

de.NBI Quarterly Newsletter

EDITORIAL

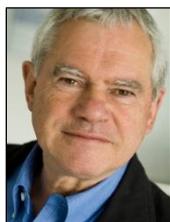
Dear de.NBI members, dear de.NBI followers,

With the first de.NBI Quarterly Newsletter of the year 2018, I have the pleasure to comment the **second phase of the de.NBI project** which will start March 2018 and will run for another two years. Since the reviewer panel of the midterm review did not modify the general structure of the de.NBI we all can continue our tasks concerning **service and training** for de.NBI users. However, the reviewers asked to develop a more user-oriented service, a recommendation which will dominate the activities of the network in the second phase of its existence.

Besides service and training de.NBI is intensively engaged in cloud computing and ELIXIR collaboration. In particular, the establishment of the **de.NBI cloud** is prime importance to provide compute power to users. A big step forward has been also the German membership in ELIXIR where de.NBI is asked to establish the national node **ELIXIR Germany**. In the second phase of the de.NBI project, the cooperation with other European ELIXIR nodes will be important for the further development of the German bioinformatics infrastructure. A big question for the future, however, is the **sustainable continuation of the network**. It is evident that this question will dominate the coming months since at the end of 2018 a practicable solution should be visible.

The first de.NBI Quarterly Newsletter of 2018 informs also on important events of the last three months and announces major meetings organized by de.NBI and ELIXIR. The **ELIXIR All Hands Meeting 2018** will take place in Berlin, and an **ELIXIR Innovation and SME Workshop** is planned in Frankfurt. The de.NBI network looks forward to a **Scientific Advisory Board Workshop** in Berlin, accompanied by the **Plenary Meeting 2018**.

The de.NBI coordinator together with the members of the administration office hope that the de.NBI newsletter is of interest for members of the network and interested public. Please send comments if you would like to see additional topics addressed.




A. Pühler (de.NBI Coordinator)

Further information at: <http://www.denbi.de/>

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12TH CeBiTec SYMPOSIUM „BIG DATA IN MEDICINE AND BIOTECHNOLOGY“, 19-21 MARCH 2018

The 12th CeBiTec Symposium, 19-21 March 2018 in Bielefeld, will cover actual developments of big data in medicine and biotechnology. It is organized as a joint conference of the Center for Biotechnology (CeBiTec), the German Network for Bioinformatics Infrastructure (de.NBI), and the Bielefeld Center for Data Science (BiCDaS). The first day focusses on big data in medicine. The de.NBI network hosts the second day of the symposium featuring the 12 ELIXIR use cases currently under discussion. The day will close with two Distinguished Symposium Lectures by Eva Winkler and Kai Cornelius, Heidelberg University, on ethical and legal aspects medical data. The last day is dedicated to cloud computing, big data in biotechnology and a round table discussion on legal issues of big data in life sciences

Thus, the symposium '**Big Data in Medicine and Biotechnology**' of high interest for de.NBI members. In particular, the de.NBI-ELIXIR day presents excellent opportunities to get interesting information on ELIXIR Use Cases.

Main topics

- Big Data in Medicine
- Big Data in Biotechnology
- Cloud Computing
- ELIXIR Use Cases
- Legal and Ethics Issues of data in medicine and biotechnology

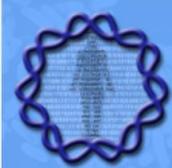
12th CeBiTec Symposium

Big Data in Medicine and Biotechnology

a joint conference of CeBiTec, de.NBI and BiCDaS

Center for Interdisciplinary Research (ZiF),
Bielefeld University

March 19 to 21, 2018



Further information and registration at: <http://www.cebitec.uni-bielefeld.de/12th-symposium-2018>

Registration deadline: 03 March 2018

de.NBI WINTER SCHOOL 2018 “COMPUTATIONAL METABOLOMICS”

The Center for Integrative Bioinformatics (CIBI) together with the partner project “Metabolite Annotation and Sharing” (MASH) and the associated de.NBI partner at Jena University, Christoph Steinbeck, organizes the first de.NBI Winter School on “Computational Metabolomics”, **05-08 March 2017** at **Leucorea** in **Lutherstadt Wittenberg**. These de.NBI units are specialized in metabolome bioinformatics and are well-known for its tools and workflows for the analysis, annotation and sharing of metabolome data, e.g. OpenMS, MetFrag or MetaboLights. During the winter school, participants from Germany and other European countries will obtain a comprehensive overview of metabolomics data processing pipelines from data to publication. The course will cover different interesting lectures and hands-on sessions by de.NBI speakers, e.g. Steffen Neumann (IPB Halle), Oliver Kohlbacher (University of Tübingen) and Christoph Steinbeck (Jena University). International instructors will be Pablo Moreno, Keeva Cochrane (both EMBL-EBI), and Etienne Thévenot (Gif-sur-Yvette). The school is targeted at graduate students and early-stage researchers in metabolomics and bioinformatics. Participants should have some metabolomics experience and an interest in computational data analysis. de.NBI will continue its successful training program with the summer school in 3-7 September 2018 in Braunschweig.



