

**“THERMO FISHER SCIENTIFIC BALTICS” NOMINAL SCHOLARSHIP  
COMPETITION TERMS AND CONDITIONS  
2025-2026**

1. „Thermo Fisher Scientific Baltics“, UAB in cooperation with Vilnius University invites prospective 1<sup>st</sup> 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. Students selected to prepare their 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 2200 Eur per single academic year, paid 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 4400 Eur. If final thesis defense is in January, second year scholarship is halved and amounts to 1100 Eur, bringing the total amount for both years up to 3300 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:

<b>Molecular biology groups and managers</b>	<b>Molecular biology group methods and research areas</b>
Molecular biology advanced technology group  Manager dr. R.Skirgaila	<b>Methods:</b> NA isolation, PCR, qPCR, protein purification and characterization, EMSA, protein selection using microfluid technology, protein exposition on ribosomes, <i>in vitro</i> compartmentalization.  <b>Research areas:</b> <ul style="list-style-type: none"> <li>• DNA polymerase research and applications;</li> <li>• Nucleic acid modification enzyme research;</li> <li>• Protein <i>in vitro</i> evolution-driven enzyme development.</li> </ul>
Product verification-validation group  Manager dr. A. Lagunavičius	<b>Methods:</b> Nucleic acid and enzyme purification, enzymology; PCR, RT-PCR and qPCR; NGS; targeted enzyme mutagenesis, immobilization and chemical modifications; protein lyophilization, freeze-drying and air-drying.  <b>Research areas:</b> <ul style="list-style-type: none"> <li>• Nucleic acid modification enzyme research and applications;</li> <li>• Enzyme mutagenesis and chemical modifications;</li> <li>• Protein freeze-drying and air-drying.</li> </ul>
Innovative cloning solutions development group  Manager dr. V.Šeputienė	<b>Methods:</b> recombinant DNA construct (bacterial, plant) development using modern cloning methods: gene synthesis, Golden Gate, Gibson assembly, Gateway recombination.  <b>Research areas:</b> <ul style="list-style-type: none"> <li>• Development of innovative tools for cloning of <i>in vitro</i>, <i>in vivo</i> and synthetic DNA.</li> </ul>
Molecular diagnostics solutions development group  Manager dr. R. Sukackaitė	<b>Methods:</b> PCR, qPCR, isothermal amplification, protein purification and characterization, enzyme modification via targeted mutagenesis and/or <i>in vitro</i> evolution.  <b>Research areas:</b> <ul style="list-style-type: none"> <li>• New isothermal amplification methods for molecular diagnostics</li> <li>• DNA polymerase and other NA amplification enzyme development</li> </ul>
Cell biology group  Manager dr. L. Zaliauskienė	<b>Methods:</b> mammalian cell line cultivation and functional assays; chimeric gene construction – gene engineering, transfection, protein purification, ELISA, cytometry, Western Blot, protein interaction evaluation using BLI method. Group works with cell isolation/activation using magnetic beads, conjugated with antibodies, and develops products/methods used in immunotherapy.

