

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 – Suchbát
Acting through: Ing. Jakub Kleindienst, Bursar
Bankers: Česká spořitelna, a. s.
Account number: xxxx
Business ID: 60460709
VAT ID: CZ60460709
(hereinafter the "Client") on the one side

and

- 1.2. Contractor:** **Institute of Applied Biotechnologies a.s.**
Registered seat: Služeb 3056/4, 108 00 Praha 10
Acting through: RNDr. Petr Kvapil, Chairman of the Board
Bankers: ČSOB a.s.
Account number: xxxx
Business ID: 27225712
VAT ID: CZ27225712
Company entered in the Commercial Register maintained by the Municipal court in Prague, section B, file no 9836
(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 "Transcriptome Analysis (RNAseq)", 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, Transcriptome Analysis (RNAseq) of 320 samples of Norway spruce total RNA. Each 8 individual RNA samples will be delivered in 8-Strip PCR Tube (so called "batch"). If there is more than 12 batches delivered in one shipment, each 12 batches will be arranged as 96-well PCR Plate. The subject of contract consists of: shipping, input quality control of the delivered RNA samples; if RNA samples fulfil quality and quantity requirements, the methodological procedure as described in Attachment No. 1 – Technical Specification – follow, and consultations. A total of 40 batches (in total 320 RNA samples) in 10 shipments are expected to be delivered by the Client and 15 one-hour consultations are expected to be used by the Client from the Contractor. The exact scope of

the work is defined in Attachment No. 1 – Technical Specification and Attachment No. 2 – Tender price, both forming an integral part hereof.

- 2.2 Ten shipments (individual parcels with RNA samples with 15 – 20 kg of dry ice shipped from the Client to the Contractor, sent at different times according to the Client 's needs) are expected. The Client is not obliged to order shipping from the Contractor.
- 2.3 The Contractor hereby agrees to be available at no charge to discuss the sequencing, troubleshoot, and answer questions included. Useful information for initial troubleshooting will be provided automatically with sequencing results that are difficult to sequence.
- 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:

Client sample delivery:

- first delivery is expected no later than 5 months after the contract came on the force. Descending priority of sample arrangement for shipment: 96-well PCR plate, 8-Strip PCR Tube.

Activity commencement:

- immediately after sample takeover by the Contractor, starting with initial quality control.

Work completion and results delivery of each batch:

- Results for each batch must be delivered within 60 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 (delivered sequences) 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 30th June 2023 at the latest

- 3.2. If the Contractor assesses an insufficient quality or quantity of RNA sample(s), the Client must be immediately informed. The Client will decide if to continue with the analysis with those samples or not (if not, substitute RNA samples will be provided by the Client).
- 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: xxxx

email:

phone: xxxx

Client's contact person in acceptance proceeding and payment:

Name: xxxx

email: xxxx

phone: xxxx

- 3.5. The Contractor will provide fifteen consulting hours (each 60 min) with a bioinformatician for 2 people determined by the Client. It is expected to hold 15 one-hour contact-based meetings according to Client requirements, on Client's registered seat.
- 3.6. Content of consultations will be secondary bioinformatics on sequencing results – software guidance, mapping to the reference genome, coverage QC, statistics and annotation.

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 price for the subject of contract is specified in Attachment No. 2 this contract, in the amount of CZK, V.A.T: exclusive. The V.A.T. shall be calculated and levied in compliance with the applicable tax legislation valid as of the date of taxable supply.
- 4.3 In case that the quality assessment fails and the insufficient quality samples will not be replaced in new shipment, the Contractor will charge only the shipping cost (if ordered) and quality assessment costs.
- 4.4 The payments will be executed on base of acceptance protocol pursuant to Art. 3.4 of this Contract or, if the if RNA samples quality and quantity requirements fail, on the base of failure notification sent by the Contractor.
- 4.5 The price includes all related costs, including but not limited to the costs of shipping and 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 and an Attachment No. 2 – Tender price.

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

On behalf of Client:
Czech University of Life Sciences Prague



.....
Ing. Jakub Kleindienst
Bursar

In Prague, on

On behalf of Contractor:
Institute of Applied Biotechnologies a.s.



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RNDr. Petr Kvapil
Chairman of the Board

Technical specification - Transcriptome Analysis (RNAseq) - 320 samples

- RNAseq analysis of delivered samples of Norway spruce (total RNA), 320 samples
- RNA samples delivered to the Contractor will meet the following parameters: RIN \geq 6.0, amount RNA \geq 0.4 μ g, volume \geq 20 μ L, concentration \geq 20 ng/ μ L, purity: no contamination
- After delivery, if some of the samples will not be assessed by the Contractor fulfilled minimal quality and parameters, the Contractor agrees to proceed pursuant to Art. 3.2 of this Contract

Requirements for the methodological procedure:

Quality control of the delivered RNA samples before the analysis commencement

mRNA fraction enrichment (polyA enrichment) before cDNA library preparation

cDNA library preparation (random-primed library type)

- cDNA library prepared with the directional RNA kit

genotyping platform: Illumina – NovaSeq

150 bp pair-end reads (bilateral reading in the section length 150 bp)

Minimum 30 million good quality reads (reading frames) per sample (9Gb raw data)

Data quality requirement: Phred value at least Q30 for at least 85% of the reads (reading frames) and at the same time Phred value at least Q20 for at least 90% of the reads (reading frames)

De-multiplexing, removing of adaptors, data quality control (QC report)

Availability of the sequencing results (data delivery) electronically via server/shared disc in the format fastq and fasta format

the Client requires a description of the methodology of the library preparation

the data must be generally compatible with the reference genome databases regardless of the used technology of sequencing.

Consultations:

- 15 (fifteen) consulting hours (each 60 min) with a bioinformatician for 2 people determined by the Client, contact-based meetings (up to 15 one-hour meetings according to Client requirements, on Client's registered seat
- Content of consultations: „secondary bioinformatics on sequencing results“ – software guidance, mapping to the reference genome, coverage QC, statistics and annotation

Attachment – Tender price_Transcriptome Analysis (RNAseq)

	Unit Price	Unit	Estimated total number	Estimated value
Shipping	2 000,00 CZK	Shipment	10	20 000,00 CZK
Initial Quality Control	1 643,00 CZK	Batch (8-Strip PCR Tube)	40	65 720,00 CZK
Complete Sample Processing and Analysis	31 267,00 CZK	Batch (8-Strip PCR Tube)	40	1 250 680,00 CZK
Bioinformatic Consultations	2 500,00 CZK	One-hour contact-based meeting	15	37 500,00 CZK
Tender price				1 373 900,00 CZK