

**EUROPEAN PHOTONICS**  
**ROADSHOW SERIES**   
NEWCASTLE



# **Photonics in MedTech and pharmaceuticals**

## **DRAFT AGENDA**

3<sup>rd</sup> – 4<sup>th</sup> April 2019

The Baltic Centre for Contemporary Art, Gateshead and The Core at the Helix,  
And Newcastle Science Central

# AGENDA

## Day 1: Wednesday 3<sup>rd</sup> April 2019

**Venue: Baltic Centre for Contemporary Art, Shore Rd, Gateshead, NE8 3BA.**

09.00 to 09.30 Registration in Level 1 Conference Area

### 09.30 -11.00 Welcome and market needs

09.30 - 10.00 Introduction to the EPRISE project and welcome from CPI.

10.00 - 10.20 Opportunities in pharmaceuticals market - speaker to be confirmed

10.20 - 10.40 Opportunities in MedTech market - speaker to be confirmed

10.40 - 11.00 Diagnostics and healthy aging (Professor Mike Catt, Newcastle University)

11.00 - 11.30 Coffee break

### 11.30 - 12.30 Experts session 1

11.30 - 11.50 How to become investment ready (Alex Buchan, NorthStar Ventures)

11.50 -12.10 Expert – topic and speaker to be confirmed

12.10 - 12.30 Expert - topic and speaker to be confirmed

12:30 - 12:50 Public Involvement in MedTech product development (speaker from Voice Network, UK)

12.50 - 14.00 Lunch

### Company pitches

14.00 - 15.30 Pitching session by companies (5 mins max per company).

15.30 - 16.00 Coffee break

### Business to business and meet the expert meetings (B2B)

16.00 - 17.00 B2B sessions in the break-out rooms. Meetings are bookable in advance through our online B2Match website: <https://photonics-roadshow-newcastle.b2match.io/> .

### Evening events

16.00 – 18.00 - Those not involved in the B2B meetings can view of the public art galleries in the Baltic Arts Centre until 18.00.

19.00 – 19.30 Introduction to the Baltic Centre for Contemporary Art building (talk).

19.30 Dinner in the Riverside Terrace room: a three course meal.

21.00 Lighting up of the Millennium Bridge to mark the occasion of the Photonics Roadshow Event and viewed from the Riverside Terrace room.

## **Day 2: Thursday 4<sup>th</sup> April 2019**

**Venue: The Core at the Helix, Newcastle Science Central, Bath Ln, Newcastle upon Tyne NE4 5TF**

08.30 – 09.00 Arrival, registration and refreshments

### Meet the experts session

09.00 - 09.20 "The Application of Photonics and Artificial Intelligence for Cell and Gene Therapy Manufacturing", Dr John Churchwell, Senior Scientist - Cell and Gene Therapy Catapult

09.20 -09.40 Expert talk – topic and speaker to be confirmed

09.40 - 10.00 "AI knowledge and technology transfer from research to the healthcare industry", Prof Boguslaw Obara, Durham University.

10.00 - 10.30 Coffee break

### Expert Panel advice session (panel of experts including clinicians)

Including: Dr Will Innes, Consultant Medical Ophthalmologist at RVI Hospital, Mr Anil Reddy, Consultant Robotic/ Laparoscopic Colorectal Surgeon at James Cook University Hospital, Alex Buchan, NorthStar Ventures

10.30 - 11.00 Five minute introduction from each expert to companies about their work and needs

11.00 - 12.30 Companies to pitch their products/ projects to experts: 5 minute pitch plus 10 minutes of feedback.

12.30 -12.45 Event wrap-up and conclusions

12.45 - 13.15 Lunch and end close.

## Meet our experts



Alex Buchan, Director, NorthStar Ventures

Alex leads on NorthStar's life science and bio-tech investments. As an Investment Director, Alex makes and manages investments into a wide range of technology businesses and oversees our activities in the health-tech and green-tech sectors. He is an observer on the board of several companies and is a Non-Exec Director at Femeda, a company which produces medical devices.

Alex has been interested in the life-sciences industry since completing a PhD in Microbiology/ Biotechnology at the University of Kent. He went on to hold a number of senior commercial roles in biotechnology companies, including Compugen, SDI Europe and EnSys Europe. Prior to this, Alex worked as a Stockbroker in London.

Alex is also responsible for Northstar's partnership with Ignite, one of Europe's leading angel-led accelerator programmes. As part of this, Alex works as a mentor and advisor to start-up companies taking part. He also sits on the Newcastle University Equity Committee, supporting with its commercialisation activities.

Outside of Northstar, Alex is a Trustee for North East charity The Lit and Phil - the largest independent library outside of London.



