Manchester Royal Eye Hospital implants first AMD patient in the world with the Argus® II Retinal Prosthesis

Initial tests on 80-year-old with no central vision show that ‘bionic eye’ treatment allows patient to see the outline of people again

Manchester, UK – July 22, 2015 – Manchester Royal Eye Hospital and Second Sight Medical Products, Inc. (“Second Sight” or “the Company”) (NASDAQ: EYES), today announce that they are delighted by early stage tests on the world’s first ever dry Age Related Macular Degeneration (AMD) patient to receive the Argus II ‘bionic eye’.

Paulo Stanga, Consultant Ophthalmologist & Vitreoretinal Surgeon at the Manchester Royal Eye Hospital and Professor of Ophthalmology and Retinal Regeneration at The University of Manchester, says that initial screening tests on 80-year-old Ray Flynn, from Audenshaw in Manchester, have shown that he has perception in his central vision for the first time in many years.

With the Argus II system switched on, Mr Flynn is able to make out the outline of people and objects even with his eyes closed – thus proving that he is not using any of his remaining natural vision to identify the shapes and outlines.

The procedure to implant Mr Flynn took place on June 16 in a four-hour procedure. Mr Flynn’s system was turned on for the first time on July 1. Tests carried out the same day consisted of the patient looking at a computer screen and identifying black and white patterns, at different orientations. The patient’s ability to correctly identify the direction of the lines and the difference between the diagonal and horizontal lines shows that the Argus II device is providing central visual function that did not exist prior to the patient being implanted.

It is expected that with practice and rehabilitation, Mr Flynn’s vision will continue to improve.

Professor Stanga says: “Mr Flynn’s progress is truly remarkable. He is seeing the outline of people and objects very effectively.

“Mr Flynn is the first patient to be implanted with Argus II as part of a trial we are doing that aims to establish whether blind patients with total central vision loss due to dry AMD can benefit from an artificial retina - the Argus® II Retinal Prosthesis System. Currently, indications for use of commercially available retinal prostheses are limited to patients with the rare disease Retinitis Pigmentosa.
"As far as I am concerned, the first results of the trial are a total success, and I look forward to treating more dry AMD patients with the Argus II as part of this trial. We are currently recruiting four more patients to the trial in Manchester.

Interested patients and referring physicians can call Danielle Ridyard from our research office at 0161 701 7691 or email Danielle.Ridyard@cmft.nhs.uk.

Dry AMD is a much more common disease than Retinitis Pigmentosa (RP). Worldwide, an estimated 375,000 people suffer from severe RP\textsuperscript{1}, compared to 20 to 25 million who have AMD\textsuperscript{2}. According to the UK patient group The Macular Society, the dry form of AMD affects 44,000 more people per year in the UK\textsuperscript{3}.

Professor Stanga, who is also Director of the Manchester Vision Regeneration (MVR) Laboratory at the National Institute for Health Research (NIHR)/Wellcome Trust Manchester Clinical Research Facility, says: “On behalf of the Manchester Royal Eye Hospital, we feel privileged to be conducting the world’s first study into retinal implants for patients with AMD. This technology is revolutionary and changes patients’ lives – restoring some functional vision and helping them to live more independently.

“The dry form of AMD is a common but untreatable condition. In the western world, it is the leading cause of sight loss. Unfortunately, with an ageing population, it is becoming more common. We are initially limiting our study to the dry form of AMD, and if successful, perhaps we will subsequently look into recruiting patients with the advanced and scarred wet form of AMD.”

Gregoire Cosendai, VP of Europe for Second Sight Medical Products, says: “The difference between patients with dry AMD and patients with RP is that the AMD patients retain some peripheral vision. RP patients with severe disease have no peripheral vision. This is why we have focused on treating RP patients first. This study will aim to establish whether the retention of some peripheral vision in dry AMD patients with severe sight loss – functionally blind patients – can benefit from artificial vision in their central visual field as well as using their remaining peripheral natural vision. This is totally groundbreaking research.”

Second Sight gained European approval (CE Mark) for the Argus II system in 2011 and United States FDA approval in 2013. The Argus II system remains the first approved retinal prosthesis treatment in the world. The Argus II has now been implanted in over 130 patients. Several patients have been using the system for more than seven years, which shows the long-term reliability of the device. Argus II has been the subject of over 20 peer-reviewed articles, including the most recent one, "Long-Term Results from an Epiretinal Prosthesis to Restore Sight to the Blind" by Ho et al in Ophthalmology, 2015:311 (http://www.aaojournal.org/article/S0161-6420(15)00415-7/abstract).

The Argus II works by converting video images captured by a miniature camera housed in the patient’s glasses into a series of small electrical pulses that are transmitted wirelessly to electrodes on the surface of the retina. These pulses stimulate the retina’s remaining cells resulting in the corresponding perception of patterns of light in the brain. The patient then learns to interpret these visual patterns to regain some visual function.

About dry Age related Macular Degeneration (AMD)

\textsuperscript{1} http://www.ncbi.nlm.nih.gov/pmc/articles/PMC39310/
\textsuperscript{2} http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1125371/
\textsuperscript{3} http://www.macularsociety.org/research/Prevalence
Dry AMD is more common than the ‘wet’ type. Dry AMD affects 85% of AMD patients. Dry AMD usually develops slowly and causes gradual loss of central vision, but doesn’t affect peripheral vision.

