The Nicholas Conor Institute Partners with Industry to Bring New Discoveries for Childhood Cancer to the Clinic

Posted on ePharma.com on Friday, November 06, 2009
by Dr. Adrienne Brown

The Nicholas Conor Institute for Pediatric Cancer Research is a medical research organization dedicated to support the development of diagnostics, therapeutics and personalized programs specifically for children with cancer. The goal of the Institute is to establish efficient, mutually beneficial partnerships between industry, academia, clinicians and funding sources. These partnerships aim to develop predictive diagnostics to guide individualized therapy, to bring to the clinic new therapies that consider the unique molecular makeup of the child and to translate discoveries into integrated, personalized treatment programs.

A mother's trials during the diagnosis and treatment of her 15 month old son for high risk neuroblastoma have inspired the inception of The Nicholas Conor Institute. Beth Anne Baber, PhD, MBA is a cancer researcher and the mother of Nicholas Conor, who lends his name to the Institute. Baber saw the need for innovative and specialized medicines for children, and with Martin Latterich, Ph.D., Co-founder and CSO, they conceived of the Institute to help bring about those treatments. In September 2009, The Nicholas Conor Institute was founded with the aim of lowering research and development (R&D) costs and accelerating the availability of diagnostics and therapeutics specifically for pediatric cancer.

Cancer is the number two killer of children, after accidental death in the United States. Still, childhood cancers represent only 1% of all cancers in the US, putting them in the rare disease category.

What Baber realized during her son's battle with neuroblastoma was that treatments for childhood cancer are often smaller dosages of adult therapies based on the children's body weights. However, adult therapies such as radiation, chemotherapy and surgeries are often too harsh for children.

Fifty years ago, cancer in a child was considered incurable. Now, eight out of ten children diagnosed will respond to treatments and will survive post five years. Even though childhood cancer survival rates have increased, current treatments bring many long-term side effects. Later in lives, cancer survivors often experience developmental delays and abnormalities such as learning difficulties, hearing losses, infertilities, secondary cancers, heart problems, liver failures and kidney failures. It is clear that further research is needed to better understand how the cancer treatments affect development. In treating cancer, children are not small adults.

The lack of financial incentives for developing therapies for rare diseases such as childhood cancer, because of their small market sizes, discourages drug companies from spending substantial research and development efforts on these therapeutic areas. The goal of The Nicholas Conor Institute is to fill such a need in childhood cancer. Dr. Richard Kadota MD, Former Director Blood/Bone Marrow Transplantation at Rady Children's Hospital, San Diego, notes the importance of translating new discoveries into diagnostics and treatments for rare cancers. "There is an enormous amount of new medical technology being developed in the war against cancer, but minimal financial incentive to do so for cancer in children. Other strategies are needed, like The Nicholas Conor Institute," says Dr. Kadota.

The Nicholas Conor Institute is dedicated to advancing medical discoveries using a novel business model. The business strategy outlined by the concept TACTIC™ (The Accelerator of Cancer Treatments in Children) is to create collaborations between the Institute and industry partners. The Institute will tap into funding opportunities in Small business Technology Transfer (STTR) grants, Small Business Innovation Research (SBIR) grants, Orphan Product Development (OPD) grants and other sources. Collaborations between academic labs, industry and philanthropic partners support funding and accelerate R&D efforts.

The TACTiC™ strategy is designed to rapidly target emerging technologies in genomics, proteomics, bioinformatics, molecular diagnostics, companion diagnostics, drug discovery, immunotherapy, vaccine development, nanotechnology and wireless technology. The Institute will first demonstrate its ability to deliver molecular diagnostics for childhood cancer, and then will expand to the areas of therapeutics and prevention. In particular, The Nicholas Connor Institute will focus on

promising academic research that has not yet been translated into formal drug development programs as a result of the high cost of the R&D required.

The Institute is collaborating with biotechnology companies, filing joint grant applications, and seeking supplemental funding from philanthropic organizations in order to move discoveries from the bench to the bedside. The aggressive plan of The Nicholas Conor Institute requires cooperation among partners and funding sources such as foundations and grant organizations. Partnerships initiated with industry partners include Prognosys Biosciences, to use their expertise in genomics; CollabRx in personalized medicine arena; and AltheaDx, an innovator in theranostics.

AltheaDx, is developing the first childhood cancer diagnostic panel for small round blue cell tumors. This new tool will avoid misdiagnosis and save lives. These cancers, on the surface, look very similar. However, they can emerge from distinct cancer types that respond differentially to known treatments. Having an accurate test to identify the correct type will lead to more accurate diagnosis and treatment, helping to save lives.
A collaboration with CollabRx will use molecular information from patient biopsies and match the finding with available marketed therapeutics, as well as investigational drugs, for a treatment match. The aim is that researchers will continuously test and refine the models of pediatric cancer biology and therapeutics based on the resulting clinical responses.

Prognosys Biosciences is using innovative genomics applications to develop diagnostics. The company plans to analyze and compare tumor cells from children to normal children's cells in a long-term prospective study.

These collaborations will provide more individualized approaches to pediatric cancer treatment. Dr. Jennifer Willert, MD, treats children at the Rady Children's Hospital. She emphasizes, "That a more personalized approach as well as long term follow-up for late effects, will ultimately result in significantly improved outcomes and decreased toxicity." The Nicholas Conor Institute is dedicated to making these important steps towards our children's future.

Existing and future partnerships at the Institute are supported by a prestigious Board of Directors, composed of world-renowned scientists, thought leaders, and business executives with strengths in corporate governance, business strategy and law. Using TACTIC, the Nicholas Conor Institute provides many opportunities for cooperation between biotechnology and drug companies, clinicians, and philanthropic individuals and groups.

The vision is expansive. The Institute welcomes researchers with promising discoveries and technologies that would benefit children with cancer. Researchers and companies that are interested in partnering in development, validation and commercialization are encouraged to contact The Nicholas Conor Institute for Pediatric Cancer through the Website or directly by phone or email.

The Nicholas Conor Institute Mission Statement
Our Mission *is to meet pediatric cancer head on with superior detection methods and diagnostic tools coupled with kid friendly treatments that bring hope to all those involved:*

- *By translating biomedical discoveries into integrated, personalized treatment programs*
- *By developing cancer-specific predictive tests to guide cancer therapy for each child*
- *By bringing to the clinic new therapies that consider the unique molecular physiology of each child and his or her cancer*

THE NICHOLAS CONOR INSTITUTE
for Pediatric Cancer Research

Adrienne Brown earned her PhD at UNC-Chapel Hill, did research at the NCI-FCRC and the Salk Institute for Biomedical Sciences before joining healthcare industry leader, BD Biosciences where she worked for 11 years. Currently she is a project management and technical writing consultant in the San Diego area.