Table of technical parameters

„HTS robotic station“

Device description:

Delivery and installation of new automated station for High Throughput Screenings of chemical libraries. A station must allow the unattended processing of a wide variety of biological assays and applications using SBS-compatible microtiter plates. Tasks include but are not limited to biochemical and cellular assays in 96/384/1536-well plate formats.

The supplier HighRes Biosolutions Inc. honestly declares that the subject of performance offered has the technical characteristics and meets the technical parameters specified in Article II of the Contract and in Article 1.2 of the Tender Documentation “HTS robotic systems ” when specifying below technical parameters of the subject of performance offered by him:

Manufacturer:	HighRes Biosolutions Inc.
Type:	Acell

1.1 Technical parameters for HTS Robot/Robots:

Parameter description:	**Parameter fulfilled:**	**Parameter value of the subject of performance offered by the participant:**
Automatic labware based movements must be provided by high-speed robotic arm/arms – plate movement from one device to another (in same orientation).	YES	X
Vendor must provide a PC workstation capable to operate robotic station in the terms of hardware and software requirements.	YES	X
Sufficient number of robotic arms must be proposed to integrate the required peripherals.	YES	Number of robotic arms: Two arms on two 2m rails and one arm on detachable cart
If multiple robotic arms are proposed, the vendor must include and describe a mechanism for automatically transporting labware between those	YES	X

robots without operator intervention.		
Robot must include collision detection to prevent damage to instrumentation or robot in the event of error.	YES	X
Robot must include a plate gripper that is compatible with all common 96, 384, 1536 SBS microplates and served instruments.	YES	X
The gripper must incorporate plate/part presence sensing.	YES	X
Robot performs 1D and 2D barcode scanning as part of moves.	YES	X
Robot performs high-speed automated lidding/delidding.	YES	X
System has an automated lidding/delidding function to hold a minimum of 14 lids in parallel across the system	YES	Lid storage capacity: 14 positions, at 7 - 2 position LidValets
System has an automated dry environment storage hotel (minimizing air humidity) for each integrated instrument capable of acoustic transfer of DMSO solutions.	YES	Number of dry environment storage hotels: 3 hotels with 4 positions each
System has an automated random - access storage hotels to hold a minimum of 20 microplates in parallel across the system	YES	Microplate storage capacity: 20, 3x4 position hotels and 1x8 position hotel
Robot must be able to automatically load/unload Labcyte Echo nest inserts based upon active plate type	YES	X
Robot must be able to reorient SBS microtiter plates when needed. The reorientation needs to be automatic, without human intervention	YES	X
The vendor must indicate the limits of the access of the robotic arm in the system images submitted for this proposal for the future expansion of the system.	YES	X

1.2 Technical parameters for HTS Peripheral Device Access:

Parameter description:	**Parameter fulfilled:**	**Parameter value of the subject of performance offered by the participant:**
It must be possible to rotate or slide devices that are integrated to the system into a position for ergonomic manual use, while the rest of the system is in use for automation	YES	X
The access mechanism must ensure positional accuracy upon re-positioning of the device to automation position (operator not required to reteach robot), and also to prevent the robot from accessing any instrument when it is in the offline/manual state.	YES	X

1.3 Technical parameters for HTS Device Exchange Mechanism:

Parameter description:	**Parameter fulfilled:**	**Parameter value of the subject of performance offered by the participant:**
Robot system must have a flexible design to allow the following: • Day to day exchange of devices to permit different processes to be run on the system. • Exchange of failed devices ("hot swap") to permit processing to continue with minimum down-time in the middle of a run. • Adjustment of device location to optimize system throughput. • Incorporation of additional devices in the future to match expanded processing requirements or new screening formats.	YES	X

• Incorporation of new devices in the future to integrate novel technologies.		
It must be possible to replace a device without requiring the system operator to perform a robot re-teaching.	YES	X
The exchange mechanism must allow for automatic connect and disconnect of services to the device (power, gases, data)	YE	X
The exchange mechanism must integrate with the scheduling software to allow automatic identification of devices that have been swapped (initialize new device and confirm physical location on system).	YES	X
The exchange mechanism must be compatible with devices that weigh up to 900 kilograms	YES	X
The device exchange process (remove one device, add another) must take a maximum of 60 seconds, and require a maximum of one system operator to perform (no vendor employees required)	YES	X
The vendor must integrate the following third-party devices owned by the buyer and located at IMG, Prague, Czech Republic: • 2x Echo 550 (BECKMAN COULTER), placed on turntable for easy access to the instrument • 1x EnVision Multimode Plate Reader (PerkinElmer), placed on turntable for easy access to the instrument 1x JANUS MINI	YES	X