	<p><b>Research areas:</b></p> <ul style="list-style-type: none"> <li>• Evaluation of T-lymphocyte reaction to various activators and potential applications in immunotherapy</li> <li>• Isolation of specific T-lymphocyte population and potential applications in immunotherapy</li> <li>• Development of a platform used for cell functionality evaluation for next generation immunotherapy products</li> </ul>
<p>Micro-array product group</p> <p>Manager dr. D. Motiejūnas</p>	<p><b>Molecular biology methods:</b> genotyping, chromosome modification and expression microchips, enzymatic reactions (polymerases, restriction enzymes etc.), PCR, NA purification, NA/protein electrophoresis etc..</p> <p><b>Bioanalytical methods:</b> absorption, fluorescence, ion, pH and other measurements. Working with pipetting robots, scanners and fluidic systems.</p> <p><b>Bioinformatic methods:</b> programming with Python, Linux, various data analysis methods and statistical analysis.</p> <p><b>Research areas:</b></p> <ul style="list-style-type: none"> <li>• Development of micro-array technology.</li> <li>• Development of tools used in automatization of complex data analysis, trend observation and interpretation.</li> </ul>
<p>AgB ELISA product development group</p> <p>Manager Aliona Markina</p>	<p><b>Methods:</b> ELISA, TAAD. Group works with BSL-2 level biological samples (serum, blood, plasma, milk).</p> <p><b>Research areas:</b></p> <ul style="list-style-type: none"> <li>• ELISA-based product development</li> <li>• Automatisatation</li> <li>• Diagnostic product development</li> </ul>
<p>Molecular biology product optimization group</p> <p>Manager M. Laime</p>	<p><b>Methods:</b> NA purification, NA amplification, protein purification and characterization, fluorescence-based methods</p> <p><b>Research areas:</b></p> <ul style="list-style-type: none"> <li>• New analysis method development and/or development of current methods</li> <li>• Critical product component analysis and change</li> <li>• Development and improvement of product manufacturing technologies</li> </ul>
<p>Molecular biology PCR product development group</p> <p>Manager Dr. B. Gagilienė</p>	<p><b>Methods:</b> DNA/RNA purification, PCR, qPCR and other alternative DNA/RNA detection methods, recombinant protein development using gene engineering methods, protein purification and characterization using molecular biology methods.</p> <p><b>Research areas:</b></p> <ul style="list-style-type: none"> <li>• Development of methods used for quick and effective detection of viral or other DNA/RNA</li> <li>• Development and characterization of next generation polymerases, used for virology research, next generation sequencing, single cell analysis, gene editing technologies.</li> </ul>
<p>Molecular and synthetic biology tools group</p> <p>Manager dr. I. Vendelė</p>	<p><b>Methods:</b> <i>E. coli</i> transformation, bacterial culture cultivation, qPCR, PCR, isothermal NA amplification methods, DNA/RNA modification, NGS, SDS-PAGE, electrophoresis, NA purification, protein characterization studies.</p> <p><b>Research areas:</b></p> <ul style="list-style-type: none"> <li>• Investigation and characterization of novel DNA / RNA modifying enzyme properties</li> <li>• Development of new methods and/or validation</li> <li>• Regular research and testing of novel and innovative tools for molecular biology.</li> </ul>

<p>Enzyme competency center</p> <p>Manager Dr. Juozas Šiurkus</p>	<p><b>Methods:</b></p> <p><b>Gene engineering.</b> Molecular biology methods: PCR, qPCR, DNA/RNA purification, DNA restriction, DNA/RNA electrophoresis, DNA sequencing, <i>in vitro</i> transcription/translation, gene editing via homologous recombination using cas9 methods.</p> <p><b>Microbiology:</b> cell bank preparation and characterization, cell transformation, protein biosynthesis in <i>E. coli</i> and yeast cells, cultivation of microbial cultures using modern bioreactors Biostat B® and selection platform Ambr® 250.</p> <p><b>Biomass isolation:</b> cell lysis methods, culture microfiltration, tangent filtration, NA purification, dialysis, chromatography (affinity, ion exchange, hydrophobic), protein electrophoresis, formulation.</p> <p><b>Analytical methods:</b> liquid chromatography (HPLC), spectroscopy methods: mass spectroscopy (MS), UV– visible light spectroscopy (UV-Vis), fluorescent spectroscopy; enzymatic activity measurement methods: spectrophotometric, fluorometric, radioisotopic, chromogenic, electrophoretic mobility (EMSA), isothermal titration calorimetry (ITC), microcalorimetry, immunological (ELISA), activity labeling (zymograms), Western blot, nucleic acid detection and quantification methods (PCR and qPCR).</p> <p><b>Research areas:</b></p> <ul style="list-style-type: none"> <li>• Cell engineering, gene editing</li> <li>• Gene expression and regulation in bacterial, yeast, mammalian or insect cells, protein folding <i>in vivo</i> research</li> <li>• Bioprocess engineering: cultivation technology</li> <li>• Bioprocess engineering: recombinant protein/enzyme expression and biomolecule separation and isolation research</li> <li>• Recombinant protein folding <i>in vivo</i> research</li> <li>• Innovative analytical method development</li> <li>• Recombinant protein stability research</li> <li>• Recombinant protein characterization</li> <li>• Therapeutic RNA synthesis, modification and research (small nucleic acid oligonucleotides – antisense, si/miRNA, RNA synthesis <i>in vitro</i>, modifications, self-amplifying RNA, etc)</li> </ul>
<p>Technology development group</p> <p>Manager V. Budrys</p>	<p><b>Methods:</b> gene engineering; gene expression in bacteria and yeast, protein and nucleic acid purification (cell lysis, depth and tangent filtration, chromatography); lyophilization; capillary electrophoresis; effective liquid chromatography; PCR; qPCR; enzyme activity and functional tests; spectrophotometric analysis methods.</p> <p><b>Research areas:</b></p> <ul style="list-style-type: none"> <li>• Bacterial and yeast fermentation process development;</li> <li>• Protein and nucleic acid purification process development;</li> <li>• Enzyme activity measurement, physicochemical and functional test development.</li> </ul>

