

## Annex B) "Technical specifications"

The Next Generation Sequencing (NGS) Platform required by the Department of Surgical, Odontostomatological and Maternal and Child Sciences of the University of Verona must meet the following minimum requirements:

1. **Throughput capabilities.** The sequencer must be able to handle low and medium throughput workflows for, such as panels and Whole Exome Sequencing (WES). At the same time, it must be able to support larger research projects, such as transcriptome and microbiome studies. The ability to vary throughput is essential to meet the needs of different users. Throughput should be able to be, at a minimum, around 100 gigabases, but it should also approach or exceed 1 terabase at the maximum level of utilization.
2. **Flexibility.** The flexibility of the device must be clearly defined. It is desirable that the sequencer offers the possibility of using multiple flowcells in parallel, allowing configurations adapted according to the type of project.
3. **Types of libraries to be processed.** The sequencer should be able to use different types of libraries, including those used for WES (amplicon or capture based), but also for various research projects. It must adapt to different applications with full compatibility with various library preparation kits (from vendors such as IDT, Twist, Lexogen, etc.) and support a wide range of methods, such as expression profiling (RNA-seq), WES and WGS, metagenomic and metatranscriptomic analyses, single cell sequencing, epigenomes, etc., for human (high-pass or low-pass), plant, and animal genomes.
4. **Maximum cost per reaction.** The cost of a flow-cell with a throughput of 500-1000 gigabases should be less than 15 euros per gigabase of sequence (300 cycles).
5. **Type of equipment.** Supplies of instrumentation offered in a reconditioned version (regenerated/renewed), which guarantees compliance with the minimum requirements listed above and has the functionalities for the work performance for which it is required, will be evaluated.
6. **Security.** If, in addition to the supply, activities such as installation, training and full-risk technical assistance are envisaged, and the exceptions provided for by art. 26, paragraph 3-bis, of Legislative Decree 81/2008 and subsequent amendments are not applicable, the drafting of the DUVRI will be necessary.

**Maximum amount of the supply: Euro 139,000.00 excluding VAT.**

**Delivery times and commissioning of the equipment:** the delivery of the platform and its commissioning (including any installation and testing) must take place within 60 days of the signing of the supply contract/sending of the order form.