

120362-2026 - Direct award preannouncement

Finland – Laboratory, optical and precision equipments (excl. glasses) – High-throughput microelectrode array (MEA) and impedance equipment

OJ S 35/2026 19/02/2026

Voluntary ex-ante transparency notice

Supplies

1. Buyer

1.1. Buyer

Official name: University of Helsinki

Email: hankinnat@helsinki.fi

Legal type of the buyer: Body governed by public law

Activity of the contracting authority: Education

2. Procedure

2.1. Procedure

Title: High-throughput microelectrode array (MEA) and impedance equipment

Description: Microelectrode array (MEA) systems are novel tools in electrophysiology that will help the basic and preclinical research on brain and cardiac diseases with a goal to efficiently translate preclinical research findings into efficient treatment, prevention and diagnosis.

Electrophysiological techniques allow comprehensive understanding of the biological basis of functioning of these cell types in health and in pathological conditions. MEA technology is one of the core methods to study e.g. electrophysiological characteristics of neuronal and cardiac cells and their function both in normal and diseased conditions. High-throughput MEA instruments allow also drug discovery for neurological and cardiovascular diseases and investigation of novel therapeutic targets/treatments in human cell-based models in vitro.

Instrument with integrated impedance technology allows also cell viability and neuro/cardio-toxicity analysis, which are highly relevant for early safety assessment of new drug leads.

Minimum technical specifications required from the high-throughput microelectrode array (MEA) and impedance equipment to be purchased are:

- Enables medium to high throughput analysis i.e. at least 96-well format capacity. This throughput is needed for screening compound libraries where compound stock volumes are limited.
- Enables measurements with several plate formats mimicking standard well culture plates (at least 12, 24, 48, 96 well formats). This flexibility is required to enable experiments with various cell models some of which cannot be established in high-throughput format
- >700 measurement electrodes per MEA plate to allow high quality data output with high number of electrodes per well
- At least 12.5 kHz data sampling frequency to identify fast occurring electrophysiological events in neuronal and cardiac cells
- Ability to induce and measure cardiac local extracellular action potentials (LEAP) on any and every electrode in a plate
- Capable of monitoring live cell function parameters in real time including cell proliferation, cytotoxicity, cell adhesion, receptor based functional assays, immune cell killing, ADCC, viral neutralizing antibody detection, cell migration, wound healing, and barrier function through impedance with at least 96-well plate capacity
- Optogenetic stimulator for customizable light stimulation
- Temperature and gas environment control for measurement chamber to enable stable long-term measurements
- Option for transparent sample area in wells for imaging cell growth, morphology for identification
- Possibility to use customised MEA plates, e.g. organ-on-a-chip platforms for co-

cultures and tissue models • Advanced, license-free analysis software packages specifically designed for neuronal and cardiac cell analysis, cell viability and impedance measurements
Procedure identifier: 7372996c-123b-48d1-96a9-b47058b745f0
Internal identifier: 598754
Type of procedure: Negotiated without prior call for competition

2.1.1. Purpose

Main nature of the contract: Supplies

Main classification (cpv): 38000000 Laboratory, optical and precision equipments (excl. glasses)

2.1.2. Place of performance

Country: Finland

Anywhere in the given country

2.1.4. General information

Legal basis:

Directive 2014/24/EU

5. Lot

5.1. Lot: LOT-0000

Title: High-throughput microelectrode array (MEA) and impedance equipment

Description: Microelectrode array (MEA) systems are novel tools in electrophysiology that will help the basic and preclinical research on brain and cardiac diseases with a goal to efficiently translate preclinical research findings into efficient treatment, prevention and diagnosis. Electrophysiological techniques allow comprehensive understanding of the biological basis of functioning of these cell types in health and in pathological conditions. MEA technology is one of the core methods to study e.g. electrophysiological characteristics of neuronal and cardiac cells and their function both in normal and diseased conditions. High-throughput MEA instruments allow also drug discovery for neurological and cardiovascular diseases and investigation of novel therapeutic targets/treatments in human cell-based models in vitro. Instrument with integrated impedance technology allows also cell viability and neuro/cardio-toxicity analysis, which are highly relevant for early safety assessment of new drug leads. Minimum technical specifications required from the high-throughput microelectrode array (MEA) and impedance equipment to be purchased are: • Enables medium to high throughput analysis i.e. at least 96-well format capacity. This throughput is needed for screening compound libraries where compound stock volumes are limited. • Enables measurements with several plate formats mimicking standard well culture plates (at least 12, 24, 48, 96 well formats). This flexibility is required to enable experiments with various cell models some of which cannot be established in high-throughput format • >700 measurement electrodes per MEA plate to allow high quality data output with high number of electrodes per well • At least 12.5 kHz data sampling frequency to identify fast occurring electrophysiological events in neuronal and cardiac cells • Ability to induce and measure cardiac local extracellular action potentials (LEAP) on any and every electrode in a plate • Capable of monitoring live cell function parameters in real time including cell proliferation, cytotoxicity, cell adhesion, receptor based functional assays, immune cell killing, ADCC, viral neutralizing antibody detection, cell migration, wound healing, and barrier function through impedance with at least 96-well plate capacity • Optogenetic stimulator for customizable light stimulation • Temperature and gas environment control for measurement chamber to enable stable long-term measurements • Option for transparent sample area in wells for imaging cell growth, morphology for