**About the Argus® II Retinal Prosthesis System**
Second Sight’s Argus II System provides electrical stimulation that bypasses the defunct retinal cells and stimulates remaining viable cells inducing visual perception in individuals with severe to profound retinitis pigmentosa. The Argus II works by converting images captured by a miniature video camera mounted on the patient’s glasses into a series of small electrical pulses, which are transmitted wirelessly to an array of electrodes implanted on the surface of the retina. These pulses are intended to stimulate the retina’s remaining cells, resulting in the perception of patterns of light in the brain. The patient then learns to interpret these visual patterns, thereby regaining some visual function. The Argus II is the first artificial retina to receive widespread approval, and is offered at approved centers in Canada, France, Germany, Italy, Netherlands, Saudi Arabia, Spain, Switzerland, Turkey, United Kingdom and the United States.

**About Second Sight**
Second Sight Medical Products, Inc. was founded in 1998 to create a retinal prosthesis to provide sight to patients blinded from outer retinal degenerations such as RP. Second Sight's mission is to develop, manufacture, and market innovative implantable visual prosthetics to enable blind individuals to achieve greater independence. Second Sight’s Argus II Retinal Prosthesis is approved in the United States, Canada, Europe, and Saudi Arabia, and a trial is currently underway to test the safety and efficacy of the Argus II in patients with Dry Age-Related Macular Degeneration (AMD). Second Sight is also developing the Orion™ I Visual Cortical Prosthesis to restore some vision to individuals who are blind due to causes other than preventable or treatable conditions. Second Sight's headquarters are in Sylmar, California, and its European Headquarters are in Lausanne, Switzerland. For more information, visit [www.secondsight.com](http://www.secondsight.com).

**Safe Harbor**
This press release contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange and Exchange Act of 1934, as amended, that are intended to be covered by the "safe harbor" created by those sections. All statements in this release that are not based on historical fact are "forward looking statements". These statements may be identified by words such as "estimates," "anticipates," "projects," "plans," or "planned," "seeks," "may," "will," "expects," "intends," "believes," "should" and similar expressions or the negative versions thereof and which also may be identified by their context. All statements that address operating performance or events or developments that Second Sight expects or anticipates will occur in the future are forward-looking statements. While management has based any forward looking statements included in this release on its current expectations, the information on which such expectations were based may change. Forward-looking statement involve inherent risks and uncertainties which could cause actual results to differ materially from those in the forward-looking statements, as a result of various factors including those risks and uncertainties described in the Risk Factors and in Management's Discussion and Analysis of Financial Condition and Results of Operations sections of our Annual Report on Form 10-K as filed on March 17, 2015 and our other reports filed from time to time with the Securities and Exchange Commission. We urge you to consider those risks and uncertainties in evaluating our forward-looking statements. We caution readers not to place undue reliance upon any such forward-looking statements, which speak only as of the date made. Except as otherwise required by the federal securities laws, we disclaim any obligation or undertaking to publicly release any updates or revisions to any forward-looking statement contained herein (or elsewhere) to reflect any change in our expectations with regard thereto or any change in events, conditions or circumstances on which any such statement is based.
Central Manchester University Hospitals NHS Foundation Trust (CMFT) is a leading provider of specialist healthcare services in Manchester, treating more than a million patients every year. Its eight specialist hospitals (Manchester Royal Infirmary, Saint Mary's Hospital, Royal Manchester Children's Hospital, Manchester Royal Eye Hospital, University Dental Hospital of Manchester and Trafford Hospitals) are home to hundreds of world class clinicians and academic staff committed to finding patients the best care and treatments. (www.cmft.nhs.uk)

The University of Manchester, a member of the prestigious Russell Group of British universities, is the largest and most popular university in the UK. It has 20 academic schools and hundreds of specialist research groups undertaking pioneering multi-disciplinary teaching and research of worldwide significance. According to the results of the 2008 Research Assessment Exercise, The University of Manchester is one of the country’s major research institutions, rated third in the UK in terms of ‘research power’, and has had no fewer than 25 Nobel laureates either work or study there. The University had an annual income of £807 million in 2011/12. (www.manchester.ac.uk)

The NIHR/Wellcome Trust Manchester Clinical Research Facility (MCRF) is a purpose-built unit focused on supporting experimental medicine research helping to bring new drugs and medical devices into patient care. The facility is based at Central Manchester University Hospitals NHS Foundation Trust and receives funding from the National Institute for Health Research (NIHR). The MCRF offers state-of-the-art equipment and facilities for adult and children's studies, and has a team of specialist research nurses and support staff. A satellite unit the Children's CRF in the Royal Manchester Children's Hospital is at the cutting edge of research into inherited renal, metabolic, and hearing disorders.

For further information see: www.wtcrf.nhs.uk and www.childrenscrf.org

The National Institute for Health Research (NIHR) is funded by the Department of Health to improve the health and wealth of the nation through research. Since its establishment in April 2006, the NIHR has transformed research in the NHS. It has increased the volume of applied health research for the benefit of patients and the public, driven faster translation of basic science discoveries into tangible benefits for patients and the economy, and developed and supported the people who conduct and contribute to applied health research. The NIHR plays a key role in the Government's strategy for economic growth, attracting investment by the life-sciences industries through its world-class infrastructure for health research. Together, the NIHR people, programmes, centres of excellence and systems represent the most integrated health research system in the world. For further information, visit the NIHR website (www.nihr.ac.uk).

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Source: Second Sight Medical Products, Inc.