DATE

Ontario Institute for Cancer Research

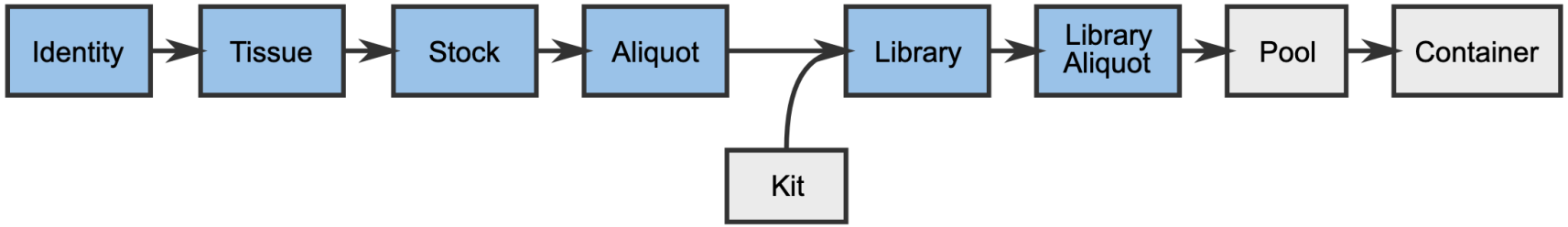
MISO Tutorial: Sequencing

OICR
Ontario Institute for Cancer Research

Outline

- Pool Orders
- Pools
- Sequencing Orders
- Sequencer Runs
- Sequencing Containers
- Service Records

General MISO Flow



Pool Orders

- A pool order tells the sequencing team that a set of libraries is ready to be pooled and sequenced
- Specifies which library aliquots to include and at what proportions
  - Library aliquots derived from the ones specified are also accepted
- May specify sequencing requirements
- Fulfilling a pool order requires
  - Linking a pool that contains all of the specified aliquots (or derivatives)
  - Linking a sequencing order that matches the sequencing requirements of the pool order (if specified)

Pools

- A pool is made up of one or multiple library aliquots that are ready to be loaded into a sequencing container partition for sequencing
- A pool containing multiple aliquots is called multiplexed
  - Indices are used to separate the libraries later on
  - Pools containing problematic indices show warnings

Sequencing Orders

- A sequencing order tells the sequencing team that a pool is ready to be sequenced
- Specifies
  - Instrument type
  - Sequencing parameters such as chemistry and read length
  - Number of partitions (lanes) required
- Automatically marked as fulfilled when matching runs are completed

Sequencer Runs and Sequencing Containers

- Run information is automatically populated in MISO shortly after a run starts
- Sequencing containers (e.g. flow cells) are created automatically at the same time if they do not already exist
- Pools must be added to the sequencing container’s partitions (lanes) in MISO

Service Records

- Service records can be added to an instrument
- Detail service that was done
- Files can be attached
- Indicate whether the instrument is out of service

Exercise

Complete Tutorial 5: Sequencing

https://miso-lims.github.io/walkthroughs/

Funding provided by the
Government of Ontario.