identification • Possibility to use customised MEA plates, e.g. organ-on-a-chip platforms for co-cultures and tissue models • Advanced, license-free analysis software packages specifically designed for neuronal and cardiac cell analysis, cell viability and impedance measurements
Internal identifier: 598754

5.1.1. Purpose

Main nature of the contract: Supplies

Main classification (cpv): 38000000 Laboratory, optical and precision equipments (excl. glasses)

5.1.2. Place of performance

Country: Finland

Anywhere in the given country

5.1.6. General information

The procurement is covered by the Government Procurement Agreement (GPA): yes

5.1.10. Award criteria

Criterion:

Type: Quality

Name: Laadulliset kriteerit

Description: minimum quality criteria

Category of award weight criterion: Order of importance

Award criterion number: 1

Justification for not indicating the weighting of the award criteria: direct procurement

5.1.16. Further information, mediation and review

Review organisation: Markkinaoikeus

6. Results

Direct award

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Justification for direct award: The contract can be provided only by a particular economic operator because of an absence of competition for technical reasons

Other justification: Axion Biosystems Maestro Pro is the only instrument in the market which meets all the most critical technical requirements fulfilling the needs of the research groups at the Faculty of Pharmacy. These are: flexible selection of different plate formats up to 96-well plates and also customised plates, suitability for electrophysical as well as impedance based measurements, possibility for both voltage-drive and optogenetic simulation and data collection from significant number of electrodes per plate (768). Axion Biosystems is the sole manufacturer and distributor of the Maestro Pro in Europe and North America.

6.1. Result lot identifier: LOT-0000

6.1.2. Information about winners

Winner:

Official name: Axion Biosystems

Tender:

Tender identifier: Tender Axion Biosystems

Identifier of lot or group of lots: LOT-0000

Value of the tender: 282 734,25 EUR

The tender was ranked: no

Contract information:

Identifier of the contract: Agreement with Axion Biosystems

Date on which the winner was chosen: 16/02/2026

8. Organisations

8.1. ORG-0001

Official name: University of Helsinki

Registration number: 0313471-7

Postal address: Fabianinkatu 33

Town: Helsinki

Postcode: 00100

Country subdivision (NUTS): Helsinki-Uusimaa (FI1B1)

Country: Finland

Contact point: Hankinnat

Email: hankinnat@helsinki.fi

Telephone: +358 503188076

Internet address: <https://www.helsinki.fi/en>

Roles of this organisation:

Buyer

8.1. ORG-0002

Official name: Markkinaoikeus

Registration number: 3006157-6

Postal address: Radanrakentajantie 5

Town: Helsinki

Postcode: 00520

Country subdivision (NUTS): Helsinki-Uusimaa (FI1B1)

Country: Finland

Email: markkinaoikeus@oikeus.fi

Telephone: +358 295643300

Internet address: <https://www.markkinaoikeus.fi>

Roles of this organisation:

Review organisation

8.1. ORG-0003

Official name: Axion Biosystems

Town: Atlanta, GA

Postcode: 30309

Country: United States

Roles of this organisation:

Tenderer

Winner of these lots: LOT-0000

8.1. ORG-0004

Official name: Hansel Oy (Hilma)

Registration number: FI09880841

Postal address: Mannerheiminaukio 1a

Town: Helsinki

Postcode: 00100

Country subdivision (NUTS): Helsinki-Uusimaa (FI1B1)

Country: Finland

Contact point: eSender

Email: tekninen@hankintailmoitukset.fi

Telephone: 029 55 636 30

Internet address: <http://hankintailmoitukset.fi>

Roles of this organisation:

TED eSender

Notice information

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