

## **CONTRACT FOR WORK**

(hereinafter this "Contract"), executed pursuant to § 2586 et seq., in keeping with § 2631 et seq. of Act no 89/2012 Coll., the Civil Code, as amended, by and between:

### **I**

#### **Contracting Parties**

- 1.1. Client:** **Česká zemědělská univerzita v Praze**  
**(in English: Czech University of Life Sciences Prague)**  
Registered seat: Kamýcká 129, 165 00 Praha – Suchdol  
Acting through: Ing. Jakub Kleindienst, Bursar  
Bankers: Česká spořitelna, a. s.  
Account number: 500022222/0800  
Business ID: 60460709  
VAT ID: CZ60460709  
(hereinafter the "Client") on the one side

and

- 1.2. Contractor:** **Life Technologies Czech Republic s.r.o.**  
Registered seat: V celnici 1031/4, 110 00 Praha 1 – Nové Město  
Acting through: RNDr. Ondřej Holeňa, Proxy  
Bankers: Unicredit Bank Czech republic a.s.  
Account number: 1387424581/2700  
Business ID: 25761307  
VAT ID: CZ25761307  
Company entered in the Commercial Register maintained by the Municipal court in Prague, section C, file no 67849  
(hereinafter the "Seller") on the other side  
(hereinafter the "Contractor")

(Both the Client and the Contractor hereinafter also "Contracting Parties" or just "Parties")

On the basis of the tender result for the project of "Norway spruce 50K array genotyping", implemented on the basis of public contract pursuant to Act no 134/2016 Coll., on Public Procurement, as amended, the Parties hereby execute the following public contract in the below wording:

### **II**

#### **Subject of Contract**

- 2.1 The Contractor hereby agrees to process, at its cost, for the Client, Norway spruce 50K array genotyping of up to 3 072 DNA samples of Norway spruce. The subject of contract consists of: quality check of the delivered samples and the methodological procedure as described in Attachment No. 1 – Technical Specification. The exact scope of the work is defined in Attachment No. 1 – Technical Specification forming an integral part hereof.
- 2.2 The shipments of samples will be provided by the Client on its own costs. The Client can send any number of samples, but always in format of 96-well plate(s). The Contractor agrees to store the delivered samples of the client under appropriate conditions until the minimum required number of samples (2x384) is provided and the genotyping can be initiated.

- 2.3 The Contractor hereby agrees to be available at no charge to discuss the genotyping, troubleshoot, and answer questions included. Useful information for initial troubleshooting will be provided automatically with genotyping results that are difficult to genotype.
- 2.4 The Client hereby agrees to duly and timely take over the work implemented by the Contractor and pay the contract price to the Contractor as defined below.
- 2.5 The Contractor hereby agrees to perform the work with due professional care, within the agreed deadline, and within the scope and in the quality pursuant hereto.

### III Time and Place of Supply

- 3.1. The Contractor hereby agrees to implement the work in compliance herewith and hand it over to the Client within the following deadlines:

Activity commencement:

- after the Client receives the Samples Accepted Message by the Contractor. This message is sent, when:
  - The Contractor obtains the minimum number of samples for genotyping from the Client (i.e., 2x384 samples)
  - All of the sample plates have failure rate <10%
  - The Client has already resubmitted samples once for the failed plate(s)
  - The Client chooses not to resubmit and approves processing “as is”.

Work completion and results delivery of each batch:

- Results for each batch must be delivered within 90 calendar days from the sample takeover by the Contractor at the latest; unless there is a special circumstance, e.g. unsatisfactory quality of sample(s).

Work acceptance:

- Results (as specified in Attachment No. 1 – Technical Specification) will be delivered as a downloadable link
- Results of each batch will be accepted by the Client within 2 weeks after receipt from the Contractor

Final completion of contract work:

- all work will be completed, and the results will be delivered to the Client until the 30<sup>th</sup> June 2023 at the latest

- 3.2. If more than 10% of the samples on a given 96-well plate fail quality and quantity evaluation by the method according to the Contractor the ultrasensitive fluorescent nucleic acid stain threshold based on Contractor’s readings, client will be notified and will have the option to re-submit failing samples. If Client would like to resubmit, must notify the contractor within 5 business days. If not, contractor reserves the right to move forward with processing all samples on that plate. Client may resubmit samples only once. After the resubmission, every sample received will be processed, regardless of passing Contractors QC requirements.
- 3.3. The place of the supply will be the buildings of the Faculty of Forestry and Wood Sciences of the FFWS on the address of the registered seat of the Client, Czech University of Life Sciences in Prague, Kamýcká 129, 165 00 Praha – Suchbátka, Czech Republic.

