

Sarek

The Review - 2018-06-05

SciLifeLab



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Science for Life Laboratory

Today's agenda

- Transition from CAW to Sarek
- Article
- Deployment on NGI's Irma
- Samples with Clinical Genomics

Definition

A screenshot of a web browser window displaying Google search results for the query "CAW". The browser interface includes standard navigation buttons (back, forward, home, etc.), a URL bar with the address "https://www.google.se/search", and a search bar containing "CAW". Below the search bar are filter buttons for "All", "Images", "Videos", "News", "Maps", and "More", along with "Settings" and "Tools" links. A message indicates "About 64 400 000 results (0,55 seconds)". On the left, a "Dictionary" sidebar shows the word "caw" with its phonetic transcription "/kɔ:/ (ɪ)", part of speech "noun", definition "the harsh cry of a rook, crow, or similar bird.", part of speech "verb", and definition "utter a caw." with the quote "rooks cawed in the dark trees". At the bottom of the sidebar is a link "Translations, word origin, and more definitions". A "Feedback" link is located at the bottom right of the sidebar.

What happens when you look for CAW



- Can do more than Tumor/Normal Pair Cancer Analysis



- Can do more than Tumor/Normal Pair Cancer Analysis
 - Plan to replace NGI Piper



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- Nobody never really agreed on pronunciation



- Can do more than Tumor/Normal Pair Cancer Analysis
 - Plan to replace NGI Piper
- Nobody never really agreed on pronunciation
 - Get a more Nordic name

Sarek, the National Park



Sarek, the National Park in Northen Sweden

The most dramatic and grandiose of all

Long, deep, narrow valleys and wild, turbulent waters. A tortuous delta landscape. **Completely lacking in comfortable accommodations.** This is where visitors and the wild World Heritage Site meet.

Sarek is one of Sweden's **most inaccessible national parks** for anyone who cannot hike or ski in on their own. **There are no roads leading up to the national park.**

Sarek National Park website

Where we're going we don't need roads



Quest for a logo

- More than 50 mails exchanged

Quest for a logo

- More than 50 mails exchanged

"Any chance you could make the mountain top less pointy? It "hurts" a bit looking at it."

What is Sarek?



🌐 <http://opensource.scilifelab.se/projects/sarek/>

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Sarek



<http://opensource.scilifelab.se/projects/sarek/>

- Nextflow pipeline

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🌐 <http://opensource.scilifelab.se/projects/sarek/>

- Nextflow pipeline
- Developed at NGI



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- Nextflow pipeline
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- In collaboration with NBIS



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- Nextflow pipeline
- Developed at NGI
- In collaboration with NBIS
- Support from The Swedish Pediatric Tumor Biobank



Sarek is now in two flavors



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Sarek

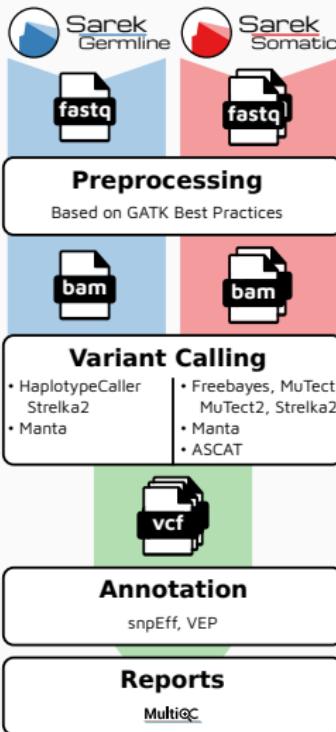


Sarek
Germline



Sarek
Somatic

What does Sarek do?



Preprint to BioRxiv and Submission to Bioinformatics

Sarek: A portable workflow for whole-genome sequencing analysis of germline and somatic variants

Maxime Garcia, Szilveszter Juhos, Malin Larsson, Pall I Olason, Marcel Martin, Jesper Eisfeldt, Sebastian DiLorenzo, Johanna Sandgren, Teresita Diaz de Ståhl, Valtteri Wirta, Monica Nistér, Björn Nystedt, Max Käller

doi: <https://doi.org/10.1101/316976>

Manuscripts I Have Co-Authored

STATUS	ID	TITLE	CREATED	SUBMITTED
With Editor	BIOINF-2018-1054	Sarek: A portable workflow for whole-genome sequencing analysis of germline and somatic variants View Submission Submitting Author: Nystedt, Björn Cover Letter	15-May-2018	23-May-2018

With the help of:

- Senthil
- Pär

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Already been used:

- Germline
- Somatic

Collaboration with Clinical Genomics

Sarek was presented there

- SPHN Workflow Interoperability Workshop (Basel, Switzerland, 2018/03)
- Frontiers in Cancer Research and Therapy (Stockholm, Sweden, 2018/03)
- Keystone Symposia - Precision Medicine in Cancer (Stockholm, Sweden, 2018/05)

Sarek will be presented there

- The Nordic Precision Medicine Initiative (Reykjavik, Iceland, 2018/06)
- 25th Biennial Congress Of The European Association For Cancer Research 2018 (Amsterdam, Netherlands, 2018/06-07)
- Journées Ouvertes en Biologie, Informatique et Mathématiques (Marseille, France, 2018/07)

Latest additions

- New logo and stickers
- Main script was dissected into 5 new script
 - to facilitate work on separate parts
- Follow Strelka Best Practices
- Improved slurm usage
- Improved help
- Improved CI testing

Discussions

- Control-FREEC
- CI testing for ASCAT
- GATK 4.0
- Removing MuTect1

Bug reports

The List of People Involved



Sarek

Sebastian DiLorenzo	Markus Mayrhofer
Jesper Eisfeldt	Monica Nistèr
Phil Ewels	Björn Nystedt
Maxime Garcia	Pall Olason
Szilveszter Juhos	Markus Ringnér
Max Käller	Pelin Sahlén
Malin Larsson	Johanna Sandgren
Marcel Martin	Teresita Díaz De Ståhl

Get involved!

- We are on the SciLifeLab Slack
 ⌘ #sarek-pipeline

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- We have a gitter channel
 (|||) <https://gitter.im/SciLifeLab/Sarek>

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- We have a gitter channel
 <https://gitter.im/SciLifeLab/Sarek>
- Our code is hosted on Github
 <https://github.com/SciLifeLab/Sarek>

Any questions?

- 🌐 <http://opensource.scilifelab.se/projects/sarek/>
- ⌚ <https://github.com/SciLifeLab/Sarek>