Leucorea Fridericianum in Wittenberg



MetaboLights

Further information at: <http://www.denbi.de/22-training-cat/training-courses/467-de-nbi-winter-school-on-computational-metabolomics>

ELIXIR All Hands Meeting 2018 in Berlin

The fourth ELIXIR All Hands meeting will take place **4-7 June 2018** at Hotel Berlin Berlin in Berlin, bringing together ~ 300 members of the ELIXIR community from across the 21 ELIXIR Nodes as well as observers from partner organizations. The conference keynotes will present different perspectives on bioinformatics infrastructures and bioinformatics research across the globe. The All Hands meeting will also serve as the Annual General Meeting for the EXCELERATE project. Here, the work of EXCELERATE work packages - each Platform and Use Case gives a short update on the

achievements and plans for 2018 – will be reviewed. In addition, the full breadth of ELIXIR activities will be presented flash talks and workshops. Different parallel sessions will cover specific facets of ELIXIR Use Cases and Platforms as well as work in the ELIXIR Nodes. The conference will also host several workshops to discuss a range of topics, from FAIR data and Biocontainers to workflow technologies within ELIXIR. Registration will start in early February.

Further information at: <https://www.elixir-europe.org/events/elixir-all-hands-2018>

ELIXIR Innovation and SME Forum in Frankfurt

The ELIXIR Innovation and SME Forum, organized in Frankfurt, on 15–16 October 2018 will be hosted by ELIXIR, de.NBI (ELIXIR-Germany) and the German Society for Chemical Engineering and Biotechnology (DECHEMA). The forum aims at large and small companies active in the industrial biotechnology field that use public bioinformatics resources in their business and would like to further streamline this process. This event will bring together a mix of experts who understand how to use the global data resources in bioinformatics, are able to create opportunities for specialized businesses and provide solutions, for example, for the use of genomic data in industrial biotechnology. The main goal of this event is to prompt (long-term) innovation and the usage of open tools and data, facilitating networking and knowledge exchange. The event's scientific program will include keynote talks, meet-the-expert sessions and technical seminars about ELIXIR and de.NBI resources and projects. Here, participants will be introduced to some tools, data resources and services that are available through ELIXIR and de.NBI. In addition, a networking dinner with "flash talks" will be provided where SMEs can highlight their technology and products to the audience.



de.NBI SAB and Plenary Meeting 2018

The de.NBI SAB Workshop 2018 will take place at the Seminaris Campus Hotel Berlin (<http://www.seminaris.de/hotels/seminaris-campushotel-berlin.html>) from **29–30 November 2018**. This major event includes the 5th de.NBI Plenary Meeting. The workshop brings together the members of the international SAB and the de.NBI community providing an overview of all activities and recent achievements in de.NBI. The report on the development in the current year and presentations on the work of the SIGs is followed by talks about the eight de.NBI Service Centers. A poster session will allow the participants to get a common understanding of the service and training activities offered by the single projects of de.NBI. The second day will focus on the 5th de.NBI Plenary Meeting. All de.NBI members are expected.

de.NBI goes public

The network will be present at various big national conferences in the first semester 2018.

de.NBI at the annual meeting of the DGHM

de.NBI will be represented with a poster at the 70th Annual Meeting of the German Society for Hygiene and Microbiology (DGHM) 19–21 February 2018 in Bochum. The DGHM (Deutsche Gesellschaft für Hygiene und Deutsche), is a medical society, which works to advance research in the fields of infectious diseases and microbiology. As can be seen from the program, the society participants of the conference are more and more involved in the big data problem in life science, where de.NBI is able to provide bioinformatics solutions.

Further information at: <http://www.dghm-kongress.de/>

VAAM in Wolfsburg

The Annual Conference 2018 of the Association for General and Applied Microbiology, 15 – 18 April 2018 in Wolfsburg, constitutes a big forum to introduce de.NBI, its services and training opportunities to a the German Microbiology and Biotechnology community of expected 1500 persons.. Just like at the VAAM 2017, the de.NBI office will be present a poster

Further information on the VAAM Jahrestagung 2018 at: <http://www.vaam-kongress.de/>

de.NBI at Deutsche Biotechnologietage 2018

The 2018 DBT will take place on 18 and 19 April 2018 in Berlin. The conference is co-organized by BIO Deutschland and the Council of German BioRegions. The two-day event provides a forum for all stakeholders in Germany's biotech scene to exchange views and experiences. The event has continually grown over the years, becoming the leading networking platform for the German biotech industry with around 800 expected attendees. A. Pühler will give an introductory lecture to de.NBI and the Bielefeld Hub will represent de.NBI with a booth.

