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Contract

NCA30964 DRI Multi-photon 2021

University Of Edinburgh

F03: Contract award notice
Notice identifier: 2021/S 000-019569
Procurement identifier (OCID): ocds-h6vhtk-02d3e0
Published 12 August 2021, 12:15pm

Section I: Contracting authority

I.1) Name and addresses

University Of Edinburgh

Charles Stewart House, 9-16 Chambers Street

Edinburgh

EH1 1HT

Email

andrew.helmn@ed.ac.uk

Telephone

+44 1316502508

Country

United Kingdom

NUTS code

UKM75 - Edinburgh, City of

Internet address(es)

Main address

http://www.ed.ac.uk/schools-departments/procurement/supplying

Buyer's address

https://www.publiccontractsscotland.gov.uk/search/Search_AuthProfile.aspx?ID=AA00107

I.4) Type of the contracting authority

Body governed by public law

I.5) Main activity

Education

Section II: Object

II.1) Scope of the procurement

II.1.1) Title

NCA30964 DRI Multi-photon 2021

Reference number

NCA30964

II.1.2) Main CPV code

- 38510000 - Microscopes

II.1.3) Type of contract

Supplies

II.1.4) Short description

This unique multi-photon microscope has the ability to simultaneously activate individual neurons while imaging a whole brain region (e.g. primary visual cortex). This technology – currently unavailable in Scotland and adopted by only a few laboratories in the world- would allow us to investigate the changes in neuronal connectivity that may underlie memory formation – as well as memory dysfunction in Alzheimer's disease animal models. As such, this technology will not only allow us to generate new knowledge that hold the promise to open therapeutical avenues for Alzheimer's disease that will benefit societies around the world, but it will also provide better training to early career researchers by providing access to innovative and state-of-the-art technology - in agreement with University of Edinburgh research's vision.

II.1.6) Information about lots

This contract is divided into lots: No

II.1.7) Total value of the procurement (excluding VAT)

Value excluding VAT: £360,750

II.2) Description

II.2.2) Additional CPV code(s)

- 38510000 - Microscopes

II.2.3) Place of performance

NUTS codes

- UKM75 - Edinburgh, City of

Main site or place of performance

THE CHANCELLOR'S BUILDING

EDINBURGH BIOQUARTER

49 LITTLE FRANCE CRESCENT

EDINBURGH

EH16 4SB

II.2.4) Description of the procurement

Under Regulation Reg 33(1)(b)(ii) of the Public Contracts (Scotland) Regulations 2015, a contracting authority may use the negotiated procedure without the prior publication in the case of a public contract, based on the following justification:

Competition is absent for technical reasons (only if it is not caused by artificial narrowing down of the parameters of the procurement and no reasonable alternative or substitute exists);

II.2.5) Award criteria

Quality criterion - Name: Quality / Weighting: 50

Price - Weighting: 50

II.2.11) Information about options

Options: No

II.2.13) Information about European Union Funds

The procurement is related to a project and/or programme financed by European Union funds: No

Section IV. Procedure

IV.1) Description

IV.1.1) Type of procedure

Award of a contract without prior publication of a call for competition in the cases listed below

- The services can be provided only by a particular economic operator for the following reason:
    - absence of competition for technical reasons

Explanation:

See additional information.

IV.1.8) Information about the Government Procurement Agreement (GPA)

The procurement is covered by the Government Procurement Agreement: Yes

Section V. Award of contract

A contract/lot is awarded: Yes

V.2) Award of contract

V.2.1) Date of conclusion of the contract

12 August 2021

V.2.2) Information about tenders

Number of tenders received: 1

Number of tenders received from SMEs: 0

Number of tenders received from tenderers from other EU Member States: 0

Number of tenders received from tenderers from non-EU Member States: 1

Number of tenders received by electronic means: 0

The contract has been awarded to a group of economic operators: No

V.2.3) Name and address of the contractor

Bruker UK Ltd

Banner Lane

Coventry

CV4 9GH

Telephone

+44 7500552694

Country

United Kingdom

NUTS code

- UK - United Kingdom

The contractor is an SME

No

V.2.4) Information on value of contract/lot (excluding VAT)

Total value of the contract/lot: £360,750

Section VI. Complementary information

VI.3) Additional information

The following features are unique to the 3D Neuralight system - as compared to other commercially available 2-photon microscopes - and are essential to our research programme:

1. Given that we used the mouse primary visual cortex (V1) as a model to investigate changes in neuronal connectivity during Alzheimer's disease, it is crucial to visualize the activity of neurons across this whole brain region – which in the mouse spans over 1.6 mm in diameter, approximately. The 3D Neuralight two-photon microscope has a scanning field-of-view (FOV) of 1.4mm x 1.4mm which allow to visualize this brain region almost entirely. This is largest FOV of any commercial system and achieved through having a unique field number of 28mm.

2. Because the primary visual cortex is around 0.6 mm deep, it is critical to rapidly monitor the activity of neurons located at different cortical depth (layers). To this purpose, the Neuralight 3D includes a unique electrically tunable lens (ETL) capable of fast imaging in multiple depths (up to 0.45mm with variable step sizes) without physically moving the microscope objective. As such, this technology is much faster and accurate than conventional piezos devices used in other commercial system that mechanically move the objective up and down.

Importantly, the ETL allow for the decoupling of the stimulation and imaging path, so that the photostimulated neurons and the imaged neurons can be at different cortical depth. No other commercial system provides a proven ETL in conjunction with a Spatial -Light Modulator (SLM).

3. As part of our research programme, we will also investigate the dynamics of neuronal activity in freely moving animals using miniature microscopes developed by Inscopix. Although the miniscopes allow studies in moving animals, it lacks the high-resolution of two-photon imaging in head-fixed animals. Through a collaboration, Bruker and Inscopix developed an adapter called the MIRA (Multimodal Imaging and Registration Analysis) to image the same population of neurons with the Inscopix miniscope and the Bruker two-photon microscope. Bruker is the only multiphoton company with proven integration with the Inscopix Miniscope system.

All in all, the specific features of the Bruker 3D Neuralight two-photon microscope are not only essential to meet the objectives of our research programme, but it is also the only multi-photon system available carrying all these features. Although other multiphoton suppliers have started to implement the SLM technology for stimulation and imaging- they all lack the large field-of-view, rapid volumetric imaging in the z-plane using ETL and the capability to integrate it with the miniscope technology- all crucial aspects of our research.

(SC Ref:663782)

VI.4) Procedures for review

VI.4.1) Review body

Edinburgh Sheriff Court & Justice of the Peace Court

Edinburgh

Country

United Kingdom