- 3.4. The Contractor shall fulfil its liability to duly perform the work by its completion and handover in an acceptance proceeding to the Client. The results shall be deemed delivered on the day of delivery of the e-mail with the results in attachment; with the link for results downloading to the Client's contact person or other similar way. The acceptance proceeding will be closed by a written acceptance protocol signed by contact person of the Client, which will be sent to the Contractor by e-mail. Otherwise, the work shall not be deemed duly and timely accepted. Both parties are obliged to report any changes of the contact person by e-mail to the other Contracting Party.

Contractor's contact person in acceptance proceeding and payment:

Name: Ildiko Zigraiová  
email: czorders@thermofisher.com  
phone: +420 235 302 459

Client's contact person in acceptance proceeding and payment:

Name: Jiří Korecký  
email: korecky@fld.czu.cz  
phone: +420 604 260 233

#### IV

#### Price and Payment Terms

- 4.1 The price of the work (unit prices) within the contracted scope implemented pursuant to the terms and conditions laid down hereby was specified on the basis of the bid of the Contractor submitted in the context of the tender as the maximum price (which may be exceeded).
- 4.2 The unit price of the service is given in the Czech currency and is set to the amount of: 1 011,74 CZK (in words: one thousand eleven Czech crowns seventy-four pennies) without VAT for one sample. VAT will be determined and paid in accordance with the valid legal regulations on the day of the taxable supply. The total price of the service is determined as a multiple of the unit price and the expected quantity of 3 072 samples and amounts to 3 108 065,28 CZK.
- 4.3 Individual services will be ordered through separate orders. Orders will be placed in batches, i.e. 2x384-format PCR plate.
- 4.4 The payments will be executed upon receipt of the results for the relevant order on base of acceptance protocol pursuant to Art. 3.4 of this Contract.
- 4.5 The price includes all related costs, including but not limited to the costs of potential administrative fees, taxes, customs duties, approval proceedings, required testing, conformity statement, certificates and attests, transfer of rights, insurance, etc.
- 4.6 The price shall only be calculated based on the services actually provided by the Contractor.
- 4.7 The price shall be paid by the Client in the Czech currency on the basis of the relevant tax invoice by wire transfer to the bank account of the Contractor. The Contractor shall issue the invoice in 15 calendar days from due and timely delivery and acceptance of the goods (sample group) by the Client pursuant hereto on the basis of the relevant acceptance protocol.
- 4.8 The tax invoice shall include all appurtenances of a correctly issued tax document in the sense of the relevant legislation, including but not limited to Act no 235/2004 Coll., on the Value Added Tax, as amended. The invoice shall include identification of the project and the operation programme from which the supply is financed: "Building of an excellent research team at the Faculty of Forestry and Wood Sciences of Czech University of Life Sciences on Prague and its instrumental background focused on mitigation of the impact of climate change

on forests (from the gene level to the landscape level)” (reg. ID of OP VVV CZ.02.1.01/0.0/0.0/15\_003/0000433) financed from the “Operation programme Research, Development and Education”, unless otherwise stated by the Client. If the invoice misses any of the required appurtenances the Client shall be entitled to return it within its payment deadline to the Contractor for correction without getting into any delay with its payment. A new payment deadline shall start from the date of the redelivery of the corrected invoice to the Client. The invoice payment deadline shall be 30 days from documented delivery to the Client. The Contractor shall deliver the invoice to the Client’s contact person pursuant to Art. 3.4 of this Contract. No other delivery shall be deemed appropriate and the Client shall not be liable to pay an invoice delivered in any other way.

- 4.9 The day of payment shall be the date of debit of the amount of the invoice from the bank account of the Client in favour of the Contractor’s bank account.
- 4.10 In accordance with Czech law, the payment of the price or its part shall be transferred to the bank account of the Contractor published by the tax administrator pursuant to § 98 of Act no 235/2004 Coll., on the Value Added Tax, as amended, if this liability is applicable to it, even if the bank account number specified in the invoice is different. If the Contractor has no published bank account pursuant to § 98 of Act no 235/2004 Coll., on the Value Added Tax, as amended, published by the tax administrator, then the Client shall affect the payment to the bank account after its publication by the tax administrator, without getting into any delay in the invoice payment. Publication of the bank account number by the tax administrator shall be notified by the Contractor to the Client without delay. This provision shall not apply if the Contractor is not liable to publish its bank account pursuant to Act no 235/2004 Coll., on the Value Added Tax, as amended.
- 4.11 If at the moment of the taxable supply the competent tax administrator publishes information that the Contractor is an unreliable taxpayer the Client as the guarantor hereby reserves the right to reduce the amount paid out to the Contractor as the purchase price of the supply by the relevant amount of V.A.T. and notify the Contractor accordingly in advance. By application of this procedure the Contractor’s claim towards the Client shall be reduced by the relevant amount of V.A.T. and the Contractor shall not be entitled to request the V.A.T. amount payment from the Client or enforce it in any manner.