Chemistry groups and managers	Chemistry methods and research areas
<p>Chemistry group</p> <p>Manager Dr. I. Čikotienė</p>	<p><b>Methods:</b> HPLC, mass spectroscopy, UV/fluorescence.</p> <p><b>Research areas:</b></p> <ul style="list-style-type: none"> <li>• Instrumental analytical method development</li> <li>• Product characterization of small molecules and large molecules</li> <li>• Organic synthesis</li> </ul>
<p>Analytical method development group</p> <p>Manager V. Sutkuvienė</p>	<p><b>Methods:</b> spectrophotometric, HPLC, MS, BMR, SDS-PAGE, cIEF, FTIR, visual methods, density.</p> <p><b>Analytes:</b> lipids, peptides, nucleotides, proteins, conjugates.</p> <p><b>Research areas:</b></p> <ul style="list-style-type: none"> <li>• Development and validation of analytical methods (using Good Manufacturing Practice GMP, EU and US pharmacopeia)</li> <li>• Product characterization, detection and identification of impurities</li> <li>• Characterization of internal standards</li> </ul>
<p>Process chemistry group</p> <p>Manager Vytenis Raudonis</p>	<p><b>Methods:</b> BMR, HPLC, MS, UV, FT-IR.</p> <p><b>Analytes:</b> lipids, natural and modified nucleotides and their compounds, other micromolecular compounds.</p>

	<b>Research areas:</b> <ul style="list-style-type: none"> <li>Organic compound synthesis and chromatography: <ul style="list-style-type: none"> <li>Process optimization</li> <li>Retrospective chemical process analysis</li> <li>Molecule characterization, using existing analytical methods</li> </ul> </li> </ul>
Chromatography and mass spectroscopy center  Manager Dr. L. Taujenis	<b>Methods:</b> HPLC –MS(MS2), HPIC, GC, ICP-MS, chemical synthesis, chemometry.  <b>Research areas:</b> <ul style="list-style-type: none"> <li>Verification and validation of tools and equipment</li> <li>Development and application of chromatography products: synthesis and modification of sorbent particles, development of analytical and preparative LC columns, development of sample preparation solutions.</li> <li>Software testing</li> <li>Advanced chromatography, mass spectroscopy tools development and application.</li> </ul>
Biopharmaceutical chemistry product development group  Manager I. Jaglinskaitė	<b>Methods:</b> organic synthesis methods, liquid chromatography (LC), BMR, HPLC, UV, kPGR, PGR, IVT transcription.  <b>Research areas:</b> new chemical biopharmaceutical product synthesis and optimization, analytical method development and validation.

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 27, 2025.

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 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 [andrius.juozapavicius@cr.vu.lt](mailto:andrius.juozapavicius@cr.vu.lt) and “Thermo Fisher Scientific Baltics” UAB via e-mail: [stud@thermofisher.com](mailto: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.