

EUROPEAN UNION European Structural and Investment Funds Operational Programme Research, **Development and Education**



PURCHASE CONTRACT

No. 084/OVZ/PV/2023

CONTRACTING PARTIES:

BUYER:

PALACKÝ UNIVERSITY OLOMOUC

prof. MUDr. Martin Procházka, Ph.D.

Křížkovského 511/8, 771 47 Olomouc, Czech Republic

a public higher education institution established by the Act No. 111/1998 Coll., on Higher Education Institutions and on Amendments to Some Other Acts (the Higher Education Act), as amended

Head office: Rector[.]

Person authorised to act in technical matters:

ID No.:	61989592
Tax ID No.:	CZ619895
Bank details:	
Account No.:	
IBAN	
BIC/SWIFT:	
(hereinafter referred to as "Buyer")	

and

SELLER:

Registered office: Statutory body: Person authorised to act in contractual matters: Person authorised to act in technical matters:

ID No.:
Tax ID No.:
Bank details:
Account No.:
(hereinafter referred to as "Seller")

PE Systems s.r.o.

CZ61989592

Pastevců 471/10, 149 00 Prague Registration in the Commercial Register: C 14829/MSPH Municipal Court in Prague Ing. Pavel Choc

Ing. Pavel Choc

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on the bellow stated day, month and year, according to the provisions of Section 2079 et seq. of the Act No. 89/2012 Coll., the Civil Code, as amended (hereinafter referred to as "Civil Code"), enter into this purchase contract (hereinafter referred to as "Contract").

The Buyer and the Seller enter into this Contract as a result of the fact that the Seller has been selected by the Buyer, acting as the Contracting Authority in the procurement procedure for the small-scale public supply contract named "IMTM/UPOL - Software for image analysis and big data" as the Supplier.



This Contract is related to realization of project *"Molecular, cellular and clinical approach to healthy ageing", reg. no.:* CZ.02.1.01/0.0/0.0/16_019/0000868, within Operational Programme Research, Development and Education.

I. Subject-Matter of the Contract

1. The Seller undertakes, under this Contract, to deliver to the Buyer **PerkinElmer Signals Image Artist software and PerkinElmer Signals VitroVivo** (hereinafter referred to as "Goods") of a type, quantity, quality and parameters in accordance with the specifications that form an integral part of this Contract as Annex 1. The Seller is not entitled to deliver to the Buyer the Goods in larger quantities within the meaning of Section 2093 of the Civil Code. The Contracting Parties agree that the provisions of Section 2099 (2) of the Civil Code shall not apply.

2. The Seller hereby undertakes to deliver to the Buyer the Goods specified in Annex 1 to this Contract under the terms and conditions stipulated by this Contract, and to allow him to acquire an ownership right to the Goods. The supply further includes the installation of the Goods and provision of warranty service in relation to the Goods under the terms and conditions stipulated by this Contract.

3. The Buyer agrees to take over the Goods and to pay the Seller the agreed purchase price in the way and on the day as agreed in this Contract.

4. The supply of the subject-matter of the Contract further includes provision of legal documents.

5. The Seller declares pursuant to Section 2103 of the Civil Code, that the Goods is free of any faults or defects.

6. The Goods shall be fully operational, new, non-refurbished, without the need of any additional costs or expenditures by the Buyer.

II. Date and Place of Delivery

1. The Seller undertakes to deliver and install the Goods in the place of delivery and to provide all the legal documents related to the Goods within 40 calendar days from the effective day of this Contract.

2. Place of delivery: University Palacký Olomouc, Institute of Molecular and Translational Medicine, Faculty of Medicine and Dentistry, Hněvotínská 1333/5, 779 00 Olomouc, Czech Republic. Person authorised to take over the Goods on behalf of the Buyer:

3. The Contracting Parties agree that the provisions of Sections 2126 and 2127 of the Civil Code on self-help sale shall not apply in the case of delay in take-over of the Goods by the Buyer.



