

ELIXIR.NO newsletter no 2

January 2015



Elixir Norway – a Norwegian Node of Elixir

The ELIXIR.NO project, coordinated by the University of Bergen and including the Universities in Oslo, Trondheim, Tromsø and Ås, is now into its third year. We have made great progress towards the aim to establish a Norwegian Node in Elixir, the pan-European infrastructure for bioinformatics. In fact, the board of Elixir has approved the Norwegian Node. The Elixir Scientific Advisory Board has also reviewed and praised the status and plans for the Norwegian Node. On the European level Elixir has, as one of three research infrastructures, been prioritised by the Competitiveness Council. As a result Elixir has applied for substantial funding from Horizon2020 through the Infradev3 program. The Norwegian Node played an active role in writing the proposal and will lead a work package assuming the proposal is funded.

The help desk

The help desk activity in ELIXIR.NO is based on the bioinformatics core facilities in Oslo, Bergen, Trondheim and Tromsø. These core facilities are also a continuation of the FUGE II technology platform for bioinformatics, which means that they represent many years of competence and experience. The integration with ELIXIR.NO ensures that all users can get access to specialised competence from any node through a common portal. It also means that users get rapid and easy access to tools developed through NeLS and through ELIXIR activities in general. In addition to services and research, the help desk personnel can organise training sessions and information meetings to support local research groups.

User survey

A web based survey was performed in December 2014-January 2015. As of January 30th, there were 101 respondents. Some of the major conclusions are as follows. First, people who have used the platform's help desk are generally very happy with the service. Second, the platform and its help desk is unknown to many respondents. Third, the storage facility, StoreBioInfo, is not very much used. Fourth, the data type most users need help with is high-throughput sequencing data.

The input from the survey will be used to adjust the plans for the project going forward. As our NeLS system is now ready to be integrated with the storage solution and launched, we will use more efforts into outreach and increase the number of active users.

Marine Pilot

Marine genomics and metagenomics (the study of genetic material recovered directly from marine environmental samples) is still in its infancy, but is a rapidly expanding area of life science research.

To prevent the large-scale implementation of such studies from being disruptive (where the data production is faster than the speed users are able to analyze and interpret it), there is an urgent need to establish dedicated data management e-infrastructure and bioinformatics pipelines specialized for marine research.

Involving ELIXIR Norway, EMBL-EBI and other partners from the ELIXIR Nodes, this Pilot Action aims to harmonize and improve existing pipelines and develop new ones. The main aim is to establish long-term sustainable service platforms, and to start to build a "user community" for marine metagenomics analysis in ELIXIR.

NeLS, TSD and StoreBioInfo – ready for test users

NeLS, the Norwegian e-infrastructure for Life Science, is being developed within the ELIXIR.NO project. It allows any user with a Feide login (that is user account at a Norwegian university or any other linked institution) can enter the NeLS system and upload and analyse data. We have set up a set of Galaxy instances providing a user-friendly workbench for analysing your data. A set of analysis pipelines, focusing at this stage on high-throughput sequencing data, is available. The system is ready to be used and will be refined with the help of your feedback.

TSD (tjenester for sensitive data) is a service provided by the IT department at the University of Oslo. The ELIXIR.NO help desk can assist in setting up analysis software and analysis pipelines within TSD so that you can use it to analyse sensitive data, e.g., human re-sequencing data.

StoreBioInfo, developed in a collaboration between NorStore and ELIXIR.NO, allows you to get access to storage capacity in the NorStore system for your life science data sets. The ELIXIR.NO help desk can assign quotas to users in the domain and provide help with using the storage capacity. The storage is being integrated with NeLS so that data stored in StoreBioInfo can be analysed using NeLS pipelines. A StoreBioInfo granted disk quota can also be provisioned inside a secure isolated TSD project area.

The Genomic HyperBrowser

"The Genomic HyperBrowser is a framework for finding and testing relations between HTS and/or other genomic datasets, making use of statistical hypothesis testing and other advanced methodology. The HyperBrowser project started in 2007 and is now a cornerstone of much bioinformatics research activity in and around the University of Oslo and the Norwegian Radium Hospital (OUS). It is also one of the main deliverables from ELIXIR.NO towards Europe. New users and research initiatives are welcome! The Genomic HyperBrowser is available from <http://hyperbrowser.uio.no>. The system is also in the process of being integrated with NeLS.

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