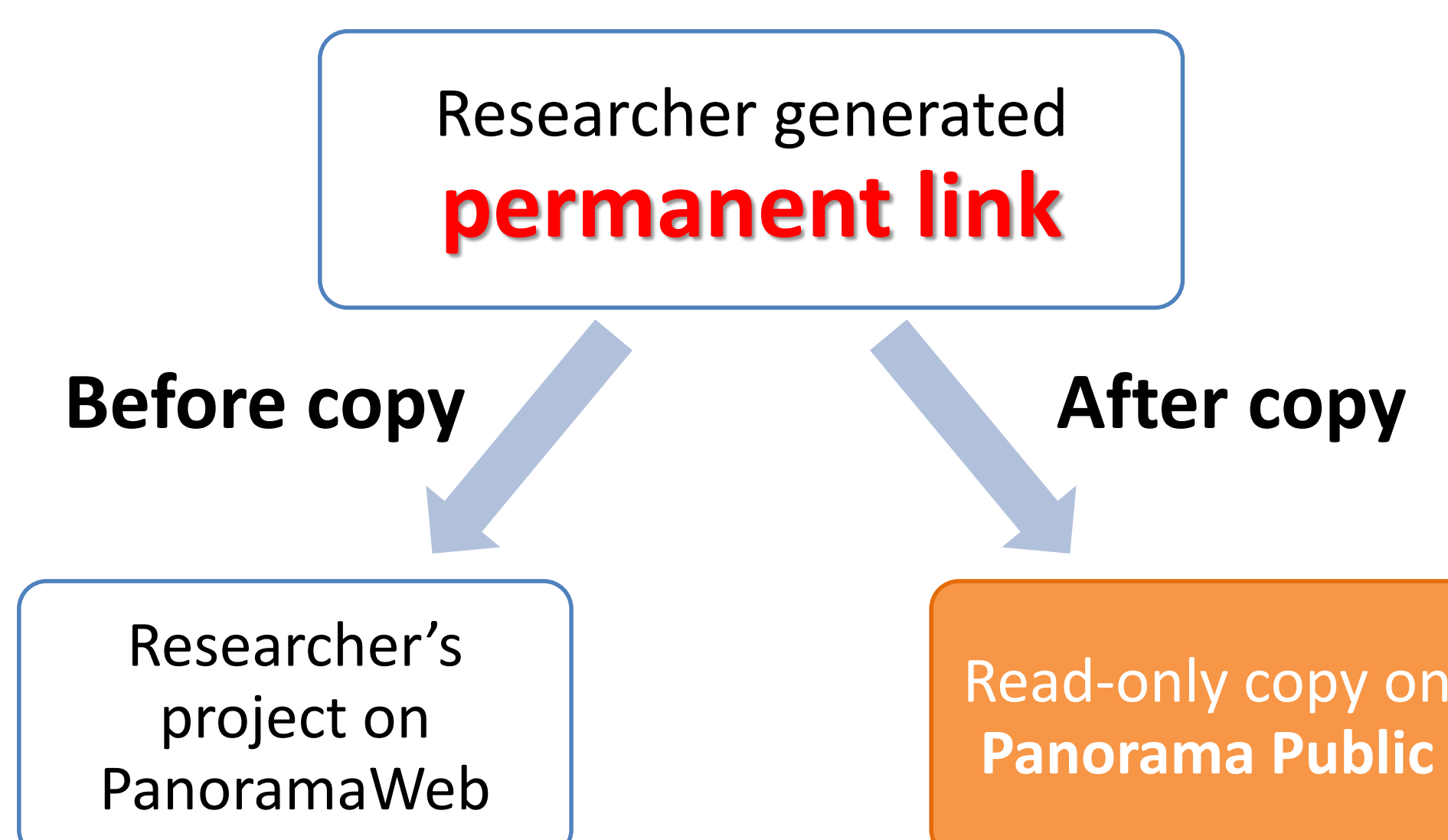
Researcher adds experiment annotations (abstract, organism, instrument etc.) to the folder