III. Purchase Price

1. The total purchase price of the Goods is **58 000 EUR excluding VAT**. The Seller is the payer of VAT.

2. The purchase price includes all the costs and expenses related to the supply of the Goods, as well as the Seller's profit (in particular customs duties, insurance, installation of the Goods, provision of all legal documents related to the Goods, provision of a full warranty service).

3. The purchase price is agreed as a fixed, highest acceptable and maximum price, covering all the costs and expenses connected with the delivery of the Goods.

4. The Seller takes the responsibility for the fact, that the VAT rate at the time of invoicing is determined in compliance with the applicable laws and regulations.

IV. Payment Terms

1. The payment for the Goods will be made on the basis of a properly issued tax document (invoice), containing all the required data, and due within 30 calendar days from the day of the provable delivery of the invoice to the Buyer. <u>The invoice shall be issued by the Seller no</u> sooner than after the delivery of the Goods, its proper and complete installation as evidenced by a written handover protocol of delivery and installation of the Goods. The due fulfilment of obligations by the Seller specified in the preceding sentence shall be evidenced by a written dated handover protocol signed by both Contracting Parties' authorised persons responsible for technical matters.

2. The invoice issued by the Seller shall include all the tax document data required by the Act No. 235/2004 Coll. on Value Added Tax, as amended, and all the commercial deed data required by Section 435 of the Civil Code, as well as the identification of the Contract, on the basis of which the Goods have been supplied. The Seller's invoice shall be signed by a person authorised to issue the invoice. <u>The invoice issued shall contain the number of this Contract and name and reg. no. of the project.</u>

3. If the invoice issued by the Seller fails to contain any of the obligatory data or if the Seller incorrectly invoices the price or the VAT, the Buyer is entitled to return such invoice to the Seller before the expiration of the maturity period of the invoice for correction, stating the reason for its returning. The Seller shall correct it by issuing a new invoice. The initial maturity period is suspended on the day of sending the incorrect invoice to the Seller, and a new maturity period commences on the day of delivery of a new invoice to the Buyer.

4. The Contracting Parties agree that the obligation to pay the purchase price is fulfilled on the day when the given amount is transferred from the Buyer's account to the Seller's account given above in this Contract.

5. The Seller shall ensure proper and timely fulfilment of financial obligations to its subcontractors, where proper and timely fulfilment is considered to be full payment of invoices issued by subcontractors for performances provided to the Seller to fulfil obligations under this Contract, always no later than 15 calendar days after receiving payment from the Buyer for specific performance (unless the due date of the invoice issued by the subcontractor is sooner). The Seller undertakes to extend the same obligation to other levels of the supply chain and to



oblige its subcontractors to fulfil and extend this obligation to lower levels of the supply chain as well. The Buyer is entitled to request the submission of documents on payments made to subcontractors and of contracts concluded between the Seller and subcontractors. Any failure to fulfil these obligations by the Seller under this provision of the Contract shall be considered to be a material breach of the Contract with the Buyer having the possibility to withdraw from this Contract. In such case, withdrawal from this Contract is effective on the day of delivery of a written notice of withdrawal from the Contract to the other party.

V. Installation

1. As part of the installation of the Goods at the place of delivery, the Seller is obliged to prove, the full functionality and fulfillment of all the parameters of the Goods in accordance with the tender of the Seller, which forms an integral part of the Contract (Annex No. 1 of the Contract).

VI. The Seller's Responsibility for Defects and Warranty

1. The Seller provides a warranty for the quality of the Goods according to Section 2113 et seq. of the Civil Code of 12 months from the day of signing the protocol according to Article IV (1) of this Contract.

