# IMPRESS
# GENOMICS AND BIOINFORMATICS WORKSHOP 2015

## 27-30 October 2015
## Leiden, The Netherlands

Dear Marie Curie fellows and other interested scientists,

It is a great pleasure to announce the IMPRESS Genomics and Bioinformatics Workshop
to be held in Leiden, The Netherlands, from 27 till 30 October 2015.

**Aim:** Open workshop for Marie Curie fellows and other interested scientists who wish to learn more about the field of genomics and bioinformatics, including sequencing and bioinformatics tools, genomics, transcriptomics and hands-on practice.

**Program:** A four-day workshop with keynote lectures and hands-on sections on processing of Nextgen sequencing data. A detailed preliminary program is shown on the reverse side.

**Accommodation:** The venue of the meeting will be the Auditorium and Foyer of the Biopartner 1 building at the Bioscience Park in Leiden. Address: J.H. Oortweg 21, 2333 CH Leiden, The Netherlands. Several excellent hotels are located in close vicinity to the Leiden Bioscience Park.
Check e.g. www.booking.com for an up-to-date overview and to make your reservation.

**Costs:** Registration fee is € 450,00 for IMPRESS Marie Curie fellows and € 600,00 for external participants. The registration fee includes the costs of lunches and coffee/tea breaks (accommodation and dinner are not included).

**Registration:** The deadline for registration is: 1 October 2015.
The capacity for external participants is limited to 15 people. Selection will be on "first come, first served" basis. Please register via e-mail: workshop2015@zfscreens.com

Looking forward to your participation in the IMPRESS Genomics and Bioinformatics Workshop.

Kind regards,

**The organizers:**
• Ron Dirks (ZF-screens BV / Leiden University, Leiden, The Netherlands; dirks@zfscreens.com)
• Hans Jansen (ZF-screens BV, Leiden, The Netherlands; jansen@zfscreens.com)

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# Preliminary program of the
# IMPRESS Genomics and Bioinformatics Workshop 2015

| Tuesday 27 October 2015 | | | |
|---|---|---|---|
| Timeslot | Topic | Description | Speaker |
| 8.45 - 9.00 h | arrival with coffee/tea | | |
| 9.00 - 10.00 h | Sequencing tools (lecture) | From eel blood to genome sequence: past and present strategies (part 1) | Dr. Hans Jansen ZF-screens BV, Leiden |
| 10.00 - 11.00 h | Sequencing tools (lecture) | From eel blood to genome sequence: past and present strategies (part 2) | Dr. Hans Jansen ZF-screens BV, Leiden |
| 11.00 - 11.30 h | coffee/tea break | | |
| 11.30 - 12.30 h | Bioinformatics tools (lecture) | Software tools for genome assembly | Dr. Christiaan Henkel Leiden University |
| 12.30 - 13.30 h | lunch break | | |
| 13.30 - 17.00 h | Hands-on practice | European eel gene annotations CLC-Bio Main Workbench | Dr. Ron Dirks ZF-screens BV, Leiden |

| Wednesday 28 October 2015 | | | |
|---|---|---|---|
| Timeslot | Topic | Description | Speaker |
| 8.45 - 9.00 h | arrival with coffee/tea | | |
| 9.00 - 10.00 h | Sequencing tools (lecture) | From eel fin clip to FASTQ file: Tissue sampling and storage, RNA isolation, library preps and runs | Dr. Hans Jansen ZF-screens BV, Leiden |
| 10.00 - 11.00 h | Sequencing tools (lecture) | From eel fin clip to transcriptome: Variations of RNAseq: low input RNA, microRNAs, nanoCage | Dr. Hans Jansen ZF-screens BV, Leiden |
| 11.00 - 11.30 h | coffee/tea break | | |
| 11.30 - 12.30 h | Bioinformatics tools (lecture) | RNAseq data processing: Filtering, alignment against reference genome, statistical analysis | Dr. Hans Jansen ZF-screens BV, Leiden |
| 12.30 - 13.30 h | lunch break | | |
| 13.30 - 16.00 h | Hands-on practice | From eel fin clip FASTQ file to Excel file with differentially expressed genes | Dr. Hans Jansen ZF-screens BV, Leiden |
| 16.00 - 17.00 h | Bioinformatics tools (demo) | Creating a de novo transcriptome reference file for non-model organisms | Dr. Iris Kolder Leiden University |

| Thursday 29 October 2015 | | | |
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| Timeslot | Topic | Description | Speaker |
| 8.45 - 9.00 h | arrival with coffee/tea | | |
| 9.00 - 10.00 h | Bioinformatics tools (lecture) | Advanced analysis of transcriptomes: alternative splicing (DEXSeq), whole transcript sequencing (MinION) | Dr. Hans Jansen ZF-screens BV, Leiden |
| 10.00 - 11.00 h | Genomics tools (lecture) | Verification of RNAseq data: advanced qPCR tools | Dr. Han Zendman NYtor BV, Nijmegen |
| 11.00 - 11.30 h | coffee/tea break | | |
| 11.30 - 12.30 h | Genomics tools (lecture) | Visualization of genomics results | Dr. Walter Pirovano BaseClear BV, Leiden |
| 12.30 - 13.30 h | lunch break | | |
| 13.30 - 14.30 h | Genomics tools (lecture) | Advanced analysis of eel fin clip RNAseq data | Dr. Peter Racz ZF-screens BV, Leiden |
| 14.30 - 17.00 h | Hands-on practice | publishing RNAseq results: Venn diagrams, heat maps, pathway analysis | Dr. Peter Racz ZF-screens BV, Leiden |

| Friday 30 October 2015 | | | |
|---|---|---|---|
| Timeslot | Topic | Description | Speaker |
| 8.45 - 9.00 h | arrival with coffee/tea | | |
| 9.00 - 10.00 h | Genomics tools (lecture) | Genome evolution | Dr. Christiaan Henkel Leiden University |
| 10.00 - 11.00 h | Genomics tools (lecture) | Selective fish breeding | Dr. Hans Komen Wageningen University |
| 11.00 - 11.30 h | coffee/tea break | | |
| 11.30 - 12.30 h | Genomics tools (lecture) | Creating superscaffolds using Irys systems from Bionano Genomics | Dr. Gabino Sanchez Perez Wageningen University |
| 12.30 - 13.30 h | lunch break | | |
| 13.30 - 14.30 h | Transcriptomics (lecture) | Applications of RNAseq in aquaculture research | Dr. Arjan Palstra IMARES, Yerseke |
| 14.30 - 16.00 h | Hands-on practice | Submitting RNAseq data to GEO/SRA database | Dr. Ron Dirks ZF-screens BV, Leiden |
| 16.00 - 18.00 h | closure of the workshop drinks and snacks | | |

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