



# All India Institute of Medical Sciences Jodhpur

Admn/Prop/94/2021-AIIMS.JDH

Dated: 25<sup>th</sup> January 2022

**Subject:** Purchase of Benchtop Next Generation Sequencing System for R'VRDL Project at AIIMS, Jodhpur on proprietary basis - **Inviting comments thereon.**

The Institute is in the purchase of Benchtop Next Generation Sequencing System for R'VRDL Project at AIIMS, Jodhpur from M/s Illumina Inc., 5200, Illumin Way San Diego, CA 92122, USA on proprietary basis. The proposal submitted by M/s Illumina Inc., USA and PAC certification by user are attached.

The above document are being uploaded for open information to submit objection, comments, if any from any manufacturer regarding proprietary nature of the equipment within 07days of issue giving reference Admn/Prop/94/2021-AIIMS.JDH. The comments should be received by office of Deputy Director (Admin), Medical College at AIIMS, Jodhpur on or before 31<sup>st</sup> January 2022 upto 03:00 PM failing which it will be presumed that any other vendor is having no comment to offer and case will be decided on merits.

**Yours faithfully,**

**Deputy Director (Admin)**

**Enclosed: Related documents enclosed.**



# All India Institute of Medical Sciences Jodhpur

illumina

June 14, 2021

## Proprietary Letter

To Whom It May Concern

Illumina Singapore Pte. Ltd. ("We") a subsidiary of Illumina, Inc., a Delaware corporation, having its principal place of business at 11 Biopolis Way # 09-05 Helios, Singapore 138667, is an established and reputable manufacturer of Illumina Sequencing & Arrays Systems and the consumables for the Sequencing and Arrays Systems. We hereby confirm that the following products are solely manufactured by Illumina, Inc. and/or Illumina Singapore Pte. Ltd. and is proprietary technology of Illumina, Inc.

Below list of products and their use are covered by U.S. and European patent number(s) and other patents issued or pending, which are exclusively licensed to Illumina.

Catalog # (Product Code)	Patents	Product Name
SY-410-1003 (15034551)	US 7,414,116	<b>MiSeq™ System</b> MiSeq System Integrated system for automated generation of DNA clonal clusters by bridge amplification, sequencing, primary and secondary analysis. System includes embedded touchscreen monitor and on-instrument computer, dual surface imaging capability, MiSeq Software Suite, installation kits and standards, installation and training, and 12 months warranty (including parts and labor).
MS-102-3001 (15043761)	US 7,427,673 US 7,541,444	MiSeq Reagent Kit v3 (150-cycle)
MS-102-3003 (15043762)	US 7,592,435 US 7,795,424 US 7,816,503	MiSeq Reagent Kit v3 (600-cycle)
MS-102-2001 (15033413)	US 8,039,817 US 8,071,962	MiSeq Reagent Kit v2 (50-cycles)
MS-102-2002 (15033412)	US 8,084,590 US 8,212,015 US 8,241,573	MiSeq Reagent Kit v2 (300-cycles)
MS-102-2003 (15033411)	US 8,244,479 US 8,315,817 US 8,394,586	MiSeq Reagent Kit v2 (500-cycles)
MS-102-2021 (15033419)	US 8,412,467 US 8,460,910	20-pack MiSeq Reagent Kit v2 (50-cycles)
MS-102-2022 (15033418)	US 8,563,477 US 8,852,910 US 8,914,241	20-pack MiSeq Reagent Kit v2 (300-cycles)
MS-102-2023 (15033417)	US 8,951,781 US 8,965,076	20-pack MiSeq Reagent Kit v2 (500-cycles)
MS-103-1001 (15036522)	US 9,068,220 US 9,121,063 US 9,365,898	MiSeq Reagent Nano Kit v2 (300-cycles)
MS-103-1002		MiSeq Reagent Micro Kit v2 (300-cycles)

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Catalog # (Product Code)	Patents	Product Name
(15036523)	US 9,512,422	
MS-103-1003 (15036524)	US 9,765,309 US 9,970,055 US 10,017,750	MiSeq Reagent Nano Kit v2 (500-cycles)
RH-102-1001 (15049008)	US 10,220,386 US 10,480,025	MiSeq Reagent Kit v3 - PGS (24 samples)
TG-142-1001 (15035687)	US 10,487,102 US 10,519,496	TG MiSeq Reagent Nano Kit, v2 (300 cycles)
TG-142-1002 (15035688)		TG MiSeq Reagent Micro Kit v2 (300 cycles)
TG-142-1003 (15035685)		TG MiSeq Reagent Kit, v2 (300 cycles)
TG-142-1013 (15039436)		TG MiSeq Reagent Kit v2 (500 cycles)
TG-142-1022 (15039435)		TG MiSeq® Reagent Kit v2 (300 cycles) - 20 Pack
TG-142-3003 (15049955)		TG MiSeq Reagent Kit v3 (600 cycle)

Yours faithfully,



Name: Tan Kah Ling, Mavis  
Title: Senior Director, Finance, Asia Pacific  
For and behalf of Illumina Singapore Pte. Ltd.



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## Technical Specifications For Benchtop Next Generation Sequencing System

1. System should occupy minimal lab footprint and should be offered as a **single, integrated instrument with automated template DNA amplification, sequencing, and data analysis (base calling, alignment, variant calling, and reporting) onboard on machine.**
2. The sequencing chemistry should employ robust **Sequencing By Synthesis method** using **nucleotides with reversible terminators** and should mimic natural biological chemistry with **simultaneous** addition of all four bases in the sequencing reaction for competitive addition to the DNA template.
3. The sequencing workflow should allow **fully automated, walk-away operation, without user intervention**, for template amplification to analyzed data on a **single machine**, and support **unattended operation for at least 600 sequencing cycles.**
4. System should **offer minimum of 15 Gb of high-quality data passing filter from 2 × 300 bp reads** to enable high throughput multiplexed sequencing of diverse genomes and **up to 50 million paired-end reads** from a single run to enable robust counting applications, like RNA-seq and ChIP seq.
5. Sequence output should generate accurate base calls and high error free reads with **greater than 80% bases with high quality Q30 score at 2x150 bp read length, derived directly from intensity data and not from a reference sequence-based, multiple-color encoding scheme.**
6. Clonal amplification of DNA template should employ accurate **bridge amplification** methodology, should be fully automated, **without the involvement of emulsion PCR.**
7. The sequencer should be able to read through **at least 15 bases homo-polymer stretches in the genome accurately.**
8. The sequencing chemistry should be robust and globally proven, as demonstrated with **greater than 3500 peer reviewed publications.**
9. The system should be offered with integrated paired-end fluidics on the instrument, supported with fully automated paired-end chemistry, without user intervention.
10. The data analysis module should enable real time, on-instrument image processing, base calling, read alignment and variant calling without the need for ancillary equipment.
11. System should offer the user-friendly sequencing experience, such as, intuitive touchscreen user interface, RFID tracking and pre-mixed/pre-filled integrated reagent cartridge for minimal user intervention.
12. The system should offer the option of seamless integration with cloud computing environment to avoid manual data transfer and analysis.
13. The system should offer flexibility for supporting diverse sequencing applications such as DNA, RNA, targeted RNA expression (pathway analysis), ChIP, small RNA, metagenomics, small genomes, amplicons, target region enrichment, HLA typing, Cancer (solid/liquid) DNA profiling, SARS CoV-2 Sequencing etc..

*Handwritten signatures and initials in blue ink:*  
G. Rao, A. K., A. K., A. K., A. K.