2. The Seller guarantees a timely service intervention, i.e. to accept and to detect the defect, and to discuss necessary service interventions with the person authorised to act in technical matters on behalf of the Buyer, during the warranty period no later than 3 working days from the day of the defect notification by the Buyer, namely by a visit by a service technician, the Buyer also allows remote diagnostics, if this is possible due to the nature of the defect. During the warranty period, the respective defects shall be removed within 15 working days at the latest from the day of the defect removal commencement, with the day of the defect removal commencement being the day of the service intervention, unless otherwise agreed in writing by persons authorised to act in technical matters on behalf of the Contracting Parties. The Seller is obliged to remove the respective defects in "the place of delivery and installation". If it is provably technically impossible, the Seller, upon a written approval of the suggested procedure by the person authorised to act in technical matters on behalf of the Buyer, shall sign a protocol to take over "the defective part" of the Goods for repair. The Contracting Parties agree that Section 2110 of the Civil Code shall not apply. Therefore, the Buyer is entitled to withdraw from the Contract for defects or to require the delivery of new Goods irrespective of the fact whether the Buyer is allowed to return the Goods to the Seller or, where possible, to return the Goods in the condition as the Goods were received by the Buyer.

3. The Seller undertakes to perform a full service of the Goods delivered free of charge as provided in this Contract, and to perform regular service inspections prescribed by the manufacturer of the Goods delivered for the entire duration of the warranty period. The costs of performing the full warranty service of the Goods delivered are included in the purchase price.

VII. Contractual Penalties

1. The Contracting Parties hereby agree on contractual penalties in case of contractual obligations violation, as specified in the following paragraphs of the Contract. Neither of the Contracting Parties considers the contractual penalties agreed herein to be inappropriate, taking into account the value of the respective contractual obligations.



2. The Seller undertakes to pay the Buyer a contractual penalty amounting to 0,2 % of the total purchase price in EUR excluding VAT for each commenced day of the delay in the Goods delivery agreed herein within the meaning of Article II (1) of this Contract.

3. The Seller undertakes to pay the Buyer a contractual penalty amounting to 0,1 % of the total purchase price in EUR excluding VAT for each commenced day after the expiration of the time limit to commence the defect removal or to remove the defects during the warranty period in compliance with Article VI of this Contract, for each individual case.

4. The Contracting Parties hereby agree that the provisions of Section of the 2050 Civil Code shall not apply, i.e. that contractual penalties do not offset against the damages, if any. The damages may be demanded separately in full together with the contractual penalty.

5. The contractual penalties invoiced are due within 30 calendar days from the day of delivery of a written invoice to the respective Contracting Party, with the day of payment thereof being the day of transferring the amount of the contractual penalty from the account of the respective Contracting Party to the account to be indicated in the invoice issued in respect of the contractual penalty.

6. The Buyer is entitled to offset the contractual penalties, within the meaning of Section 1982 et seq. of the Civil Code, against any Buyer's accounts receivable from the Seller, including the undue ones, to pay the purchase price under this Contract.

VIII. License Agreement

1. All licenses will be delivered together with the Goods under this Agreement. Software installation and the price of licenses is included in the total purchase price. The Seller is obliged to ensure that all necessary authorizations for the use of the delivered software of the Seller and third parties are transferred to the Buyer as part of the provision of the license for an indefinite period, so that the purpose of this Contract can be fulfilled. The Seller declares that it is authorized to grant the Buyer licenses for the delivered software in accordance with this Contract and that both by granting a license under this Contract and by exercising the license rights of the Buyer in accordance with this Contract, no rights, in particular copyrights of third parties, will be violated. In the event of the exercise of intellectual property rights by a third party, the Seller is obliged to immediately inform the Buyer of such a claim or proceeding.

2. Termination of this Contract for any reason, in any way and by any of the contracting parties, except for withdrawal from the Contract with effect from the beginning, shall not affect any license granted to the Buyer, which shall continue to be retained by the Buyer in full.

3. In the event that the Seller violates any of the above license agreements or it becomes clear that the Seller's statements are untrue, this constitutes a material breach of the obligations under this Contract. Based on the request of the Buyer, the Seller is obliged, without additional costs charged to the Buyer, according to the type of violation

- correct the resulting situation that is in conflict with these license agreements or with legal regulations;

- provide licenses to the extent necessary to fulfill the purpose of this Contract;
- to provide another remedy in order to ensure the purpose of this Contract.



IX. Final Provisions

1. The Seller is a person obliged to cooperate in performing a financial control within the meaning of Section 2 (e) of the Act No. 320/2001 Coll., on Financial Control in Public Administration, as amended. The Seller's subcontractors, participating in the fulfilment of the subject-matter of this Contract, are also subject to this obligation.