Researcher creates a permanent link to the data on PanoramaWeb

Researcher submits the annotated folder for publication to Panorama Public

PanoramaWeb administrators make a copy of the folder to Panorama Public

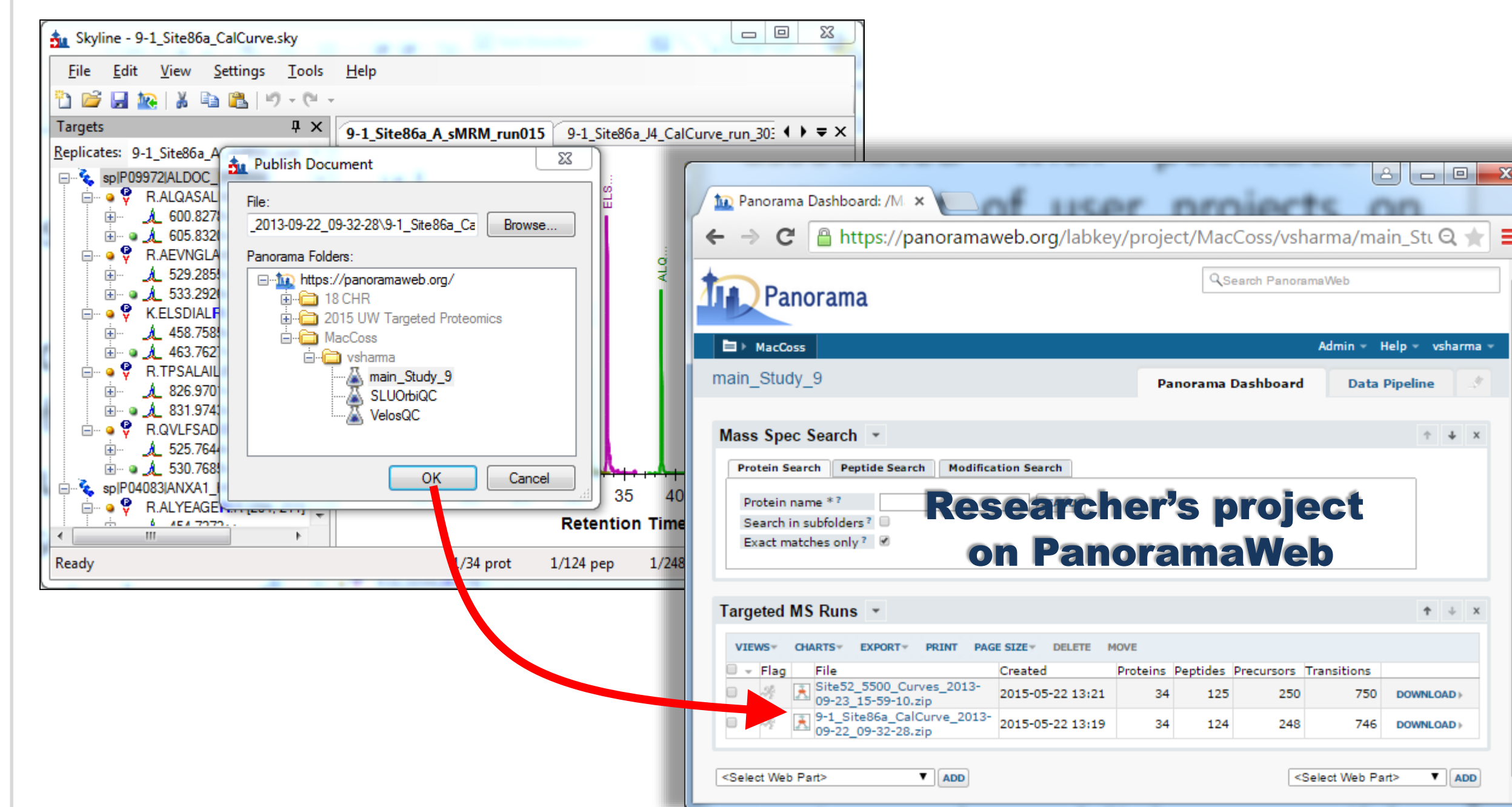
Workflow for publishing to Panorama Public



The permanent link created by the researcher initially links to the researcher's folder on PanoramaWeb. After a copy of the folder has been made to Panorama Public, the permanent link points to the new location of the copied data on Panorama Public.

