



## COMPUMEDICS WINS MAJOR MULTI-MILLION DOLLAR MEG BRAIN IMAGING CONTRACT

- Significant magnetoencephalography (MEG) milestone achieved with first MEG contract confirmed to world-renowned USA's Barrow Neurological Institute (BNI) – home of the Muhammad Ali Parkinson Center
- BNI is the world's largest neurological disease treatment and research institution
- Largest system contract in Compumedics' history, opening pathway to multi-billion dollar brain imaging market
- The contract refers to Compumedics' Neuroscan Orion LifeSpan™ MEG system

20 June 2017

Compumedics is pleased to announce the confirmation of its first MEG contract to the world-renowned Barrow Neurological Institute (BNI), based in Phoenix, Arizona, USA.

The contracted system, which will ship in FY2018, falls within previously advised MEG pricing guidance of US\$3.75m (AU\$4.93m), with a discount for special collaborative arrangements.

BNI, the world's largest neurological disease treatment and research institution, is consistently ranked as one of the best neurosurgical training centers in the world. The Institute was founded in 1962 and has since grown to be one of the premier facilities in the world for neurology and neurosurgery, with more operative neurosurgical procedures undertaken at BNI than at any other USA institution.

The new contract establishes a strong collaboration with BNI including, American Food and Drug Administration applications and beta-site services such as biomarker test protocols and access to secure patient databases for epilepsy, autism, dementia and Parkinson's disease management services, along with associated clinical validation and verification studies. Additionally, later collaborative stages will include working on improved and expanded CPT/IDT (government health reimbursement) codes to help enhance brain healthcare.

**Dr. David Burton, Executive Chairman of Compumedics, said:**

"We are very pleased and honoured to announce this strategic BNI MEG milestone, representing the largest system contract in Compumedics' history.

"In 2016 Compumedics Neuroscan and KRISS united their achievements and ongoing efforts, as part of a comprehensive 20-year exclusive Technology Transfer and License Agreement, to produce the new Orion LifeSpan™ MEG. After almost a year of extraordinary scrutiny by some of the world's most distinguished neuro-surgeons, neuroscientists and clinical experts at BNI, Compumedics Neuroscan, KRISS and BNI are inspired and intensely focused more than ever on our shared mission to transform brain-health. "This contract marks the commencement of our global MEG leadership in the multi-billion dollar brain imaging market. This is a unique inflection point in Compumedics' evolution to date, paving the way for a major new multi-billion dollar global market for the Company.

"This contract ultimately sees Compumedics, with the Orion LifeSpan™ MEG, now positioned to transform brain-health and improve people's lives, worldwide."



RANKED AS ONE OF THE BEST CENTERS  
FOR NEUROLOGY & NEUROSURGERY 2016-17



Barrow Neurological Institute



Dr. Robert Spetzler MD

MEG is a functional neuroimaging technique for mapping brain activity by recording magnetic fields produced by electrical currents occurring naturally in the brain, using very sensitive magnetometers. Compumedics has overcome earlier MEG system barriers with Orion LifeSpan's™ increased precision coupled with fully-integrated MEG (CURRY MEG) "gold standard" brain analysis software.

The BNI installation represents a new generation of MEG brain imaging, incorporating many innovative benefits, underscored by a strong patent folio. As the World Health Organization (WHO) has noted, neurological disorders are one of the world's most significant and growing health burdens, particularly as it relates to neuro-functional disorders such as Parkinson's disease, dementia (including Alzheimer's disease) for the aged, autism amongst children and epilepsy and seizures among the general population.

One of the key decision makers in choosing Compumedics Neuroscan Orion Lifespan™ MEG system, Dr. Robert Spetzler MD, who has been Director of BNI since 1986, has overseen BNI's continued growth and the introduction of many highly innovative treatment and surgical procedures, and is highly regarded both within in USA and around the world.

## About Compumedics Neuroscan Orion LifeSpan™ MEG

Compumedics has overcome earlier MEG system barriers with the Compumedics Neuroscan Orion LifeSpan's™ increased precision coupled with fully-integrated MEG (Curry MEG) "gold standard" brain analysis software.

