

Core Facility Genomics

Newsletter – February 2024

TOPICS

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 Core Facility Genomics
 (CFG) user webinar

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NovaSeq X Plus

At the end of last year we announced that the NGS sequencing in 2024 will be performed using a NovaSeq X Plus located at the UMCU. The CFG is aware of the short notice, but as it was mandatory for the CFG to run an European tender for this outsourcing, the CFG was not able to inform our users earlier. We are aware that the current turnaround times are a bit longer than previously, but this is temporarily, and is also off-set by a large decrease in sequencing costs for the user. We expect to be able to achieve our usual lead times again in the coming months. For reference the 2024 prices are listed below.

The CFG, together with the department of Human Genetics, has commenced the verification and validation of diagnostic exome and NGS panels using the new machine. Important findings that emerged during this verification is that the NovaSeq X Plus has a preference for short NGS fragments. This means NGS libraries with a wide range of fragment length might have more short fragments in their data. This has little effect on variant calling, but when for instance copy number variations are assessed against a reference set, a new reference set may need to be built. However, we don't expect many projects to be affected by this.

The procedure for sample submission will not change. We are currently adjusting the submission form, but are already open to receive submissions for the NovaSeq X Plus.

Significant decrease in sequencing costs

The use of the NovaSeq X Plus enable us to significantly lower the sequencing costs in comparison to the NovaSeq6000. Below the comparison table calculated in tranches of 25Gb (with the exception of 5Gb and 10Gb). Each tranche reflects the minimal amount of data that will be delivered.

Min. Amount of data	Price NovaSeq X Plus (from Jan 2024)	Price NovaSeq6000 (until Dec 2023)
375Gb	€ 2.015,00	€ 4.379,00
300Gb	€ 1.988,00	€ 3.645,00
275Gb	€ 1.860,00	€ 3.400,00
250Gb	€ 1.732,00	€ 3.155,00
225Gb	€ 1.604,00	€ 2.910,00
200Gb	€ 1.475,00	€ 2.665,00
175Gb	€ 1.347,00	€ 2.420,00
150Gb	€ 1.219,00	€ 2.175,00
125Gb	€ 1.091,00	€ 1.931,00
100Gb	€ 963,00	€ 1.686,00
75Gb	€ 834,00	€ 1.441,00
50Gb	€ 706,00	€ 1.196,00
25Gb	€ 578,00	€ 951,00
10Gb	€ 501,00	€ 804,00
5Gb	€ 475,00	€ 755,00

For all questions please contact us at: cfg@amsterdamumc.nl.

21st Core Facility Genomics (CFG) user webinar, 13th February

The topic of the next webinar on the 13th of February is: **Nanostring**.
 Program:



1. **Daisy Picavet – Havik** (Core Facility Imaging, Amsterdam)
Ingrid Bakker (Core Facility Genomics, Amsterdam UMC)
 Title: “Practical info from the labs about the GeoMX DSP Nanostring”
2. **Lieve van der Maarel & Otto Mulleners** (Dept of Medical Biology, Amsterdam UMC)
 Title: “Exploring regional gene expression during mouse heart development using the NanoString GeoMx”

Date: 13th February 2024 **Time:** 16:00-17:00 Join [Teams meeting](#)

Recordings of previous CFG user webinars can be found at: cfg.amsterdamumc.nl

Kostenplaats/Registration

The CFG takes care of the registration of the CFG users. Only registered CFG users are able to make use of our services and have access to our labs and machines. During registration it is important that “kostenplaats” is correct, so that the costs can be billed appropriately.

However it is important to note that when an already registered CFG user wants to perform a CFG service for another project or another “kostenplaats”, it is necessary that a new [registration form](#) is emailed to the CFG to reflect this. Costs can only be billed if the “kostenplaats” is properly registered.

Don't forget to cc your kostenplaatsbeheerder/financial advisor in this email.