Results

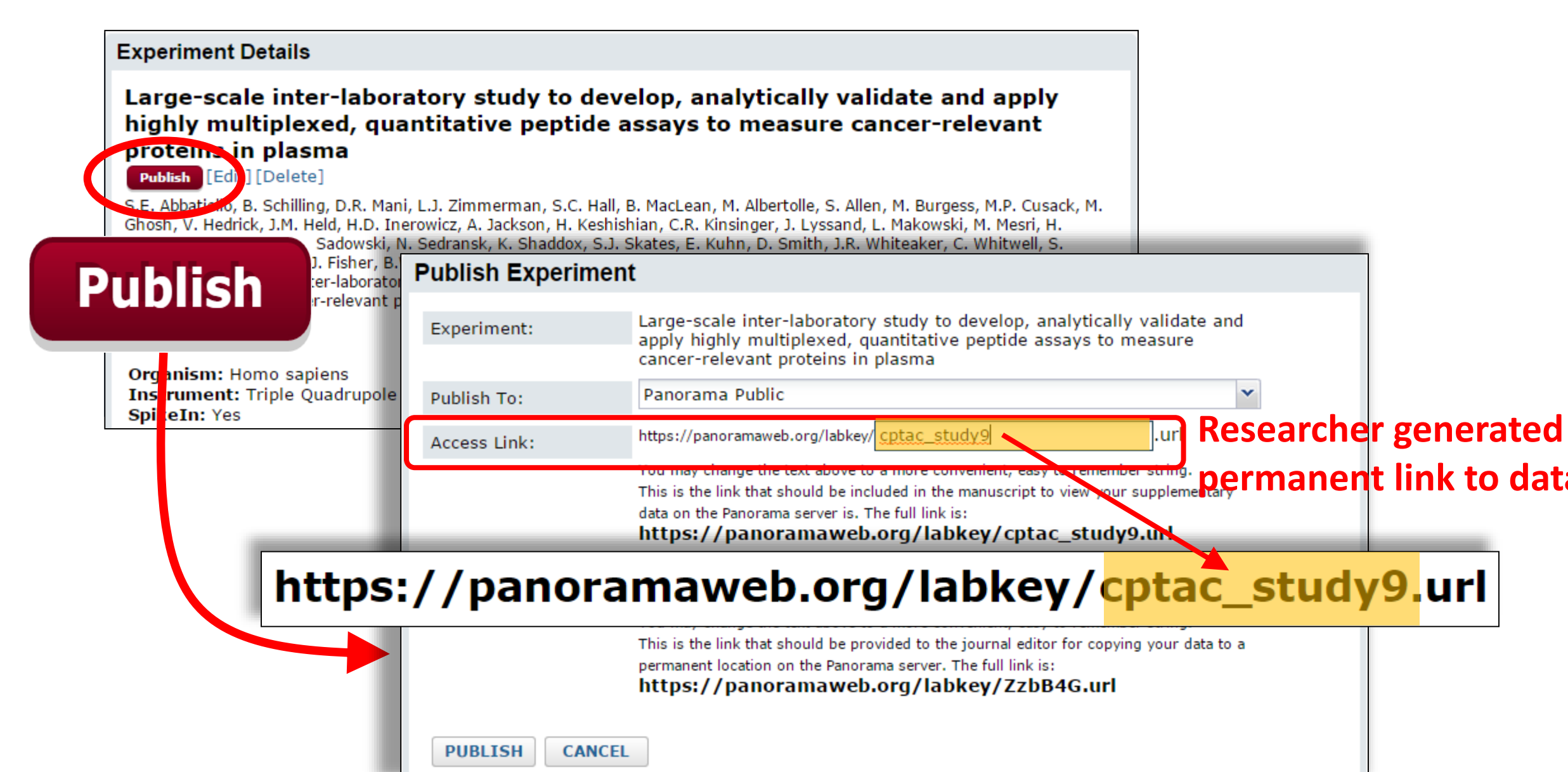
Publishing to Panorama Public



STEP 1 Upload documents to PanoramaWeb: Skyline documents associated with a manuscript are uploaded to a researcher's project on PanoramaWeb.