At the heart of the new Compumedics Neuroscan Orion LifeSpan™ MEG system is the patented double relaxation oscillator super conducting quantum interference device (DROS; SQUID) sensor system, enabling 50% greater MEG sensitivity and spatial resolution than the current incumbent market leader.

Additionally, a unique dual-helmet dewar, enabling optimal brain imaging localisation, applicable to the greater population including both adult and paediatric populations, is coupled to a vibration-free, vacuum-cooling system for virtual 100% coolant recycling with continuous 24/7 operation. These advancements contribute to transforming functional brain-health, but also provide a sustainable business model reinforced by high barriers of market entry, including patented technological and scientifically proven clinical deployment.

Over a 30-year period Compumedics Neuroscan has established the "gold standard" neurophysiological multi-modality (EEG, MRI, CT, SPECT, PET convergence etc.) and MEG brain analysis platform. In parallel, over a 30-year period the Korean Research Institute of Standards and Science (KRISS) MEG team, led by Dr. Lee have produced the most advanced MEG brain imaging scanner.

MEG provides at least 4-5 orders of magnitude of temporal resolution (speed of brain functional or cognitive measures) over other traditional functional MRI, PET or other conventional imaging systems. The new Orion Lifespan™ MEG presents for functional brain imaging today what MRI was to structural or metabolic imaging in the 80's and beyond.

**For more information on Compumedics Neuroscan Orion LifeSpan™ MEG please visit: <https://www.compumedics.com.au/products/orionlifespanmeg/>**

**ORION LIFESPAN™  
MEG**

## Innovative Functional Advantages

### LifeSpan functional imaging from pediatric to adults

- Patented two MEG-in-one system with dual-helmet dewar
- Dual helmet simultaneous data acquisition fully implemented
- Dual adult or pediatric helmet options available

### Zero-loss Helium recycling

- 24/7 operation with no down time
- Minimized operating costs

### Interference-free high-density EEG up to 256 channels

Powered by CURRY neuroimaging platform, the world's standard software for MEG /EEG analysis

### Real-time video archiving

### Full cloud-integration

## Orion LifeSpan™ Key Advantages

### Patented dual helmet rotating adult/pediatric dewar



## About Barrow Neurological Institute

Barrow Neurological Institute at Dignity Health St. Joseph's Hospital and Medical Center is an internationally renowned medical center that offers care for people from throughout the world with brain and spine diseases, disorders, and injuries. **Robert Spetzler, MD**, one of the world's leading neurosurgeons, is the director of the institute, which performs more neurosurgical procedures annually than anywhere in the United States. **U.S. News & World Report** routinely lists St. Joseph's as one of the best hospitals in the nation for neurological and neurosurgical care.

## Barrow Centers and Programs include:

- |                                      |                                      |   |
|--------------------------------------|--------------------------------------|---|
| > Muhammad Ali Parkinson Center      | > Brain Tumor Program                | > Epilepsy Program                            |
| > Gregory W. Fulton ALS Center       | > Pituitary Tumor Program            | > Neurotrauma Program                         |
| > Concussion and Brain Injury Center | > Aneurysm & Cerebrovascular Program | > Alzheimer's and Cognitive Disorders Program |
| > Neuro-Rehabilitation Center        | > Stroke Program                     | > Deep Brain Stimulation Program              |
| > Cleft and Craniofacial Center      | > Spine Program                      |   |



Muhammad and Lonnie Ali visit Ali Parkinsons Center at Barrow Neurological Institute

## About Muhammad Ali Parkinsons Center at Barrow Neurological Institute

A diagnosis of Parkinson's disease or another movement disorder is not a death sentence. Recent advances in medicines and surgical treatments have given you new weapons to fight against your disease, and our doctors at the Muhammad Ali Parkinson Center can put them in your hands.

For instance, we are the first clinic in the U.S. to offer placement of both deep brain stimulation (DBS) electrodes and stimulators in one surgical procedure instead of two, providing the most efficient and comfortable process possible. In addition, our movement disorders specialists are well-versed in the latest medical treatments and therapies. We also provide a robust outreach program that offers programs from painting and yoga to singing and support groups.

