

## **Health Robotics' Oncology Focus: Revolutionary i.v.STATION's Monoclonal Antibody Therapy Project at St-Antonius Hospital**

**Bozen, Sud-Tirol, Italy – 9 November 2011.** Health Robotics announced that prominent 850-bed medical center St-Antonius Hospital [Utrecht and Nieuwegein, The Netherlands] recently purchased 1 i.v.STATION Robot and agreed to provide Health Robotics with assistance in the protocol development for the complex and sterile compounding of Monoclonal Antibody (mAbs) therapy for i.v.STATION and i.v.STATION ONCO. Health Robotics will introduce the below described mAbs and other Oncology-focused upgrades to its world-leading robots at the American Society of Health System Pharmacists (ASHP) 46th Midyear Clinical Meeting & Exhibition, to be held at New Orleans (USA) on 4-8 December 2011 (Booth 619).

*“Integrating i.v.STATION at St-Antonius’ clinical pharmacy operations provides a safe, accurate, and efficient way to compound mAbs, and additionally a very unique opportunity to reduce the waste of these very expensive biological medications. We are very excited about the mAbs project and look forward to jointly-develop this unique i.v.STATION functionality, and being the first scientists to provide proof of accurate and automated reconstitution of complex mAbs, such as Infliximab, Rituximab and Trastuzumab<sup>1</sup>”* stated Dr. Ewoudt van de Garde, Clinical Pharmacist–Epidemiologist, St-Antonius Hospital.

*“Although i.v.STATION has already compounded “live” mAbs for patients and fully-demonstrated its financial and clinical benefits, our focus so far has been on eliminating drug and diluent exchange errors while minimizing costs, drug quantity mistakes, and sterility risks. Now it is time to provide scientific evidence of the additional importance of drug efficacy and reduction of oncology drugs’ patient side effects made possible through our exclusive Mechatronics<sup>2</sup> solutions and the protocol-development assistance from St-Antonius. These jointly-developed mAbs protocols will be made available to our global customer network,”* stated Gaspar DeViedma, Health Robotics’ Executive Vice President.

Human monoclonal antibody therapies are very complex and expensive biological drugs that are well known to display poor biophysical properties, such as low stability and propensity to aggregate<sup>3</sup>. Drug manufacturers’ reconstitution

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<sup>1</sup> *Remicade®*, *Rituxan®/MabThera®*, *Herceptin®*

<sup>2</sup> *Mechatronics: The Science of Intelligent Machines*. Health Robotics is the only company in the world to receive a Mechatronics award for its I.V. Robots.

<sup>3</sup> *Lowe et al. Aggregation, Stability, and Formulation of Human Antibody Therapeutics. Advances in protein chemistry and structural biology 2011; 84:41*



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instructions for lyophilized mAbs often state that: “*shaking-induced foaming should be avoided to prevent inaccuracies in drug dosage, and that diluents should be added very slowly to inhibit protein aggregation.*” Protein aggregation can result from the shaking process that increases the water-air interface and induces mechanical stress. mAbs are also very sensitive to mechanical stress induced by agitation or rapid expulsion from a syringe. Compounding mistakes if noticed and reported to pharmacy supervisors result in repeat compounding and waste, costing thousands of dollars (or euros); if not noticed and/or reported potentially result in patient side effects and/or reduced treatment efficacy<sup>4</sup>.

## **About St-Antonius:**

St-Antonius Hospital is a 850-bed medical, teaching, and research healthcare organization focused on improving quality and delivering the best possible medical treatment, nursing care and service to its patients at six different locations. St-Antonius was the first hospital in the Netherlands to perform balloon angioplasty and lung transplantation and has a large focus on oncology care and heart, lung and vascular diseases. Annually, St-Antonius carries out more than 1950 open-heart and 2800 dotter procedures. Our 5,000 employees, 280 medical specialists, and 150 medical interns manage our inpatient care, and additionally more than 550,000 outpatient visits and 50,000 same-day patients per year.

## **About Health Robotics:**

Founded in 2006, Health Robotics is the undisputed global leading supplier of life-critical intravenous medication robots, winning 100% of all worldwide I.V. Robot’s publicly announced purchases over the past 22 months. Well over 200 hospital installations in 6 continents are under contract for our robotics-based technology and software automation solutions. Health Robotics’ world-leading solutions CytoCare® and i.v.STATION® ONCO [hazardous IVs], i.v.STATION® [non- hazardous IVs], i.v.SOFT® [workflow engine for manual compounding], MEDarchiver® [life-critical clinical information system], and TPNstation™ [totally-automated parenteral nutrition] have and will greatly contribute to ease hospital’s growing pressures to improve patient safety, increase throughput and contain costs. Through the effective and efficient production of sterile, accurate, tamper-evident and ready-to-administer IVs, Health Robotics’ products help hospitals eliminate life-threatening drug and diluent exchange errors, decrease other medical mistakes and sterility risks, work more efficiently, reduce waste and controlled substances’ diversion, and diminish the gap between rising patient volume/acuity and scarce medical, nursing, and pharmacy staff. For more information, please visit: <http://www.health-robotics.com>

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<sup>4</sup> Hermeling et al. *Structure-Immunogenicity Relationships of Therapeutic Proteins. Pharmaceutical Research* 2004; 21:897-903.



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