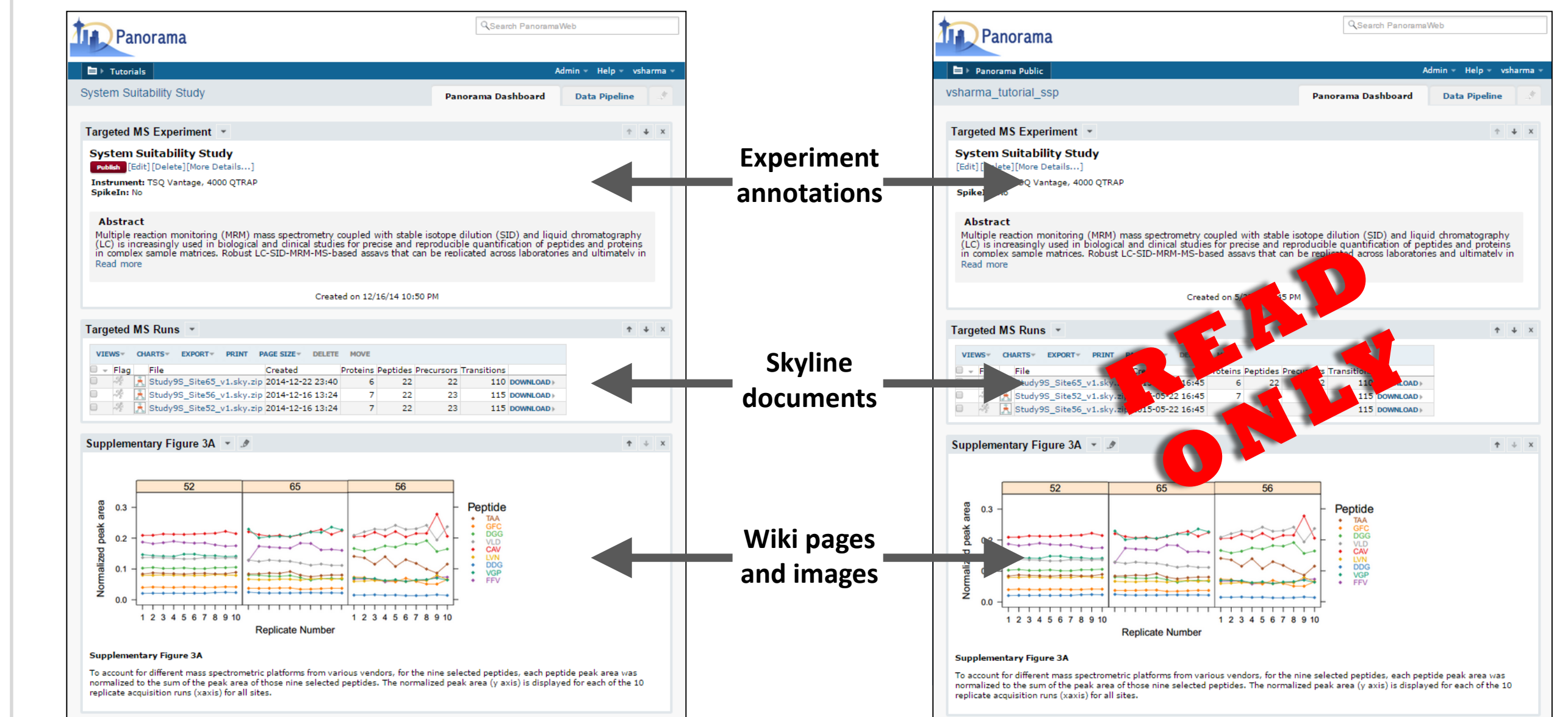


STEP 2 Annotate a folder for publication: Folders containing data intended for publication to Panorama Public must be annotated with a description of the experiment. This includes information such as an abstract, experiment and sample descriptions, organism, MS instrument used etc. The example shown above is from a published dataset² available on Panorama Public at https://panoramaweb.org/labkey/cptac_study9.url.



