

Critical Scientific Equipment Lost or Damaged

The attack caused extensive damage to the Institute's research infrastructure, including the destruction of the roof, engineering systems, laboratories, scientific equipment, and information technology.

Flow cytometer – essential for immunological research, cell analysis, and biomarker studies.

Microvolume and UV-Visible spectrophotometers – required for DNA, RNA, protein quantification, and routine biochemical analyses.

Ultrasonic cell disruptor and laboratory centrifuges – critical for sample preparation, protein extraction, and molecular biology workflows.

Cell culture and laboratory infrastructure (CO₂ incubators, biological safety cabinets, ultra-low temperature freezers, laboratory computers and furniture) – indispensable for maintaining experimental research and biosafety.

More than 900 m² of roofing and structural elements were severely damaged, exposing laboratories and valuable scientific assets to rain and further deterioration.

At least 68 windows (approximately 163 m² of glazing) were destroyed, compromising the environmental conditions required for biomedical research.

Every day of delayed reconstruction increases the risk of additional losses due to water intrusion, corrosion, mold, and further deterioration of laboratory facilities and equipment.

The damage affected highly specialized scientific instruments, including a flow cytometer, NanoDrop spectrophotometer, UV-Vis spectrophotometers, laboratory computers, and laboratory furniture, significantly reducing the Institute's research capacity.

Damage to biomedical research infrastructure directly impacts Ukraine's capacity to conduct research in immunology, infectious diseases, biotechnology, and public health.

Rapid restoration of the damaged infrastructure is essential to resume scientific research, educate young scientists, support international collaborations, and strengthen Ukraine's scientific and technological resilience.

Supporting the recovery of the Institute means protecting a critical element of Ukraine's research infrastructure and preserving the country's long-term scientific potential.

Beyond physical losses, the attack interrupted ongoing national and international research projects, delayed scientific experiments, and jeopardized years of accumulated scientific work.

Restoring the Institute is not only a matter of rebuilding a damaged building - it is an investment in preserving scientific knowledge, human capital, and Ukraine's research resilience.

Preliminary estimate of the cost of lost scientific equipment

№ Equipment		Quantity	Estimated Cost Per Unit (USD)	Estimated amount (USD)
1	Cytofluorometer (BD FACSLyric / Beckman CytoFLEX / analogue)	1	180 000–300 000	180 000–300 000
2	NanoDrop One / OneC	1	12 000–18 000	12 000–18 000
3	UV-Vis Spectrophotometer	2	8 000–20 000	16 000–40 000
4	Freezer –80 °C	2	12 000–18 000	24 000–36 000
5	Laboratory refrigerator (+4 °C)	2	2 500–5 000	5 000–10 000
6	Laminar Biosafety Cabinet Class II	2	10 000–18 000	20 000–36 000
7	CO ₂ Incubator	2	8 000–15 000	16 000–30 000
8	Benchtop Centrifuge	2	4 000–8 000	8 000–16 000
9	High Speed Cooled Centrifuge	1	18 000–35 000	18 000–35 000
10	Autoclave	1	15 000–35 000	15 000–35 000
11	Orbital shaker	2	2 000–4 000	4 000–8 000
12	Vortex	3	500–1 000	1 500–3 000
13	Thermostat / Incubator	2	2 000–5 000	4 000–10 000
14	Laboratory pH Meter	2	800–2 000	1 600–4 000
15	Light Research Microscope	2	10 000–30 000	20 000–60 000
16	Computers Workstations	10	1 200–2 000	12 000–20 000
17	Monitors	10	300–500	3 000–5 000
18	Printers / MFPs	3	500–1 000	1 500–3 000
19	UPS (Uninterruptible Power Supplies)	10	300–800	3 000–8 000
20	Server & Network Equipment	1 set	15 000–40 000	15 000–40 000
21	Laboratory furniture (5-7	1 set	80 000–150 000	80 000–150 000

№ Equipment	Quantity	Estimated Cost Per Unit (USD)	Estimated amount (USD)
laboratories)			
22 Fume Hoods Laboratory	4	8 000–15 000	32 000–60 000
23 Cabinets for reagents and acids	6	1 500–3 000	9 000–18 000
24 Reagents, antibodies, test systems	1 set	100 000–300 000	100 000–300 000
25 Laboratory plastics and consumables	1 set	20 000–60 000	20 000–60 000
26 Cryocollections, Biological Samples, and Cell Lines*	1 collection	Not subject to direct market valuation	—

Estimated cost

- **Scientific equipment: ≈ 650,000–1,250,000 USD**
- **Laboratory furniture: ≈ 80,000–150,000 USD**
- **Reagents and consumables: ≈ 120,000–360,000 USD**

Total estimated value of lost laboratory property: ≈ 850,000–1,750,000 USD

(excluding the value of unique biological collections, scientific data, and loss of research time).

* The cost of cell lines, collections of biological materials, data archives and multi-year experiments is almost impossible to determine by market methods, as their restoration may require many years of work.