

**“THERMO FISHER SCIENTIFIC BALTICS” NOMINAL SCHOLARSHIP
COMPETITION TERMS AND CONDITIONS
2022-2023**

1. „Thermo Fisher Scientific Baltics“, UAB in cooperation with Vilnius University invites prospective 1 year Masters students from VU Life Sciences Center, Faculty of Chemistry and Geosciences, Faculty of Medicine, Faculty of Mathematics and Informatics to prepare Master final thesis at the Company.
2. Favorite students selected to prepare Master final thesis at the Company will receive “Thermo Fisher Scientific Baltics” nominal scholarship.
3. Main goal of the Scholarship is to promote active participation in scientific research, manufacturing operations processes and advance perspective VU students’ career in biotechnology sector.
4. Applicants’ Bachelor final thesis (or exams) and Main study field subjects weighted average grades must be no less than 8 to qualify for the Scholarship competition.
5. “Thermo Fisher Scientific Baltics” nominal scholarship is 1.800 Eur per single academic year, payed out to students in equal parts each academic month.
6. VU students who prepare the final thesis at the Company for two academic years and if study results do not worsen, are entitled for a second-year scholarship, therefore total scholarship would amount to 3.600 Eur.
7. This nominal scholarship does not impact students’ chances to receive other scholarships from the State, “Thermo Fisher Scientific Baltics” or other.
8. Applicants Final thesis topic should prepare in one of the following Research groups and corresponding research areas:

Research group and Manager	Methods and research areas
Molecular Biology Advanced Technologies Group Manager R.Skirgaila	Methods: NA purification, PCR, qPCR, protein purification and characterization, EMSA, protein screening using microfluidics, protein exposure on ribosomes, in vitro compartmentalization of cells. Research areas: <ul style="list-style-type: none"> • DNA polymerase research and applications; • Research on nucleic acid modification enzymes; • Use of <i>in vitro</i> protein evolution to improve enzyme properties.
Products Verification-Validation Group A. Lagunavičius	Methods: NA and enzyme purification; PCR, RT-PCR, qPCR; enzymology, EMSA; NGS; alteration of enzyme properties by site-directed mutagenesis or chemical modifications. Research areas: <ul style="list-style-type: none"> • Research on nucleic acid hydrolysis and modification enzymes; • Modification of protein properties by mutagenesis and chemical modifications.
Natx Kit Development Group Manager V.Šeputienė	Methods: <i>in vitro</i> studies of the efficiency of iRNA transcription (IVT) and enzymatic modification reactions of iRNA molecules, upscale studies, qualitative and quantitative detection methods of iRNA. Research areas: <ul style="list-style-type: none"> • Investigations of iRNA synthesis and modification enzymes, their application in biopharmaceuticals and nucleic acid therapy.
Cell Biology Group Manager L. Zaliauskienė	Methods: mammalian cell culture, functional studies; casting construction - genetic engineering, transfection, protein purification, ELISA, cytometry, Western Blot (WB). The group is working on cell purification / activation using magnetic particles conjugated to various antibodies, and the products / methods are being used in immunotherapy. Research areas: <ul style="list-style-type: none"> • <i>Ex vivo</i> studies of NK cell activity • Development and characterization of membrane protein castings
Micro Array Products Group Manager D.Motiejūnas	Molecular biology methods: PCR, NA purification, enzymatic reactions (polymerases, restriction endonucleases), NA / protein electrophoresis, etc.) Bioanalytical methods: absorption, fluorescence, ionic, pH, etc. measurements. Working with pipetting robots.