Automated Workstation • 1x Plateloc (Agilent), placed on a slide for easy access to the instrument		
The vendor must integrate the following third-party devices which will be tendered by buyer along with this tender: • 2x HTS multimode plate readers, placed on turntable for easy access to the instrument • 1x HTS instrument for acoustic dispensing of samples from/to microtiter plates, placed on turntable for easy access to the instrument • 1x HTS Mass spectrometry analyser based on acoustic transfer of samples	YES	X

1.4 Technical parameters for HTS Station Software:

Parameter description:	**Parameter fulfilled:**	**Parameter value of the subject of performance offered by the participant:**
The software must be capable to operate robotic station as a whole unit, third party instruments included even with future updates.	YES	X
The software must provide a graphical user interface to allow the definition of a protocol, including its active plates, to be modified in the middle of a live order. This must include altering the remaining steps for an active plate, cancelling active or planned plates, changing protocol resource assignment	YES	X

and resource parameters.		
Scheduler must have a graphical Gantt chart simulation tool, allowing for planning of sample and device utilization.	YES	X
A single instance of the software must allow protocol design, order creation, and order simulation while the system is running other orders.	YES	X
The software must have order interleaving and scheduling and must be able to run multiple orders in parallel, while supporting injection of new orders with time or event-based control.	YES	X
The software must offer the ability to remove a device from the system during a run to use in stand-alone mode and then, once action is complete, return the device back into active use on the platform. This action must not interrupt the method.	YES	X
The software must be able to fully recover samples in an ongoing run from a catastrophic failure (e.g. a power outage).	YES	X
The software must include a scripting API, with wide access to plate, system and process variables, and easily accessible embedded scripting environment that allows users to customize the behavior of their automated protocols. The scripting API must be completely open to the user.	YES	X
Able to configure system to automatically respond to error conditions, including definition of	YES	X

which steps to follow for recovery, plus automated use of user-scripts to resolve failures		
The software must have the ability to resolve scheduling deadlocks automatically during a run, without user intervention.	YES	X
The software must allow users to pause a current order by halting the introduction of new plates, but running already-started plates to completion.	YES	X
The software must be able to fully recover samples in an ongoing run from a catastrophic failure (including a full power loss).	YES	X
The software must allow users to place orders for processing any number of plates, using any type of labware, against a single protocol without requiring the protocol to be edited.	YES	X
The software must provide a method for automatically scanning barcodes of plates in storage for an order, updating their physical locations and barcodes, and informing a user if ordered barcodes are missing.	YES	X
The software must support a connectivity to the local LIMS; the software must provide an open web services messaging platform that can be used by the user to directly submit orders and cherry pick lists into the software for processing	YES	X
The software will be updated free of charge with the latest version of the operating software at the end of 2021.	YES	X

1.5 Technical parameters for Integration of Automated Low Temperature Freezer for compound storage:

Parameter description:	**Parameter fulfilled:**	**Parameter value of the subject of performance offered by the participant:**
Minimum one device instance. The bidder must propose the number of devices consistent with overall throughput and capacity requirements.	YES	number of devices: 1
Device(s) is "robot integration-ready" in terms of hardware and software	YES	X
Internal storage conditions: It must be possible to control temperature in a minimum range of 10°C to -20°C It must be possible to maintain a low humidity environment below 10% in the whole range of temperatures.	YES	Internal storage conditions: 25°C to -20°C Below 10% RH IMG will need to provide a dedicated, separate dry air source with following configuration: -80'C dewpoint dry air at 2.0 SCFM" Humidity is dependant of quality of air supply and also ambient lab conditions
It must be possible to store a minimum of 650 heat sealed 384-well plates (sample height 14.4mm) or 900 heat sealed 1536-well plates (Sample Height 11mm) in one device in random access stackers	YES	plate capacity: of 672 heat sealed 384-well plates (sample height 14.4mm) or 924 heat sealed 1536-well plates (Sample Height 11mm)
Must have automatic plate handling system (lift system and plate-handler or comparable system).	YES	
Plate storage/retrieval time should be a maximum of 30 seconds.	YES	Plate storage/retrieval time: <20sec