Professor Michael Catt, Newcastle University

Michael Catt is Director of the National Innovation Centre for Ageing and a Professor of Practice in the Faculty of Medicine, Newcastle University.

Michael is also a member of the senior leadership team for the NIHR Innovation Observatory at Newcastle University.

Prior to moving to Newcastle University under MRC funding in 2009, Michael was Head of the 'Healthy Ageing' programme at Unilever Corporate Research Colworth Laboratory and was previously Head of New Technology and Research at Unipath Diagnostics. Michael has subsequently undertaken consultancy for both multinational and SME in-vitro diagnostic and consumer health and wellbeing companies and has been both a founder and active contributor to a number of start-ups, contributing IP, technical and management expertise.



Dr John Churchwell, Senior Analytical Development Scientist at Cell and Gene Therapy Catapult

John is a Senior Scientist at the Cell and Gene Therapy Catapult (CGTC) (London, UK) and Honorary Research Associate at University College London's (UCL's) Department of Medical Physics and Biomedical Engineering. He is responsible for delivering key aspects of CGTC's Process Analytical Technology (PAT) and data science strategies, in particular the application of Raman spectroscopy and multivariate data analysis. John obtained his PhD in physical chemistry from Durham University in the UK. During his PhD he applied physical techniques and vibrational spectroscopy in the areas of lipid membrane biophysics and surface chemistry. John previously held a postdoctoral position at UCL applying Raman Spectroscopy for the

diagnosis of bone disease and prediction of bone quality. He was a visiting scientist at the STFC's Central Laser Facility (CLF) (Harwell, UK), where he developed novel chemometric algorithms for the analysis of continuous spectra. John is most interested in how the application of PAT, in combination with advanced analytical and data driven approaches, can support cell and gene therapy manufacturing and in-process control across the industry, and their role in quality-by-design (QbD).



Prof Boguslaw Obara, Durham University

Boguslaw Obara, business-minded artificial intelligence scientist and entrepreneur. His key research and business interests include image processing, pattern recognition, computer vision, data science and machine learning techniques applied to a wide range of domains, from biology, medicine, engineering to arts & humanities.



Dr Will Innes, Consultant Medical Ophthalmologist at RVI Hospital, Newcastle

Completed undergraduate training at St Bart's and the Royal London in 2004 followed by medical and neurology rotations at St Bart's, the Royal London Hospital and the National Hospital for Neurology and Neurosurgery, Queen Square. Attained full Membership of Royal College of Physicians. Subsequent higher specialist training in Medical Ophthalmology at Newcastle Upon Tyne leading to RCOphth Diploma in Ophthalmology and Certificate of Completion of Specialist Training in Medical Ophthalmology. Undertook fellowship in Uveitis and Medical Retina at Manchester Royal Eye Hospital in 2013.

His special interests are Uveitis and ocular inflammation; Neuro Ophthalmology; Visual perception and associated disorders; Medical retina



Mr Anil Reddy FRCS,MD : Consultant Robotic/laparoscopic colorectal & pelvic floor surgeon, James Cook University Hospital, Middlesbrough

Special interests:

- Laparoscopic general and colorectal surgery (hernia, gall bladder, bowel cancer, colitis, inflammatory bowel disease, fistula, haemorrhoids and perianal disease)
- Pelvic floor surgery: developed pelvic floor surgery at James Cook and lead surgeon for faecal incontinence, prolapse and pelvic floor disorders. Sacral neuromodulation, PTNS and advanced laparoscopic surgery
- Undergraduate and postgraduate education: senior lecturer (University of Newcastle). General surgical lead for undergraduate education and also have an active role in delivering surgical and medical education for post graduate trainees including specialist registrars at James Cook.

Additional information: Research ties with University of Durham and University of Newcastle upon Tyne, working on clinical and laboratory based research projects on bowel disorders and bowel cancer. MD Research was on ulcerative colitis and biomarkers of colorectal cancer and its prevention using folic acid. Further research was done on stool DNA extraction and rectal brush biopsy techniques to identify epigenetic changes of colorectal cancer.

	<p>Speaker from the Voice network at Newcastle University</p> <p>In contributing our experience, ideas, insights and vision, VOICE members become partners. They work with Universities and external organisations to:</p> <ul style="list-style-type: none"><li>• Improve the focus, quality, relevance and impact of research</li><li>• Stimulate and shape social and technological innovation</li><li>• Enjoy lifelong learning and become research active citizens</li><li>• Make a positive difference to the lives of communities across the globe</li><li>• The involvement of VOICE members in research helps to focus academic knowledge, creativity and expertise on finding solutions and innovations that will make a difference to and have an impact on people's lives.</li></ul>
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