	<p>Bioinformatics methods: programming with Python, Linux environment, various data analysis methods and statistical data processing.</p> <p>Research areas:</p> <ul style="list-style-type: none"> • Development of tools for automation of complex data analysis, trend tracking and interpretation. • Improvement of micro-grid sets.
<p>Molecular Biology Product Optimization Group Manager M. Laime</p>	<p>Methods: NA purification, NA amplification, protein purification and characterization, fluorescent methods</p> <p>Research areas:</p> <ul style="list-style-type: none"> • Development of new methods of analysis and improvement of existing ones • Analysis and modification of critical components of product composition • Improvement of product manufacturing technologies
<p>Molecular Biology PCR Products Development Group Manager B. Gagilienė</p>	<p>Methods: DNA / RNA purification, PCR, qPCR and other alternative DNA / RNA detection methods, genetic engineering of recombinant proteins, protein purification and molecular biology analysis.</p> <p>Research areas:</p> <ul style="list-style-type: none"> • Development and refinement of methods for the rapid and reliable detection of viral and non-viral DNA /RNA • Investigation of the properties of a new generation of polymerases suitable for virological research, next generation sequencing (NGS), single cell, gene editing technologies
<p>NA Purification And Amplification Products Optimization Group Manager D.Nekrašienė</p>	<p>Methods: FRET, qPCR, PCR, PAGE-SDS, absorption measurement, NA purification, roboticization of bioanalytical methods</p> <p>Research areas:</p> <ul style="list-style-type: none"> • Development of new analysis methods and optimization of existing ones • Validation of bioanalytical methods
<p>Biopharmaceutical Chemical Products Development Group Manager I.Jaglinskaitė</p>	<p>Methods: various methods of organic synthesis, liquid chromatography (LC), NMR, HPLC, UV.</p> <p>Research areas: Synthesis and optimization of new chemical biopharmaceutical products</p>
<p>Cell Banking Development Group Manager K.Pagarauskaitė</p>	<p>Methods: genetic engineering, molecular biology, microbiology methods</p> <p>Research areas: development of new biopharmaceutical recombinant products</p>
<p>Biopharmaceutical Product Development Group Manager E.Čapkauskė</p>	<p>Methods: genetic engineering, protein expression, tangential filtration, chromatography, SDS PAGE.</p> <p>Research areas:</p> <ul style="list-style-type: none"> • Development of growth factors for cell therapy • Development of Cas9 family proteins for gene therapy • Development of recombinant protein production technologies in accordance with Good manufacturing practice (GMP) requirements; • Transfers to GMP production: scaling, increasing yields, adapting technologies to Single Use systems.
<p>Molecular and Synthetic Biology Tools Group Manager I.Vendelė</p>	<p>Methods: recombinant plasmid engineering, <i>E. coli</i> transformation, bacterial culture culture, qPCR, PCR, isothermal NA amplification methods, SDS-PAGE, electrophoresis, NA purification, protein characterization studies, in vitro transcription</p> <p>Areas of research: Investigation and characterization of DNA / RNA modifying enzyme properties</p>
<p>Biopharmaceutical Analytical Methods Development Group Manager E. Damušienė</p>	<p>Methods: spectrophotometric, qPCR, HPLC, radioactive activity assays, mammalian cell assays, SDS-PAGE</p> <p>Research areas: development and validation of analytical methods for protein testing. Protein stability studies and characterization.</p>
<p>Chemistry Group Manager I.Čikotienė</p>	<p>Methods: HPLC, Mass spectrometry, UV / fluorescence</p> <p>Research areas:</p> <ul style="list-style-type: none"> • Development of instrumental analytical methods

	<ul style="list-style-type: none"> • Characterization of low molecular weight and high molecular weight products • Organic synthesis
Analytical Methods Development And QC Support Group Manager V.Sutkuvienė	Methods: spectrophotometric, HPLC, MS. Analytes: lipids, peptides, nucleotides Research areas: Development and validation of analytical methods.
Chromatography and mass spectroscopy research center Manager. L. Taujenis	Methods: HPLC, mass spectroscopy, inorganic and organic synthesis, chemometry. Research areas: <ul style="list-style-type: none"> • Development and application of chromatography tools: sorbents, high pressure LC columns, sample purification solutions; • Testing of prototypical analytical tools and equipment in applications

9. Applicant should choose no more than three Research groups named above.

10. Applicants must be first year Master students studying Natural sciences or other sciences related to the activities of the Company and aiming to prepare their Final thesis at the Company, as also Company employees who are first year Master students and employed no more than 0.6 FTE.

11. Applications for the competition must be submitted by September 15, 2022.

12. Student applicants must submit following documents:

- Curriculum vitae (CV);
- Motivational letter, also indicating preferred Research groups from the list above;
- Copy of Bachelor studies diploma and its supplement;
- Copy of Secondary school graduation diploma;
- Copy of other achievements, such as scientific and/or social activities (e.g. participations in scientific competitions, tournaments and other);
- Recommendation from VU Faculty or Employer would be additional benefit.

13. Application documents should be submitted to VU Study administration department via e-mail jurgita.alonderyte@cr.vu.lt and “Thermo Fisher Scientific Baltics” UAB via e-mail: stud@thermofisher.com titled “Thermo Fisher Scientific nominal scholarship”.

14. Students applications are evaluated by an Appointed selection commission. This Commission evaluates provided application documents, and if needed, may ask applicants to meet prior to making decision.

15. The Commission evaluates applicant’s study results – Bachelor final thesis (or exams) and main study field subjects weighted average grades must be no less than 8, motivation, achievements and practical research capabilities.

16. Decision regarding the Scholarship will be communicated via applicant’s e-mail.

17. The scholarship is reviewed each study semester and the scholarship holder may lose the scholarship or it may be terminated on withheld according to the terms and conditions of the Scholarship defined in Agreement between the Company and the VU.

18. Terms and conditions of the Scholarship are defined in accordance to the Agreement between the Company and VU.

19. In exceptional cases the Company or the VU have a right to change terms and conditions of the Scholarship or to terminate the call for applications.