Rapid, self-inventorying barcode feature to integrate with scheduling software. The time taken to inventory of 650 heat sealed 384-well plates (sample height 14.4mm) or 900 heat sealed 1536-well plates (Sample Height 11mm) should be no greater than 10 minutes.	YES	Inventory time: <9min
Removable stackers to permit swift exchange of processed microplates with fresh microplates.	YES	X
Barcoded stackers to allow automatic identification of stacker pitch	YES	X

1.6 Technical parameters for Integration of Automated Incubators:

Parameter description:	**Parameter fulfilled:**	**Parameter value of the subject of performance offered by the participant:**
Minimum two devices instance. The bidder must propose the number of devices consistent with overall throughput and capacity requirements.	YES	number of devices: 2
Device(s) is “robot integration-ready” in terms of hardware and software	YES	X
Internal storage conditions: It must be possible to control temperature in a minimum range of 4°C to 80°C It must be possible to maintain a high humidity environment, with a minimum controlled relative humidity of 95%	YES	Internal storage conditions: 4°C to 100°C Up to 95% RH
It must be possible to store a minimum of 320 heat sealed 384-well plates (sample height 14.4mm) or 450 heat sealed 1536-well plates (Sample Height	YES	plate capacity: 336 heat sealed 384-well plates (sample height 14.4mm) or 462 heat sealed 1536-

11mm) in one device in random access stackers		well plates (Sample Height 11mm)
Must have automatic plate handling system (lift system and plate-handler or comparable system).	YES	X
Plate storage/retrieval time should be a maximum of 30 seconds.	YES	Plate storage/retrieval time: < 20 seconds
Rapid, self-inventorying barcode feature to integrate with scheduling software. The time taken to inventory of 320 heat sealed 384-well plates (sample height 14.4mm) or 450 heat sealed 1536-well plates (Sample Height 11mm) should be no greater than 10 minutes.	YES / NO	Inventory time: <5 min
Removable stackers to permit swift exchange of processed SBS microplates with fresh SBS microplates.	YES	X
Barcoded stackers to allow automatic identification of stacker pitch	YES	X
Instrument must support self-sterilization	YES	X

1.7 Technical parameters for Integration of Automated Plate Shakers:

Parameter description:	**Parameter fulfilled:**	**Parameter value of the subject of performance offered by the participant:**
Minimum of five devices. The bidder must propose the number of devices consistent with overall throughput and capacity requirements.	YES	number of devices: 5
Hardware integration must be compatible with previously described peripheral device access requirement.	YES	X
Device(s) is “robot integration-ready” in	YES	X

terms of hardware and software		
Device must be compatible with microplates in 96, 384 and 1536 well format	YES	X
Device must have plate locking mechanism	YES	X
Device must have sensored zero-position	YES	X
Device must offer variable mixing speeds from 200 up to 2,000 rpm at minimum	YES	mixing speed range: 200-3000rpm

1.8 Technical parameters for Integration of Automated Heat Sealer with ability to apply gas permeable heat seals on microplates:

Parameter description:	**Parameter fulfilled:**	**Parameter value of the subject of performance offered by the participant:**
The bidder must propose the number of devices consistent with overall throughput and capacity requirements.	YES	number of devices: 1 new sealer (plus the sealer listed as existing devices (PlateLoc)
Hardware integration must be compatible with previously described peripheral device access requirement.	YES	X
Device is “robot integration-ready” in terms of hardware and software	YES	X
Device must be compatible with specific polymer (microplate) substrates such as polypropylene, polystyrene and COC in 96, 384 and 1536 well format	YES	X
Device must be able to apply gas permeable heat seals on polystyrene microplates used for cell cultures	YES	X
Device must be able to apply DMSO resistant heat seals on microplates with no deterioration of the seal quality for 6 months at minimum when stored at -20°C.	YES	x

Seal plate height from 9 to 48mm high	YES	X
Minimum seal temperature range from 100 to 195 degrees of Celsius	YES	sealing temperature range (°C): 100 to 195 degrees of Celsius
Minimum sealing cycle time of less than 15 sec	YES	Sealing cycle time (s): less than 15 sec
Automatic plate presence sensing	YES	X
Foil presence sensing	YES	X
All functions of device must be operable without need of compressed air	YES	X
Device must be installed on a slide table to ensure easy accessibility for maintenance and for stand-alone usage.	YES	X

