



## MARATHON OF HOPE: ILLUMINA PURCHASING

Workflow for Genomic Sequencing purchases from Illumina

### Background

With the help of the Marathon of Hope Cancer Centres Network (MOHCCN) Technology Working Group, the Terry Fox Research Institute (TFRI) has achieved very competitive pricing of Illumina flow cells and associated reagents (roughly 30% savings over the project term), based on a national volume purchasing agreement. TFRI has committed to certain minimum purchases per year (calculated in flow cell units<sup>1</sup>) and needs to demonstrate that the reagents acquired under this pricing arrangement are used only for TFRI-funded projects<sup>2</sup>. TFRI acts as the central purchasing agent on behalf of all the MOHCCN Cancer Genome Centres<sup>3</sup>. The following workflow will be used to order/purchase Illumina's sequencing reagents.

### Workflow

- 1. TFRI / Genome Centres Minimum Orders:** The agreement for Illumina provides for the following minimum unit purchases through the Network national Standing Order (equivalent to 212 units (April 01, 2023 - March 31, 2024); and 211 units (April 01, 2024 - March 31, 2025)). These minimums are set at about 30% of what is necessary to complete 15,000 cases so additional ordering over these minimums will be required each year to meet our 15,000 Network target. Annually, Centres must provide TFRI with the tentative shipping dates of the number of flow cell units, and associated reagents, for that fiscal year based on the committed cases on the executed RPGA. Note that orders need to be in batches of 10 units, or as defined in Annex 1, but can be shipped in smaller batches. It is the responsibility of the Cancer centre or project lead to coordinate with their respective genome centre to align the shipping dates to its planned sample accrual rates.

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<sup>1</sup> One flow cell produces 3,000 Gb of data (= 1 unit). At 90Gb per 30x genome, a 150x genome coverage = 5 x 90Gb = 450Gb. Illumina recommended Gb per 150x genome = 625Gb (= 1 case). 1 unit (3000/625Gb) = 4.8 cases

<sup>2</sup> Every 3 months Illumina will seek assurances that the number of MOH Network cases equates to the number of flow cells provided. If a Genome Centre chooses to put other project cases on an MOH Network purchased flow cell, it will be required to complete MOH cases to an equivalent depth at its own cost.

<sup>3</sup> Cancer Centres refer to the Institutions designated as part of MOHCCN.

- 2. Genome Centres Additional Orders:** for any additional orders for Illumina units or reagents for MOH cases each Genome Centre may work with the local designated consortium Project Manager or directly with TFRI Staff, to prepare its shipping order for TFRI approval and onward transmission to Illumina.
- 3. TFRI / Illumina Quote:** Illumina will issue a quotation to TFRI for the Standing Order as well as for Additional Orders at the pre-negotiated prices.
- 4. TFRI Purchase Order:** TFRI will issue a Purchase Order to Illumina for each quotation TFRI approves.
- 5. Genome Centres / TFRI Shipping Date Changes:** Genome Centres can change ship dates by sending TFRI an updated shipping order with new dates. Illumina allows for as many shipping order date changes per year as needed.
- 6. Illumina Ship Notifications:** Upon shipment, Illumina issues an 'Order has Shipped' email to Genome Centre staff & TFRI.
- 7. Genome Centres Receiving:** Genome Centres to receive the shipment, review the contents against the packing slip, approve receipt of all items, and send a signed copy of their approved packing slip to TFRI immediately to confirm that supplies have been received in good order.
- 8. Illumina Invoicing:** Illumina issues invoices to TFRI for the supplies shipped and TFRI pays these Illumina invoices directly.
- 9. TFRI reimbursed promptly by Centre or Project:** To get reimbursed, **TFRI** issues an invoice for the same Illumina invoice amount to the Centre or Project for reimbursement to TFRI in 30 days. Failure to reimburse promptly causes significance cash flow difficulty for TFRI and MOHCCN and may lead to TFRI withdrawing a Member's Illumina ordering privileges. For payment details: Please refer to Annex 2 for details.
- 9. Meetings:** If and when necessary, TFRI will convene a meeting of Program Managers / Pan-Can Projects Administrators / Genome Centres to review the throughput of cases and the supply of Illumina units, for instance, to reallocate units within the current year between Centres (e.g. if a Centre is behind schedule and unable to complete its annual minimum), or to review Centre's data on the utilization of flow cells and reagents.