## **V**

### **Quality Guarantee**

- 5.1 The Contractor hereby provides guarantee for the quality of every part of the supply in the length of 24 months. The warranty period shall start on the day of the work takeover by the Client, i.e. on the date of execution of the protocol on due and timely takeover of the work by the Client.
- 5.2 The Client shall be liable to notify the Contractor about any warranty defect without delay. The Contractor shall perform warranty repairs free of charge in 10 calendar days from the defect reporting. In the case of failure to comply with this deadline the Client shall be entitled to have the defect remedied by a third party at the cost of the Contractor even without prior notification of the Contractor of this procedure.
- 5.3 In the case of a warranty repair the warranty period shall be extended by the period from the defect notification to the defect remedy.
- 5.4 Complaints can be applied by the last day of the warranty period, with a complaint sent on the last day of the warranty period also deemed timely applied.
- 5.5 In the case of a defect of the work or its part which cannot be repaired the Client shall be entitled to partly withdraw from this contract within the scope of the defective supply, and

request refund of the part of the price corresponding to the price of the defective part of the work.

## **VI Penalty Clause**

- 6.1 In the case of the Contractor's delay with the work handover within the deadline pursuant hereto, the Client shall charge a contractual penalty 1.500 CZK for each commenced day of the delay.
- 6.2 The Contractor shall further be charged a contractual penalty 1.500 CZK of the work for each commenced day of the delay with remedy of complained of warranty defects within the deadline pursuant to Art. 5.2 above herein.
- 6.3 In the case of the Client's delay in the invoice payment the Contractor shall be entitled to charge a delay interest in the amount of 0.05 % of the amount due for each commenced day of the delay.
- 6.4 Circumstances excluding responsibility do not apply to the liability to pay a contractual penalty.
- 6.5 The Client shall be entitled to unilaterally offset any contractual penalty against any receivable of the Contractor towards the Client (including the Contractor's receivable represented by payment of the contract price of the work).
- 6.6 Payment of a contractual penalty is without prejudice to the rights of the Client for full damage compensation.
- 6.7 The liable party hereby agrees to pay the charged contractual penalty (penalties) within 14 days from receipt of the relevant settlement. The same deadline also applies to the delay interest.

## **VII Contractor's Liabilities**

- 7.1 The Contractor shall be liable to implement the work in compliance herewith.
- 7.2 The Contractor shall be liable to inform the Client about the progress of the work on a regular basis and prove actual progress on the Client's request submitted in compliance herewith.
- 7.3 The Contractor shall be liable to perform all works and activities and provide all supplies to the Client for the work to be duly and timely completed within the contracted deadline and submitted to the Client for use as agreed and under the terms and conditions hereof. The Client hereby agrees to provide all necessary assistance to the Contractor to that end.
- 7.4 The Contractor hereby confirms to have been fully acquainted with the work scope and specification, with the technical, qualitative and other conditions of the work implementation, and to possess the required professional knowledge, experience and resources to be able to duly perform the work. The Contractor hereby agrees to implement the work in compliance herewith, with the applicable generally binding legislation, technical standards and to endow the work with properties and quality at least corresponding to the usual purpose of such work.
- 7.5 The Contractor shall be liable for damage caused to the Client and third parties by violation of the Contractor's liabilities laid down herein or by breach of the applicable legislation and standards.
- 7.6 The work as agreed herein, and in the Attachments, hereto shall not be changed without prior written consent of the Client.
- 7.7 The result of the Contractor's activity (the work or its part) pursuant hereto shall not be provided by the Contractor to any other party but the Client.

**VII**  
**Client's Liabilities**

- 8.1 The Client shall pay the Contractor for the duly and timely performed work pursuant hereto.
- 8.2 The Client shall provide the Contractor with assistance needed for implementation hereof.