1.9 Technical parameters for Integration of Automated Plate Peeler:

Parameter description:	**Parameter fulfilled:**	**Parameter value of the subject of performance offered by the participant:**
Minimum two devices instance. The bidder must propose the number of devices consistent with overall throughput and capacity requirements.	YES	number of devices: 2
Hardware integration must be compatible with previously described peripheral device access requirement.	YES	X
Device(s) is “robot integration-ready” in terms of hardware and software	YES	X
Device must be compatible with microplates routinely used in HTS such as polypropylene, polystyrene and COC microplates and 96, 384 and 1536 well format.	YES	X
Device must be capable to remove 180 plate seals per hour at minimum in	YES	Capacity of seal removals per hour: 180

manual mode		
Peeler must be able to remove different seals, i.e. aluminum, plastic, DMSO resistant, gas permeable seals, heat and pressure applied seals.	YES	X
Device must be capable to store at least 300 removed seals without user intervention.	YES	Capacity of removed seals per roll/cartridge: at least 300
Device must be installed on a turntable or slide to ensure easy accessibility for maintenance and for stand-alone usage.	YES	X

1.10 Technical parameters for Integration of Automated Centrifuge for Plates:

Parameter description:	**Parameter fulfilled:**	**Parameter value of the subject of performance offered by the participant:**
Minimum two devices. The bidder must propose the number of devices consistent with overall throughput and capacity requirements.	YES	number of devices: 2
Hardware integration must be compatible with previously described peripheral device access requirement.	YES	X
Device(s) is “robot integration-ready” in terms of hardware and software	YES	X
Device must support SBS microplates in 96, 384 and 1536 well format with height up to 48mm	YES	X
It must be possible to load a microplate from the top and side of the plate nest.	YES	X
Device must offer variable spinning speeds from 200 up to 2,500 rpm at minimum	YES	Spinning speed range: 200 up to 4700 rpm

1.11 Technical parameters for Integration of Ambient, High-Capacity Storage for Microtiter Plates:

Parameter description:	**Parameter fulfilled:**	**Parameter value of the subject of performance offered by the participant:**
Minimum one device. The bidder must propose the number of devices consistent with overall throughput and capacity requirements.	YES	number of devices: 1
Hardware integration must be compatible with previously described peripheral device access requirement.	YES	X
Device(s) is “robot integration-ready” in terms of hardware and software	YES	X
Device must store SBS microplates in 96, 384 and 1536 well format	YES	X
Device must store different labware such as tipboxes	YES	X
It must be possible to store a minimum of 700 384-well plates (Sample Height 14.4mm) or 1000 1536-well plates (Sample Height 11mm) in one storage.	YES	plate capacity: 770 384-well plates (Sample Height 14.4mm) or 1120 1536-well plates (Sample Height 11mm)
Must have automatic plate handling system (lift system and plate-handler or comparable system).	YES	X
Plate storage/retrieval time should be a maximum of 15 seconds.	YES	Plate storage/retrieval time: <12 seconds
Device must have self-inventorying barcode feature to integrate with scheduling software ordering process. The time taken to inventory 700 384 well plates (Sample Height 14.4mm) should be no greater than 5 minutes or time taken to inventory 1000 1536 well plates (Sample Height 11mm) should be no greater than 8 minutes	YES	Time for self inventory: <4minutes
Removable stackers to permit swift	YES	X

exchange of processed labware with fresh labware		

1.12 Technical parameters for Integration of Ambient, Random Access Stackers For Microtiter Plates:

Parameter description:	**Parameter fulfilled:**	**Parameter value of the subject of performance offered by the participant:**
Minimum one device. The bidder must propose the number of devices consistent with overall throughput and capacity requirements.	YES	number of devices:1
Hardware integration must be compatible with previously described peripheral device access requirement.	YES	X
It must be possible to swap the device(s) on and off the robotic system using the previously described device-exchange mechanism.	YES	X
Device(s) is “robot integration-ready” in terms of hardware and software	YES	X
Device must be compatible with SBS microplates in 96, 384 and 1536 well format	YES	X
It must be possible to store a minimum of 40 plates (Sample Height up to 30mm).	YES	plate capacity: 48
Must allow for random access to any position in the storage.	YES	X
Plate storage/retrieval time should be a maximum of 15 seconds.	YES	Plate storage/retrieval time: < 15 seconds robot access time
Removable stackers to permit swift exchange of processed labware with fresh labware	YES	X