**Annex 1: Table of Illumina Consumables** (as of April, 2023)

<b>Part Number</b>	<b>Description</b>
20028312	NovaSeq 6000 S4 Reagent Kit v1.5 (300 cycle)
20041795	Illumina® DNA PCR-Free Prep, Tagmentation (96 samples)
20015963	TruSeq DNA PCR-Free High Throughput Library Prep Kit (96 samples)
20040529	Illumina® Stranded Total RNA Prep, Ligation with Ribo-Zero Plus (96 Samples)
20020599	TruSeq® Stranded Total RNA Library Prep Gold (96 Samples)
20027213, 20027214, 20042667, 20042667	IDT® for Illumina® DNA/RNA UD Indexes Sets A, B, C and D, Tagmentation (96 Indexes, 96 Samples)
20022370	IDT for Illumina – TruSeq RNA UD Indexes (96 Indexes, 96 Samples)
20043131	NovaSeq XP 4-Lane Kit v1.5
20040553, 20040554, 20040555	IDT® for Illumina® RNA UD Indexes Sets A, B, and C, Ligation (96 Indexes, 96 Samples)
20020183	Illumina Exome Panel – Enrichment Oligos Only
20040537	Illumina® RNA Prep with Enrichment, (L) Tagmentation (96 Samples)
20085594	NovaSeq X Series 10B Reagent Kit (300 Cycle)
TBD	Additional products may be added, as required and as agreed upon by all parties.

Consumables are purchased in blocks where some units are purchased at list price and some are provided at no cost. As an example, we are currently on a 7+3 ratio for flow cells, where 7 are purchased at list price, and 3 are in kind. This ratio will become even better as we place more orders and reach our Tier 2 when it will become a 5+5 ratio with 5 no-cost flow cell units per 5 purchased at the list price.

*We are working on an amendment to the agreement at this moment, a detailed table will be included in this guideline once finalized.*

## Annex 2: Payment to TFRI by Electronic Funds Transfer

1. TFRI will issue an invoice to individual Cancer Centres or Genome Centres, as indicated, after Illumina's supplies have been delivered to the Centres, the packing slips have been approved and provided to TFRI, and Illumina has invoiced TFRI. As a purchasing agent on behalf of each Member TFRI does not take ownership of the goods, but rather TFRI flows through the total Illumina invoices it receives to the Centres, including 100% of any taxes. Centres should claim the respective GST/HST/QST or other rebates to which they are entitled, however, reimbursements to TFRI should be for the full amount of the TFRI invoice, not less any tax rebates.
2. Centres are to pay TFRI within 30 days of the receipt of TFRI's invoice as TFRI is obligated to pay Illumina. Illumina products can be paid for from Health Canada funds and/or matching cash funds. Failure to reimburse promptly causes significant cash flow difficulty for TFRI and MOHCCN.

TFRI requests that its invoices are paid by Electronic Funds Transfer to:

Recipient	The Terry Fox Research Institute
Bank	TD Canada Trust
Institution #	004
Transit #	94000
Account #	5517909

Payment advice should be sent to [accounting@tfri.ca](mailto:accounting@tfri.ca).

3. TFRI reserves the right to limit or cancel a Member's Illumina orders if TFRI is not reimbursed promptly, or if Illumina products are being used in non-TFRI-funded projects. This may lead to TFRI withdrawing a Member's Illumina ordering privileges.

## Annex 3: List of Contacts / Emails Terry Fox Research Institute

Ordering:	Kaitlin Hong Tai	<a href="mailto:khongtai@tfri.ca">khongtai@tfri.ca</a>	Network Program Manager
Invoice/Payments:	Michelle Honsberger	<a href="mailto:mhonsberger@tfri.ca">mhonsberger@tfri.ca</a>	Director of Finance