2. The Seller undertakes to ensure, within the fulfilment of this Contract, the legal employment of workers and to provide the workers participating in the fulfilment of this Contract with fair and respectable working conditions. Fair and respectable working conditions mean such working conditions that meet at least the minimal standards established by labour and wage rules and regulations. The Seller is obliged to ensure that the requirements of this provision of the Contract are fulfilled by their subcontractors as well. Any failure to fulfil the Seller's obligations under this provision of the Contract is deemed to be a substantial breach of the Contract, resulting in the Buyer having a possibility to withdraw from this Contract. In such case, the withdrawal from this Contract is effective on the day of delivery of a written notice of withdrawal from the Contract to the other Contracting Party.

3. The Buyer reserves the right to publish the content of the concluded Contract.

4. In matters explicitly unregulated by this Contract, this Contract is governed by the Civil Code and Czech laws and regulations.

5. The provisions of this Contract are mutually independent. If any part of an obligation under this Contract is or becomes invalid or unenforceable, such invalidity or unenforceability shall not affect the validity and enforceability of other obligations under this Contract and the Contracting Parties undertake to replace such invalid or unenforceable part of obligation with a new, valid and enforceable part of obligation, the subject of which shall correspond at the best to the subject of the original obligation. If the Contract fails to contain a provision which is justified for the determination of the rights and obligations, the Contracting Parties shall make all the efforts to include such provision in the Contract.

6. The Contracting Parties may amend or supplement this Contract only by means of written amendments numbered in ascending order, expressly declared as amendments to this Contract, and signed by the authorised representatives of the Contracting Parties.

7. The Buyer is entitled in accordance with Section 2001 of the Civil Code to withdraw from this Contract in case of:

7.1 the Seller's delay in the delivery of the Goods exceeding 10 calendar days,

7.2 a failure to observe the technical specifications of the Goods indicated in the Seller's tender,

7.3 the Seller's delay in the commencement of removing the defects exceeding 10 calendar days.

The withdrawal from the Contract shall be made in writing and becomes effective on the day of delivery of a written notice of withdrawal to the other Contracting Party.

8. The Seller is not entitled to cede their rights and obligations resulting from this Contract to a third party without the Buyer's approval.

9. As regards the delivery of correspondence relating to the performance of this Contract sent by the Seller by means of a postal service operator, Section 573 of the Civil Code shall not apply.



10. The Seller acknowledges that this Contract, including all its Annexes, is subject to mandatory disclosure pursuant to the Act No. 340/2015 Coll., on Special Conditions for the Effectiveness of Certain Contracts, the Disclosure of These Contracts and the Register of Contracts, as amended.

11. This Contract shall enter into force on the day it is signed by the last Contracting Party and shall be effective on the day the Buyer discloses this Contract in the Register of Contracts pursuant to the Act No. 340/2015 Coll., on Special Conditions for the Effectiveness of Certain Contracts, the Disclosure of These Contracts and the Register of Contracts, as amended.

12. The Seller is obliged to inform the Buyer if he discovers the international sanctions are appling to him or his subcontrators or to the performance of this Contract.

13. Seller acknowledges, that Buyer is obliged to abide to publicity requirements within structural funds programs, set by European Parliament regulation No. 1303/2013 and publicity rules within Operational Programme Research, Development and Education, on all relevant documents related to the subject of this Contract, in all amendments to this Contract and other documents related to the public contract, from this Contract came up and in this context Seller commits to provide necessary cooperation to the Buyer, that can be fairly demanded.

14. Seller hereby obliges, that all subjects authorized to conduct control of the project, by means of which the subject of this Contract is paid, will be allowed to carry out control of documents related to this subject, during period set by legislation of Czech Republic for their archivation (Act No. 563/1991 Coll., on accountancy, in its effective form and Act No. 235/2004 Coll., on value added tax, as amended). All outcomes of the contractual relations, where Buyer specifies it, must contain publicity features, in scope of headers of this Contract, unless specified otherwise by Buyer. EU logo, logo of Operational Programme Research, Development and Education (hereinafter reffered to as "OP RDE"), as requested by Buyer. Buyer is obliged to provide documents containing correct form of every logo.