1.13 Technical parameters for Integration of Automated Plate Washer:

Parameter description:	**Parameter fulfilled:**	**Parameter value of the subject of performance offered by the participant:**
Minimum one device. The bidder must propose the number of devices consistent with overall throughput and capacity requirements.	YES	number of devices: 1
Hardware integration must be compatible with previously described peripheral device access requirement.	YES	X
It must be possible to swap the device(s) on and off the robot system using the previously described device-exchange mechanism.	YES	X
Device(s) is “robot integration-ready” in terms of hardware and software	YES	X
Device must be compatible with SBS microplates in 96, 384 and 1536 well format	YES	X
Liquid evacuation must be done by centrifugation	YES	X
Device must dispense to 96, 384 and 1536 well plates with dedicated heads with 8, 16 and 32 pins.	YES	X
liquid evacuation with reproducible residual volume less than 5.5ul per well	YES	Residual volume per well: Specified with less than 5.5µl
Device must be compatible with magnetic bead-based purification protocols.	YES	X
Washer must support at least 7 inputs for different reagents.	YES	Number of inputs: 7
Washer must have tolerance for weight difference between active plate and	YES	Tolerance for weight difference between active plate and balance

balance plate in dry condition at least 15g at 3000 rpm.		plate in dry condition at 3000 RPM: at least 15g

1.14 Technical parameters for Integration of Automated Plate Weigh:

Parameter description:	**Parameter fulfilled:**	**Parameter value of the subject of performance offered by the participant:**
Minimum one device. The bidder must account for the number of devices consistent with overall throughput and capacity requirements.	YES	number of devices: 1
Hardware integration must be compatible with previously described peripheral device access requirement.	YES	X
It must be possible to swap the device(s) on and off the robot system using the previously described device-exchange mechanism.	YES	X
Device(s) is “robot integration-ready” in terms of hardware and software	YES	X
Device must be compatible with SBS microplates in 96, 384 and 1536 well format	YES	X
Device must be able to measure weight of microplate with precision +/- 1 mg	YES	X

1.15 Technical parameters for Integration of Automated Barcode printer:

Parameter description:	**Parameter fulfilled:**	**Parameter value of the subject of performance offered by the participant:**
The bidder must propose the number of devices consistent with overall throughput and capacity requirements.	YES	number of devices: 1
Hardware and software integration must be compatible with previously	YES	X

described peripheral device access requirement.		
Device(s) is “robot integration-ready” in terms of hardware and software	YES	X
Device must be compatible with SBS microplates in 96, 384 and 1536 well format	YES	X
Device must support printing using all common CODE formats including code 128, Code 39 (full ASCII).	YES	X
Device can print range of standard barcodes including 1D and 2D (Data Matrix)	YES	X
Device must print in resolution 500 dpi at least	YES	X
Device must label plates on any of four sides.	YES	X
Device Operating Environment must be within range: Temperature: 15 degrees C to 40 degrees C Humidity: 20% to 70% (non-condensing)	YES	Operating Environment range: Temperature: 10 degrees C to 40 degrees C Humidity: 20% to 80%
Labeling rate must be 5 sec per label at minimum in manual mode	YES	Labeling rate (sec per label): 4 seconds

1.16 Technical parameters for Integration of Automated Bulk Reagent Dispensers:

Parameter description:	**Parameter fulfilled:**	**Parameter value of the subject of performance offered by the participant:**
Minimum two devices. The bidder must propose the number of devices consistent with overall throughput and capacity requirements.	YES	number of devices: 2
Hardware and software integration must be compatible with previously described peripheral device access	YES	X