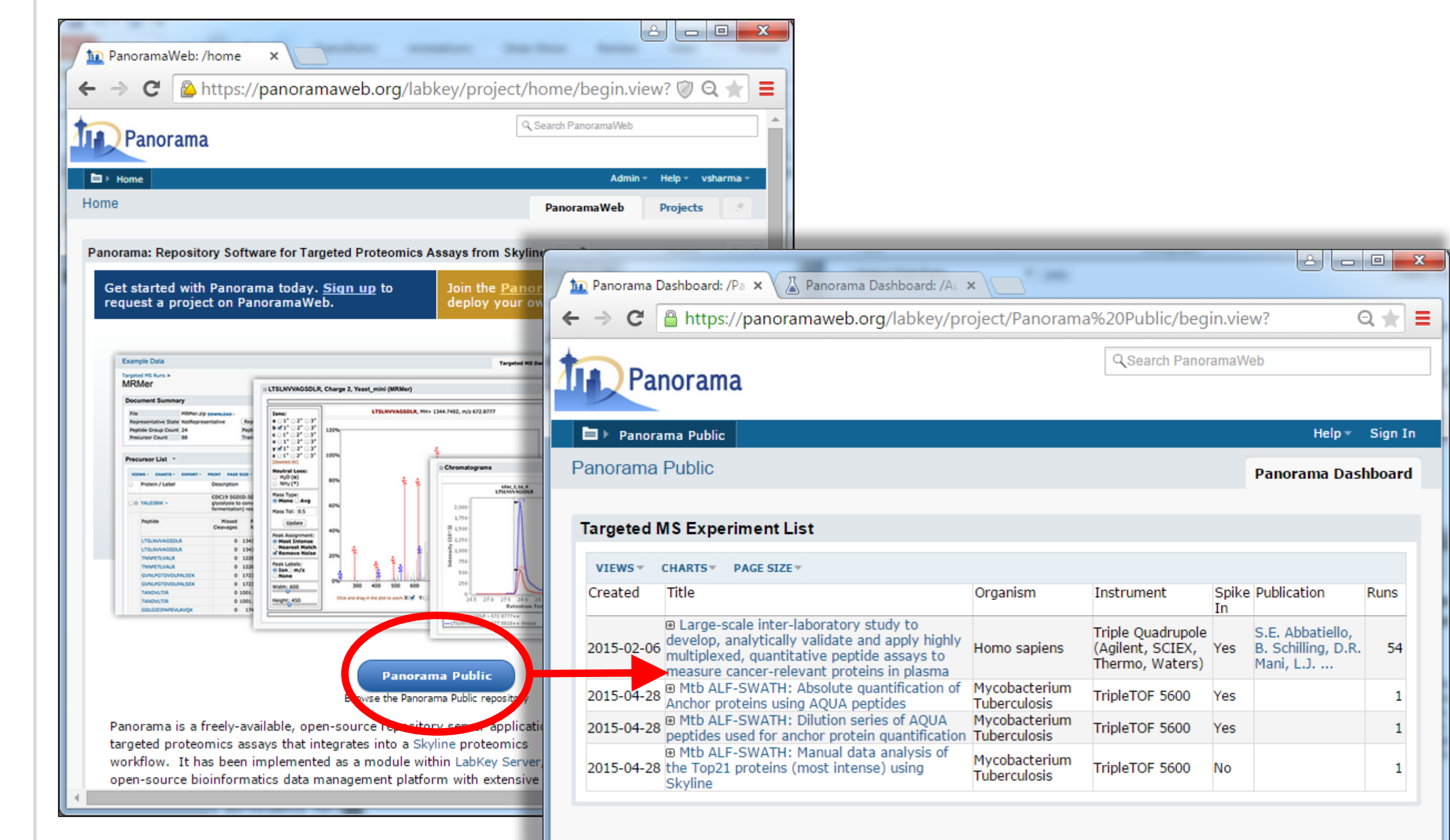
STEP 3 Submit the annotated folder for publication: Clicking on the "Publish" button in the experiment description brings up a form that lets users generate a permanent link to the data and submit the data for publication to Panorama Public. The permanent link can be included in manuscripts and given to journal editors during the manuscript review process.

Data on Panorama Public



Folder in researcher's project on PanoramaWeb

Panorama allows users to create a rich interface around their data that can include wiki pages, charts and other supplementary files and images. These user interface elements are included in the copy of the data stored in Panorama Public. Submitting researchers have read-only access to data on Panorama Public.



Browse available data on Panorama Public by clicking on the link on the home page of PanoramaWeb.

Conclusions

Panorama Public provides a new community resource for published data processed with Skyline. Data is made available in its original form as it was intended for publication. PanoramaWeb users may also submit data to Panorama Public during manuscript review process and request private access for reviewers until publication. A tutorial describing the process of publishing to Panorama Public is available at: https://panoramaweb.org/labkey/tutorial_panorama_public.url

Future work: Fulfill the requirements for participating in the ProteomeXchange consortium as a data resource.

References

- Sharma V, MacLean B, et al. J. Proteome Res. 2014/08; 10.1021/pr5006636
- Abbateello SE, Carr SA et al. MCP 2014/02; 10.1074/mcp.M114.047050

Funding: R01 GM103551 (PI: MacCoss) and U54 HG008097 (MPI: Jaffe)