15. Seller is obliged to keep all documentation related to subject of this Contract in accordance with the OP RDE rules for at least 2 years from the date of presenting financial statements of OP RDE according to Sect. 140 of European Parliament and Council regulation No. 1303/2013, ie at least until 31. 12. 2033, unless Czech legal system specifies longer period. Managing authority of OP RDE, or by it authorized subjects (or other control subjects according to actual legislation) shall have access to these documents upon request.

16. This Contract is made in electronic form.



 The following Annex forms an integral part of this Contract: Annex 1 – Seller's tender no. Q2023-04-12A dated April 12th 2023

Olomouc dated 26.04.2023

Place Prague, dated 25.04.2023

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prof. MUDr. Martin Procházka, Ph.D. Rector of Palacký University Olomouc Ing. Pavel Choc PE systems, s.r.o. Managing Director



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Quotation no. Q2023-04-12A

Prepared by:	
Date:	12/04/2023
Valid by:	30/09/2023

IMTM/UPOL – Software for image analysis and big data

P/N	qty	item description	unit price (w/o VAT)	price (w/o VAT)	
Software Licenses					
INF02358	5	Signals ImageArtist [™] 1 user, 1 year subscription	1 900 EUR	9 500 EUR	
PerkinElmer Signals Image Artist software provides a database for image storage and enabling software for sophisticated image analysis. Subscription, includes Standard Support. Server hardware and operating system are excluded.				are for sophisticated	
INF02359	8	Signals ImageArtist [™] 1 user, 1 year subscription	1 900 EUR	15 200 EUR	
PerkinElmer Signals Image Artist software provides a database for image storage and enabling software for sophisticated image analysis for additional users. Subscription, includes Standard Support. Server hardware and operating system are excluded.					
INF02033-B	5	Signals VitroVivo™ 1 user, 1 year subscription	2 950 EUR	14 750 EUR	
		PerkinElmer Signals VitroVivo provides scientists a highly visual and interactive environment to create data processing workflows from data import, visualization, analysis, to results saving and publication. Includes licenses for the first five users. Includes licenses for TIBCO Spotfire (Analyst, Server, Statistics Services) for use with Signals VitroVivo. Named User. Subscription, includes Standard Support.			
Services					
INF02360	1	Signals Image Artist Installation & Training	8 200 EUR	8 200 EUR	
		w/o configuration to use an existing local compute cluster.			
INF00004	1	Fixed Price Project - Implementation	17 800 EUR	17 800 EUR	
		Vendor to provide professional services to implement the software on the existing local computer cluster of contractor authority.			
			SUBTOTAL:	65 450 EUR	
			DISCOUNT:	- 7 450 EUR	
			TOTAL:	58 000 EUR	

SIGNALS IMAGE ARTIST

Next-Generation HCS Image Management

Signals Image Artist™ is the latest image analysis and management platform for high-content screening (HCS) and cell imaging data. Quickly upload, process, analyze, share, and store vast volumes of data generated by high-content screening and cellular imaging. That data includes live-cell imaging, 3D imaging, phenotypic screening, and cell painting – so you can get answers sooner.

As the only commercially available platform that provides universal high-volume image data storage and analysis, Signals Image Artist supports image data from all major high-content screening and cellular imaging systems. Using high-performance computing combined with object storage, the system provides a multiuser solution that's scalable to expand with your lab's changing needs.

Key Features

- Fast image data processing and image analysis powered by high-performance computing
- Easy-to-use assay building blocks with integrated AI with improved 3D imaging analysis capabilities
- A central location to store all image data with associated instrument metadata
- Compatible with all major HCS and cell imaging systems with an expanded range, including the Nexcelom from PerkinElmer Celigo[®] image cytometer
- Multiuser solution that can support your entire lab
- Scalable data storage that can expand over time
- Cloud and wide range of on-premises options now with AWS S3 support
- Seamless integration with our Opera Phenix® Plus and Operetta® CLS[™] HCS systems
- Easily transfer data to Signals VitroVivo[™] for profiling image data, hit selection, and more

AT A GLANCE

With Signals Image Artist, researchers working in HCS and cellular imaging can quickly process, analyze, share, and store all their image data in one place.

