



Fairfax Neonatal Associates and Inova Translational Medicine Institute announce partnership to Study the Causes of Preterm Birth

FALLS CHURCH, Virginia, October XX, 2015 – Fairfax Neonatal Associates (FNA) and the Inova Translational Medicine Institute (ITMI) today announced a partnership to study the causes of preterm birth. This partnership combines FNA's expertise in neonatology, specifically including the clinical care of infants admitted to the Neonatal Intensive Care Unit of Inova Children's Hospital with ITMI's expertise in genomics, bioinformatics and clinical medicine and the translation of research into clinical techniques and practices. Under the collaboration FNA will provide ITMI access to its clinical database and will facilitate the extraction of information from the database and provide supporting information relevant to the utility of the data. ITMI will utilize its database of genomic information and bioinformatic and genomic expertise to evaluate FNA's detailed clinical data in the context of genomic data. ITMI will provide the analytic capability and genomic knowledge necessary to perform analyses with the combined genomic and clinical data.

Over the past three years ITMI has generated a genomic data set on approximately 3500 families, 500 with pre-term birth. Clinical data for these individuals, including the mother, father and baby, has been extracted from Inova's electronic health records as well as health data from questionnaires and surveys. Participants provided information on nutrition, general health, family history, environmental exposures, stress, etc. ITMI has generated whole genome sequence on all of the individuals and expression, methylation and miRNA sequencing on a subset of individuals. FNA has additional physician generated clinical information that adds significant value to the clinical data obtained from Inova's electronic health records. The additional clinical care information provided by FNA may contain additional information that is relevant to the study of preterm birth when integrated with the standard EHR information the genomic information generated by ITMI. By combining these datasets, it may be possible to improve the quality of the research analysis that can be performed, leading to the potential identification of causes of preterm birth or molecular targets useful in the diagnosis or future treatment of the disease.

In the US, twelve percent of babies are born at less than 37 weeks gestation, which causes nearly 10,000 deaths¹ and costs the national health system approximately \$28 billion per year. The incidence of preterm birth has not changed over the past four decades. The causes of preterm birth are complex and often unknown. While it is

¹ Gallagan et al. (2006) The Contribution of Preterm Birth to Infant Mortality Rates in the United States. *Pediatrics* 118(4): 1566-1573.

understood that a genetic component responsible for or intimately involved with the onset of early labor must exist, to date no individual genes have been identified as causative.

“ITMI is excited to team with FNA on this search for clues related to the causes of preterm birth” said John Niederhuber, MD, Chief Executive Officer at ITMI. “This is a unique integration of high quality clinical data with genomic information to gain greater insight into complex disease processes.”

"This collaboration offers a unique opportunity to combine genomic data with over 20 years of detailed clinical data to critically evaluate diseases in premature infants" said Robin Baker, President, FNA, PC.

About Inova Translational Medicine Institute

The Inova Translational Medicine Institute (ITMI) is a not-for-profit research institute delving into the genomics component of personalized medicine. ITMI is utilizing genomic and clinical information from patients to develop innovative methods for personalized patient care. Studies at the Institute have generated a large genomic and clinical data set that can be used in a variety of fields, from computational biology to neurology as well as biomedical research applications. ITMI's goal is to utilize information from its studies to better understand and predict the onset of disease, leading to the implementation of preventive medicine based on the unique genomics of the individual patient.

About Inova

Inova is a not-for-profit healthcare system based in Northern Virginia that serves more than 2 million people each year from throughout the Washington, DC, metro area and beyond. Inova is a comprehensive network of hospitals, outpatient services and facilities, primary and specialty care practices, and health and wellness initiatives.

Inova encompasses the full array of health services, including the area's only Level 1 Trauma Center and Level IV neonatal intensive care unit (NICU). We are home to many nationally and internationally recognized programs, including Inova Heart and Vascular Institute (IHVI), Inova Translational Medicine Institute (ITMI), and the Inova Dwight and Martha Schar Cancer Institute.

Inova is a global leader in developing and applying personalized health. Connecting researchers, clinicians and empowered consumers, we integrate genomic research for patient care, prevention and wellness. Our personalized health approach enables individuals to live longer, healthier lives.

More information and statistics about Inova is at www.inova.org.

- See more at: <http://www.inovanewsroom.org/u-s-news-world-report-names-inova-mount-vernon-hospital-among-best-in-washington-dc-area/#sthash.yTsRNxf.dpuf>

About FNA

For over 40 years, Fairfax Neonatal Associates has provided the physician and NNP (Neonatal Nurse Practitioner) staffing at Inova Children's Hospital NICU (Neonatal Intensive Care Unit), which was the first acute care NICU in Northern Virginia. FNA also provides the neonatology coverage for the NICUs at Inova Fair Oaks and Inova Loudoun Hospital. At the three combined locations, FNA is responsible for overseeing the care of nearly 20,000 newborns each year. In 2011 the Inova Children's Hospital NICU was the first in the nation to receive the Joint Commission's Gold Seal of Approval for Prematurity, based on outcomes and quality improvement projects. The ICH NICU has also been recognized by US News and World Report as one of the top 50 NICU's in the nation. Clinical data generated from FNA's extensive Electronic Medical Record (EMR), coupled with ITMI's genomic research has enabled FNA and Inova to stay at the forefront of research related to premature delivery and diseases in premature infants. FNA also funds a detailed follow-up program which continually analyzes the long term neurologic progress of premature infants.

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