**IX**  
**Final Provisions**

- 9.1 This contract may only be amended by written addenda signed by both contracting parties. All Attachments hereto form an integral part hereof. According to the law, this contract shall come to force on the day of its execution by both parties and effect on the date of its publication in the register of contracts in compliance with Act no 340/2015 Coll., on Special Terms of Effectiveness of Certain Contracts, on the Publication of these Contracts and on the Contract Register (the Contract Register Act), as amended.
- 9.2 This contract is drawn up in and signed electronic form.
- 9.3 This contract is governed by Act no 89/2012 Coll., the Civil Code, as amended, and the related legislation. All data and information disclosed by the contracting parties to each other in the context of execution hereof are confidential and shall not be disclosed by either party to any third party and shall not be used for private purposes of the parties in contradiction to the purpose for which the information was disclosed. In the case of violation of this provision and unjust enrichment following from it to either party the unjust enrichment shall be given over to the other party.
- 9.4 In the case of invalidity of any of the provisions hereof the remaining provisions and the contract as a whole shall not be affected, unless the invalid provision is by its nature, content or circumstances of conclusion not severable from the rest of the contract content.
- 9.5 The contracting parties shall always strive for amicable settlement of any potential disputes arising from this contract or related to it. If an amicable settlement cannot be reached in 30 calendar days from the first notification of the dispute to the other party either party shall be entitled to submit its claim to the competent court of justice.
- 9.6 The Contractor agrees without reservations with publication of the full wording hereof for this contract to be able to become the subject of provided information in the sense of Act no 106/1999 Coll., on the Free Access to Information, as amended, and with publication of the full wording hereof pursuant to § 219 of Act no 134/2016 Coll., on public Procurement, as amended, and pursuant to Act no 340/2015 Coll., on Special Conditions of Effectiveness of Certain Contract, on the Publication of these Contracts and on the Contract Register (the Contract Register Act), as amended.
- 9.7 The Contractor hereby agrees that it is the liable party in the sense of § 2 (e) of Act no 320/2001 Coll., on Finance Control, as amended. The Contractor shall be liable to fulfil its liabilities as the liable party following to it from the above quoted act.
- 9.8 The integral parts of this agreement are an Attachment No. 1 – Technical specification.

9.9 Having read this contract the parties hereby agree with its content, which they say was worded seriously, certainly, comprehensibly and on the basis of their genuine free will, in witness whereof they attach their signatures below.

In Prague, on

In Prague, on

On behalf of Client:  
Czech University of Life Sciences Prague

On behalf of Contractor:  
Life Technologies Czech Republic s.r.o.

.....  
Ing. Jakub Kleindienst  
Bursar

.....  
RNDr. Ondřej Holeňa  
Proxy

## **Service: Norway spruce 50K array genotyping**

Estimated number of samples: (up to) 3072 samples of DNA samples of Norway spruce, i.e. up to 32 x 96-well plates.

### **Description**

Genotyping service using 50K array for Norway spruce, expected output ~45K high-quality SNPs, distributed over 40 000 scaffolds and 19 000 unique gene models, evenly covering the twelve linkage groups

- There should be no batch-to-batch variation in SNP content of the array.
- The array technology should be able to guarantee that 100% identical SNP content with every order (i.e. all data should be 100% comparable and compatible)
- Photolithographic manufacturing technology must be used for manufacturing of the arrays.
- The assay should guarantee inclusion of all candidate SNPs with a neighbouring SNP as close as 20 bases from the candidate SNP.

The client provides relevant information about the submitted samples, including the species, sample origin, ploidy, tissue, known (or assumed) level of inbreeding, plate design (sample ID/well) and DNA quantification method and DNA concentration.

If more than 10% of the samples on a given 96-well plate fail the ultrasensitive fluorescent nucleic acid stain threshold based on Contractor's readings, client will be notified and will have the option to re-submit failing samples. If Client would like to resubmit, must notify the contractor within 5 business days. If not, contractor reserves the right to move forward with processing all samples on that plate. Client may resubmit samples only once. After the resubmission, every sample received will be processed, regardless of passing Contractors QC requirements.

### **Data pre-processing**

All samples undergo quality check (QC) upon reception (with fluorochrome selectively binding dsDNA such as PicoGreen or SYBR-Green).

Raw data from the array, including the preliminary QC information, array annotation files and hybridization results/files, are pre-processed using the appropriate software.

The following preliminary results are provided:

- A list of high-quality individuals
- A list of high-quality SNPs
- Summary statistics on samples and SNPs
- Genotype matrix