Faster Insights: Process, access, and analyze the image data, quicker and easier than ever before.

Scalable Storage: Industry-standard object storage provides a multiuser solution that can expand with your needs.

Powerful Analysis: Easy-to-use building blocks allow for advanced analysis.

READ MORE



For HCS and Cellular Imaging Data

HCS and cellular imaging experiments generate tons of image data that need to be managed effectively. This data volume continues to increase as technology enables new, more advanced applications such as phenotypic screening, cell painting, 3D, and organoid imaging.

To help you maximize all this valuable data, Signals Image Artist offers a single, central platform that brings together cell imaging data from a wide range of different sources, enabling you to store, share, analyze, and reanalyze seamlessly.

With cloud deployment options (such as AWS S3), your IT team also have just one platform and installation to manage and store research image data which can easily be scaled. They can also have peace of mind with enhanced security for cloud deployments.

Image Analysis Designed for Biologists

Whether you're performing phenotypic screening, cell painting, 3D imaging, live-cell imaging, or more routine assays, Signals Image Artist is designed to make it easy for biologists to perform sophisticated image analysis – even without coding experience.

The software platform's image analysis building blocks encapsulate many years of knowledge and expertise in cellular imaging and analysis, so that you can focus on the biology. By simply adding together building blocks such as "Find Nuclei" and "Calculate Cell Painting Properties", users can quickly create image analysis protocols in just a few simple steps.

Signals Image Artist has been further optimized for 3D cell applications, with improved segmentation and analysis capabilities – so you can generate more accurate results than ever.

Furthermore, built-in AI and machine-learning technologies allow operators to train the software to develop image analysis algorithms – you don't need an expert to do it for you. Using a learnby-example approach, segmented images can be classified with ease in a few clicks.



This is all powered by high performance computing, so you can get answers faster.

From Images to Insights

With Signals Image Artist, it's not just about storing beautiful images. It's about the rich information within those image data sets. Extracting deeper insights moves your research forward, whether that's understanding a disease or finding the next breakthrough treatment.

Using the platform's advanced analytics capabilities, you can perform a range of data analysis tasks, including:

- Measure complex and subtle phenotypic responses
- Compare multiple samples, plates, or batches to quality check your results
- Measure kinetics including cell tracking, changes in cell properties, and assessing cell movement
- Cell-painting image analysis and quantification using the dedicated cell-painting building block
- 3D image segmentation and volumetric parameter calculations

For further statistical analysis, you can transfer data into Signals VitroVivo to perform screening data analysis and validation, QC analyses, calculate reliable normalization, multivariate hit stratification, dose response curves, and drug response profiling.



Figure 2. Phenotypic features can be extracted from images using the Calculate Cell Painting Properties building block.

Figure 1. Measure morphologies and volumes in 3D and count nuclei within spheroids. www.perkinelmer.com

HCS Workflow

We offer solutions across the high-content screening workflow, from sample preparation to imaging and analysis.



About Signals Research Suite

Signals Image Artist is part of our Signals Research suite that makes everyday assay data analysis more efficient and repeatable. Uncover unexpected insights, advance collaborations, unify data across multiple sources, and scale up – without IT overhead and resources.

Our Signals VitroVivo brings automated workflows to TIBCO Spotfire[®] and supports a broad spectrum of experiment types, regardless of the assay stage.

To learn more about our Signals Image Artist software, please visit www.perkinelmer.com



www.perkinelmer.com



For a complete listing of our global offices, visit www.perkinelmer.com/ContactUs

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PERKINELMER SIGNALS VITROVIVO



AT A GLANCE Signals[™] VitroVivo: All Your Data in One Platform

From assay development and data management, to in vitro and in vivo analysis, Signals VitroVivo allows scientists to quickly apply experimentappropriate data transformations and statistical analyses, then graphically output them to impactful data visualizations to interpret the results.