The Muhammad Ali Parkinson Center at Barrow Neurological Institute at Dignity Health St. Joseph's Hospital and Medical Center in Phoenix, Arizona is a National Parkinson Foundation Center of Excellence.

## Orion LifeSpan™ Advantages

### 2 MEGs in 1 MSR

Maximize ROI  
Minimizes Footprint  
Minimizes Costs

### 4-5 ORDERS OF MAGNITUDE FASTER

MEG provides vastly greater temporal resolution than traditional functional MRI PET or other structural brain imaging systems

### 192/144

Adult/Pediatric Axial Gradiometer System Standard

### UP TO 256 FULLY SYNCHRONIZED EEG CHANNELS

### 320/240 MEG

Optional Adult/Pediatric Axial Gradiometer System

## Our unique sensing system advantages

- The Compumedics Neuroscan Orion LifeSpan™ MEG system uses new generation high-sensitivity, axial gradiometers with increased SNR for superficial and deep sources
- Patented SQUID sensor type: double relaxation oscillation SQUID (DROS)
- Average sensitivity: better than  $3 \text{ fTrms}/\sqrt{\text{Hz}}$  (@ 100 Hz)
- Sampling rate : 10 kHz max option, resolution: 24 bits
- 32-256 channels of integrated simultaneous EEG, plus 4-16 bipolar/auxiliary analog channels

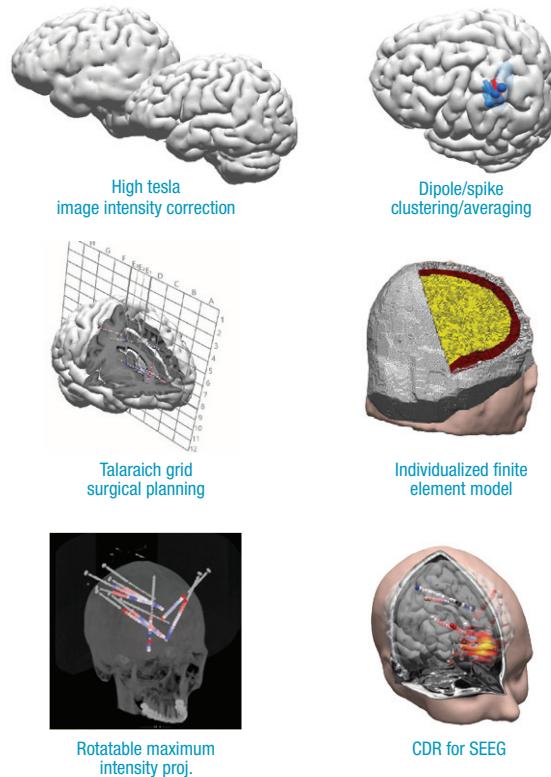
## Our hardware advantages

- The unique Orion LifeSpan™ is comprised of a patented rotating dual-helmet dewar for adult and pediatric patients (adult/adult, pediatric/pediatric options available)
- 192/144 adult/pediatric axial gradiometers standard configuration\* each including 6 reference channels for noise reduction
- Specially designed adjustable bed system for adult and pediatric patients
- Continuous helium-recycling minimizes operating costs & maintenance requirements
- Smaller electronics footprint for reduced lab space & power use

\*Up to 320/240 adult/pediatric MEG channel option available

## CURRY™ Acquisition and Analytics Software Platform Advantages

- Simplified user interface
- Co-registration of EEG & MEG, with MRI, fMRI, CT, SPECT, PET, DTI
- CURRY integrated with STIM2, including eloquent cortex evaluation
- Integrated synchronized video
- Individualized head models for MEG, EEG and combined analysis including both individualized BEM and FEM
- Complete dipole, CDR, statistics modules
- User-friendly pre-surgical planning module
- Maximum memory access for rapid processing of large data files (64 bit native application)
- Suitable for all applications (research, clinical)
- Enhanced connectivity with other hardware and software (e.g. Free Surfer, Matlab™)
- sEEG analysis module



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