Further information at: <https://www.biotechnologietage.de/>

de.NBI at the e:Med Meeting 2017 in Göttingen



de.NBI cloud members with live presentation on the de.NBI cloud

The e:Med Meeting 2017, 21-23 Nov 2017 was not the first meeting for de.NBI to present itself. It was however the first time for de.NBI to approach the medical community on a large scale. Over 300 participants got to talk with the five representatives at the de.NBI Office/Cloud booth. They engaged the participants in a very practical way by offering live hands-on demonstrations on how to set up the de.NBI Cloud and get a project running.

This was complemented with talks by the coordinator Prof. Pühler on the de.NBI network and Chris Lawerenz on the Cloud infrastructure. At the de.NBI booth, we could sense that these talks must have caught the audience's attention as soon after the doors to the lecture hall opened we found ourselves flooded with participants asking about the network and, of course in particular, the de.NBI Cloud.

The Alte Mensa of the Georg-August-University proved to be the ideal spot for the conference. With its old architecture, it gave the e: Med meeting a formal and festive character, which was well rounded off by the delicious catering throughout the event. By the beginning of 2018, some of the collaborations and projects that originated from the e:Med 2017 are already running.

Further information at <http://www.sys-med.de/de/meeting/emed-meeting-2017/>

HACKATHON ON FIJI & KNIME IMAGE PROCESSING

From early to mid-December the Center for Systems Biology Dresden hosted the second **de.NBI DAIS Hackathon**. More than 40 key developers from the international community met from the 3-16 December 2017 to discuss and develop **ImageJ, Fiji and KNIME**, and how these platforms interoperate. This interesting topic included also fundamental work on underlying frameworks and common modules such as ImgLib2, SciJava, BioFormats, BigDataViewer, Scenery or BoneJ. In numerous programming and discussion sessions (with additional online participants), the specialists strived for improving available open-source software tools for analyzing biological and bio-medical image data.

An additional benefit of such meetings is to bring the international community of experts closer together to avoid duplicated efforts and to foster synergisms. A cup of mulled wine at Dresden's famous "Striezelmarkt" surely supported this aspect of the Hackathon. Curtis, one of the participants, says, "It was again an incredible useful, exhausting, but at the same time satisfying time in this beautiful city. I am already looking forward to the next DAIS Hackathon in 2018!"



LATEST DEVELOPMENTS WITHIN THE de.NBI CLOUD

de.NBI Cloud Portal online

Since the beginning of this year, the beta version of the de.NBI Cloud Portal is online. The de.NBI Cloud Portal is used by researchers for accessing cloud resources. Various projects in fields like metagenomics, epigenomics and transcriptomics are already applying its functionality for creating project applications, accessing the cloud and managing projects and project members.

Information on cloud access and application process at: <https://cloud.denbi.de>

HD-HuB hosted Meeting of ELIXIR Cloud Platform in Heidelberg



The ELIXIR Cloud Platform members at work

de.NBI continues its collaboration with ELIXIR and organized the ELIXIR Compute Face to Face meeting in Heidelberg 17 - 19 January 2018. The de.NBI Portal, its integration with ELIXIR AAI and the five compute centers were presented to the other ELIXIR nodes. Main topic of this meeting was the progress of multiple ongoing implementation studies and the further collaboration in different cloud specific tasks. There was also a discussion about a possible participation of de.NBI Cloud in further ELIXIR implementation studies.

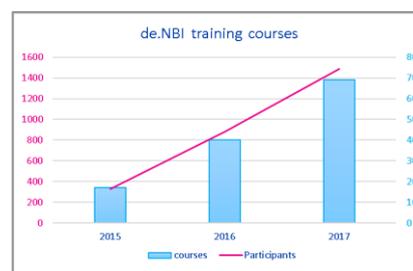
NEWS FROM THE de.NBI OFFICE

Florian Sprengel (Technical Project Management & Media) will leave the de.NBI office after almost 3 years in March 2018. In addition, he will leave the SIG 1 and SIG 2 as a member and co-chair. The de.NBI office will definitely miss you, and we hope you will keep in touch with us from time to time. Thanks a lot for all your support and encouragement. Wishing you the best in this next phase of your career. In future, his colleagues Irena und Daniel will take care of the website and of Florian's tasks in the service and media field.



de.NBI TRAINING – A SUCCESS STORY

The third de.NBI year was very successful in the field 'training'. In 2015, 17 training courses with 329 participants were realized by de.NBI. In 2016, training activities raised to 40 courses with 882 participants. In the last year, we further increased the number of courses and participants to **69 training courses with 1,489 participants**. The largest course was attended by 74, the smallest one by four scientists. Approx. 75% of the participants were PhD students or Postdocs. The remaining 25% were PIs, undergraduates, and participants from industry. The gender ratio of the students was 61% male and 39% female. About 20% of the participants came from outside Germany. In general, the user survey shows satisfaction values around 90% with only a small number of exceptions. Currently 55 training courses are announced for 2018.