requirement.		
It must be possible to swap the device(s) on and off the robotic system using the previously described device-exchange mechanism.	YES	X
Device(s) is “robot integration-ready” in terms of hardware and software	YES	X
Device must be compatible with SBS microplates in 96, 384 and 1536 well format	YES	X
Device supports dispensing from at least 5 independent sources, non-contact dispensing compatible with all common 96, 384, 1536 and 3456-well plates.	YES	X
Device uses no consumables.	YES	X
The lowest dispensing volume must be < 50nl.	YES	Minimal dispensing volume: <50nl
Dispensing accuracy for 100 nl < CV 2%.	YES	Dispensing accuracy for 100 nl: <2%
Dispensing precision ≤ ±1.5 %	YES	Dispensing precision: ≤ ±1.5 % for >1µl volumes
System throughput: filling 1536 well plate with 500 nl to each well takes < 40s	YES	Dispensing speed of 500 nl to 1536 well plate: < 40sec
Device must support cherry picking and serial dilution tasks.	YES	X
Device must support liquid dispensing o the wells of all common 96, 384, 3456-well plates, directly or under angle to eliminate air bubbles.	YES	X
All software for full functionality/applications must be included	YES	X

1.17 Technical parameters for Fully Automated, Detachable Module For Automated Reagent Dispensing:

Parameter description:	**Parameter fulfilled:**	**Parameter value of the subject of performance offered by the participant:**
Device must operate as a part of HTS automated station and can be detached from the main station, moved to different place, and operated as an independent workstation.	YES	X
Device must be recognized automatically once plugged into a system and without need to re-teach the robotic arm or inform the system or scheduling software.	YES	X
Vendor must provide a PC workstation capable to operate the independent workstation and automate processes.	YES	X
Robot must include collision detection to prevent damage to instrumentation or robot in the event of error.	YES	X
Sufficient number of robotic arms must be proposed to integrate the required peripherals.	YES	Number of robotic arms: 1
Robot must include a plate gripper that is compatible with all common 96, 384, 1536 SBS microplates and served instruments.	YES	X
The gripper must incorporate plate/part presence sensing.	YES	X
Robot performs 1D and 2D barcode scanning as part of moves.	YES	X
The access mechanism must ensure positional accuracy upon re-positioning of the device to automation position (operator not required to reteach robot), and also to prevent the robot	YES	X

from accessing any instrument when it is in the offline/manual state.		
It must be possible to replace a device without requiring the system operator to perform a robot re-teaching.	YES	X
Device must be operated from the main HTS station by scheduling software or, in the independent mode, by the same software from the local operating PC.	YES	X
Vendor must integrate the following third-party devices: 1.7 Automated Plate Shaker 1.10 Automated Centrifuge 1.12 Ambient, Random Access Stackers For Microtiter Plates 1.13 Automated Plate Washer 1.14 Automated Plate Weigh 1.16 Automated Bulk Reagent Dispensers	YES	X
Device must allow to use devices in stand-alone mode while rest of the cart is connected to the HTS system	YES	X

1.18 Installation and training for HTS station:

Vendor must secure the installation of the HTS station at customers´ premises in Prague, Czech Republic.	YES	X
Training for the operation and maintenance of the system must be provided on-site by experienced and qualified experts in duration of at least 2 days for at least 3 operators.	YES	Training provided: 2 days for at least 3 operators

Within the guarantee period, the Seller obliges to start rectifying the defect within maximum 24 hours after the Purchaser announced the defect, unless the Contractual Parties agree otherwise. The Seller obliges to rectify the defect announced by the Purchaser free of charge maximum within 5 days from the day when the Purchaser announced the defect to the Seller unless the Contractual Parties agree otherwise.	YES	X

1.19 Site acceptance test (SAT):

To demonstrate the functionality of the HTS station, 2 methods described in the attached Excel file (Workflow HTS.xlsx) will be run and must be completed without interruption. These methods will be run again to demonstrate dynamic scheduling of the system. During second run, one of the devices which are available in two or three instances will be removed from the system for offline use and methods must be completed without interruption. To demonstrate the resilience to errors, methods will be run for the third time, during which a catastrophic failure (e.g. a power outage) or a single device failure will be produced or simulated, and system must recover all samples and complete methods.

The Contracting Authority warns the Participants that in the event the offered subject of performance does not meet the above-mentioned technical characteristics and technical parameters (i.e. the Participant answers "NO" in the *Parameter fulfilled* column). Such offer does not meet the desired conditions and requirements of the contracting authority and will be excluded.

Beverly, June 14st 2021	
	_____ Signature: [redacted] HighRes Biosolutions Inc., Cherry Hill Drive 102, MA 01915, USA