But it does not end there, Signals VitroVivo includes Signals Inventa allowing data publication, data staging, and data discovery. See the Signals Inventa data sheet for more information.

READ MORE

Spend less time and money generating results and make decisions faster with Signals VitroVivo

In the lengthy, complex and costly process of drug discovery, technologies to screen compounds must empower scientists to create a sufficient quantity and quality of leads. Often, screening software is limiting because one package does not do it all: data processing, statistical analysis, and informative graphics along with desired export options.

To better achieve their goals, scientists require an accessible and intuitive solution that lets them analyze and review data from multiple outputs within a single platform. By facilitating the comparison of data from different assay types, scientists then have confidence that those assays are giving accurate results, leading to substantial improvements in the drug discovery process, and ultimately health outcomes.

PerkinElmer Signals VitroVivo is an intuitive, configurable flexible screening workflow processor coupled with the unparalleled data visualization and analysis capabilities of TIBCO Spotfire[®]. Once a screening workflow is set up, raw data from the instruments can be imported directly and processed in a consistent manner. Signals VitroVivo contains modular apps specifically designed for key drug discovery functions:

- Basic Screening (HTS) (Figure 1)
- High Content Screening (HCS) (Figure 2)
- Surface Plasmon Resonance (SPR) (Figure 3)
- In Vivo (Figure 4)

Benefits

- One software package for multiple instruments and assay types saves time and increases data accuracy
- Workflow templates: once set up, can be used multiple times
- Graphics driven by TIBCO
 Spotfire enable meaningful
 visualization of data
- Standard Statistical Analysis driven by TIBCO Spotfire provides cluster analyses and unsupervised machine learning
- Simplified reporting with easy export into Powerpoint, Excel and PDF format



Signals VitroVivo Apps

The PerkinElmer Signals VitroVivo solution can import raw or processed data from most of the widely performed assay platforms – plate reader, high content reader, surface plasmon resonance, and more. The innovative apps concept allows scientists to create a workflow from data import and analysis, to reporting, for assay development and execution, without the reliance on software developers. Built on the TIBCO Spotfire platform, the PerkinElmer Signals VitroVivo solution offers unparalleled capability to analyze and visualize high-content/high-throughput assays that aligns with the life sciences research moving towards multiplexing and big data screens.

Signals VitroVivo Apps bring direct instrument, experiment type and screening analysis functionality to TIBCO Spotfire. The results are published to a data lake while maintaining the connection to the original analysis. These results can be searched and leveraged for additional insights.



Signals VitroVivo – Basic Screening



Figure 1. **Curve Fitting App** – Visualizations are interactive such that selection of a data point of interest highlights it in the other visualizations. Data points can be automatically or manually excluded and curve parameters have the option to be bounded or fixed.

Signals VitroVivo - High Content Screening (HCS)



Figure 2. HCS SOM Map – Machine learning to group samples based on their phenotypic profile.



Signals VitroVivo – Surface Plasmon Resonance (SPR)

Figure 3. SPR Hit Selection App – Interactive isoaffinity plot allows hits of interest to be selected for associated sensorgram inspection. Hits can be filtered based on ka, kd, KD or Rmax values.

Conclusion

With the large volumes of data generated by high-throughput and phenotypic screening, you need software solutions that can quickly apply experiment appropriate data transformations and statistical analyses and then graphically output into impactful data visualizations that help you interpret the results to make informed, confident decisions. Signals VitroVivo delivers a scalable platform that make it easy to access and manage all relevant data for enhanced speed and efficiency in drug discovery.

PerkinElmer, Inc. 940 Winter Street Waltham, MA 02451 USA

perkinelmerinformatics.com

For a complete listing of our global offices, visit perkinelmerinformatics.com/company/contact/

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Signals VitroVivo - In Vivo



Figure 4. **Sequence of Events App** – Novel view of in vivo experiment as it progresses. Capture the different event data and observations for each time point as the study progresses.