Aanmeldformulier

Nieuwe aanmelding Wijziging bestaande gegevens Versie 3.0.0

Persoonlijke gegevens		
AUMC gebruikersnaam	bv. "jdoe"	
Voor- en achternaam	bv. "John Doe"	
Locatie	"AMC", "VUMC" of "Extern"	
Afdeling	bv. "Moleculaire Genetica"	
Telefoon	bv. "020-6556000"	
E-mail	bv. "j.doe@amsterdamumc.nl"	
Kostenplaats/VWS/Project nummer	bv. "1234", "W.001234" (AMC) of "200..." (VUMC)	
Naam kostenplaatsbeheerder	bv. "Jane Roe"	
E-mail kostenplaatsbeheerder #1	bv. "j.roe@amsterdamumc.nl"	
E-mail kostenplaatsbeheerder #2	optioneel: bv. AMR Financial Controller	
Lab-toegang		
<small>Toegang is voor medewerkers van 8:00 tot 18:00 en geldt niet voor elke van het dienstrooster</small>		
Locatie	"Q3-105 (AMC)" of "MF (VUMC)"	
Badgenummer voorzijde	bv. "150000"	
Badgenummer achterzijde	bv. "570000"	
Datum einde dienstverband	optioneel	
Apparatuur & Diensten		
<small>Opgevoerde apparatuur en diensten worden beschikbaar gesteld door de CFG. Aan het gebruik van sommige apparatuur en diensten staan kosten verbonden. Voor aanvraagrijzen, zie de R2 DSP SLA-PLS-088</small>		
<input type="checkbox"/> Sanger Sequencing	<input type="checkbox"/> Fragmentanalyse	<input type="checkbox"/> Afsame chemie
<input type="checkbox"/> Concentratiemeting (Microtop, Gels, FLOstar)	<input type="checkbox"/> Tapestation / Bioanalyzer	<input type="checkbox"/> Esi-MS analyse apparatuur (AS400, WEL, FLOstar)
<input type="checkbox"/> Pipetterrobots (Biorad, Hamilton, Varios)	<input type="checkbox"/> NGS Short Read Sequencing (Illumina, Ion Torrent)	<input type="checkbox"/> NGS Long Read Sequencing (PacBio, Nanopore)
<input type="checkbox"/> Single Cell Sequencing (10X Genomics)	<input type="checkbox"/> Array EPIC / GWAS	<input type="checkbox"/> DNA/RNA Isolatie (Qiagen, Qiascreen, Qiasymphony)
<input type="checkbox"/> Biobead ddPCR	<input type="checkbox"/> Lightcycler 480	<input type="checkbox"/> Covaris
<input type="checkbox"/> karyotypering	<input type="checkbox"/> optioneel	

Client satisfaction survey

We have looked at the outcome of our recent client satisfaction survey. One of the points raised was the late communication regarding the change of NGS Sequencer; the reason behind this is addressed at the beginning of the newsletter. We also received feedback regarding certain submission procedures and forms. We are working on updating/streamlining these. A last thing that was requested was the availability of checksum files for the NGS sequencing data files. Meanwhile we started to provide the checksum files together with the NGS sequencing data.

RDC-ADORE building

We are happy to inform you that in 2025 the CFG lab will also have a location in the new RDC-ADORE building at the VUmc. We are currently planning the lab space and determining the positions of the instruments that will be placed there. As our users at AMC are accustomed, we will facilitate the central availability of equipment for all CFG users. In addition, all research and diagnostic labs at the RDC-ADORE and surrounding AUMC / VU campus will be able to use these machines if needed. If you are interested in the instruments/techniques that will be offered at our RDC-ADORE location please contact us at cfg@amsterdamumc.nl.



Related to this, we would very much like to hear the wishes of our CFG users regarding services/machines, and specifically on which location(s) you would prefer certain services/machines. Please [contact us](#) to let us know your thoughts.