In the ELIXIR context, in 2017 de.NBI offered the highest number of training courses listed in the TESS portal with the highest number of trained scientists among all ELIXIR nodes.

Further information at: <http://www.denbi.de/index.php/training-courses>

UPCOMING EVENTS

The calendar lists de.NBI training courses scheduled in first half-year 2018. All offers are accessible via the de.NBI homepage (<http://www.denbi.de/training>). The de.NBI training program is continuously updated.

Major de.NBI events – Save the Dates

 **de.NBI Day** on ELIXIR Use Cases at the **12th CeBiTec Symposium “Big Data in Medicine and Biotechnology”, 19-21 March 2018 in Bielefeld**. The conference will take place at the Center for Interdisciplinary Research (ZiF) at Bielefeld University. Further information at: <http://www.cebitec.uni-bielefeld.de/12th-symposium-2018>

 **de.NBI SAB Meeting** with Workshop and Plenary Meeting 2018, 29-30 November 2018 in Berlin.

Overview of upcoming de.NBI events



Date	Event	City	Organizer
 20 Feb 2018	Single cell RNA-seq processing and imputation tutorial	Berlin	RBC
 26 Feb-02 Mar 2018	5th Galaxy high-throughput sequencing (HTS) data analysis workshop	Freiburg	RBC
 26-28 Feb 2018	Protein Bioinformatics Course for Beginners 2018	Heidelberg	HD-HuB
 05-08 Mar 2018	de.NBI Winter School on Computational Metabolomics	Lutherstadt Wittenberg	CIBI, ass. Partner Jena
 05 Mar 2018	Eukaryote genome annotation	Kiel	Ass. Partner Kiel
 06 Mar 2018	Introduction to genome-wide association studies (GWAS)	Kiel	Ass. Partner Kiel
 07 Mar 2018	Introduction to RNA-Seq data analysis with Galaxy	Kiel	RBC
 07-13 Mar 2018	Applied Metaproteomics Workshop 2018	Magdeburg	BiGi
 11 Mar 2018	Computational Proteomics Workshop - DGMS2018	Saarbrücken	BioInfra.Prot
 27-29 Mar 2018	3rd de.NBI Training Course on Metagenome Analysis	Bielefeld	BiGi
 02-06 Apr 2018	OpenMS Developer Meeting 2018	Troia, PT	CIBI
 19-21 Mar 2018	de.NBI – ELIXIR day at 12. CeBiTec Symposium “Big Data in Medicine and Biotechnology”	Bielefeld	CAU
 04-05 Apr 2018	Introduction to Python Programming	Heidelberg	HD-HuB
 24-26 Apr 2018	Tools for Systems biology modeling and data exchange: CO-PASI, CellNetAnalyzer, SABIO-RK, SEEK	Magdeburg	de.NBI-SysBio
 10 Apr 2018	14. CCU Meeting	Bielefeld	CAU
 30 Apr - 02 May 2018	Computation and statistics for mass spectrometry and proteomics	Boston, US	CIBI
 02-04 May 2018	Data Carpentry Course	Heidelberg	HD-HuB
 15-16 May 2018	Phylogenetic tree reconstruction	Kiel	Ass. Partner Kiel
 23-25 May 2018	Computational Genomics: Bisulfite-seq analysis and data integration	Berlin	RBC
 11-13 Jun 2018	Machine Learning in R / mlR Workshop	Heidelberg	HD-HuB
 04 Jul 2018	SEEK-Training – SBMC 2018	Bremen	de.NBI-SysBio
 13 July 2018	15. CCU-Meeting	Freiburg	CAU/RBC
 03-07 Sep 2018	de.NBI Summer School 2018	Braunschweig	BioData, GCBN
 29-30 Nov 2018	de.NBI SAB meeting incl. Workshop and Plenary Meeting	Berlin	CAU

Further information at: <http://www.denbi.de/training>

IMPRESSUM

Responsible for contents:

A. Pühler, A. Tauch, T. Dammann-Kalinowski
de.NBI - German Network for Bioinformatics Infrastructure
c/o Center for Biotechnology (CeBiTec)
Bielefeld University
33594 Bielefeld
Germany

Phone: +49-(0)521-106-8750

Fax: +49-(0)521-106-89046

email: puehler@cebitec.uni-bielefeld.de

web: <http://www.denbi.de>

email: contact@denbi.de

twitter: #denbi, @denbiOffice

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