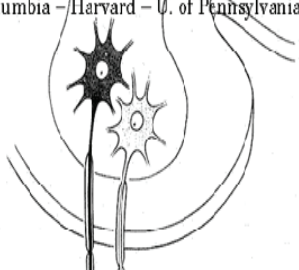




# Research Update

## **PNCR** • Network for SMA

North-Eastern Clinical Trials Consortium  
Columbia – Harvard – U. of Pennsylvania



We are very pleased with the progress of our study entitled, “Clinical Study of Spinal Muscular Atrophy”. This is an observational study intended to better understand the natural course of spinal muscular atrophy (SMA), and to evaluate different measurement tools in preparation for upcoming clinical trials. Our aim was to have 30 children and adults participate in this study each year, and we have had 24 participants enrolled in the first year. This study is part of the Pediatric Neuromuscular Clinical Research (PNCR) network’s quest to better understand and treat SMA. This network is comprised of doctors and families at Harvard University, Boston and Children's Hospital, Philadelphia and Columbia University. See [www.urmc.edu/sma](http://www.urmc.edu/sma) for more information about the PNCR.

Participants come to Columbia University Medical Center every two to three months (every 2 months for the first 6 months, then at 9 and 12 months and every 6 months thereafter) for visits lasting between 2-5 hours. During these visits a series of evaluations and testing are performed. These include a history and physical examination, pulmonary function tests, DEXA, motor unit number estimation (MUNE), standardized motor examination and molecular studies. Most of these tests are non-invasive and do not cause any discomfort. A few of the tests may cause mild discomfort but can be discontinued or declined if your child is uncomfortable or scared.

We have received tremendous positive feedback from patients and families. Families find it helpful to closely interact with our multidisciplinary SMA team and want to contribute to SMA research. Although this is not a treatment study, once a clinical trial becomes available participants in this current observational study will have the option to transition to the clinical trial if they are eligible.

## Conferences & Meetings

### **2006 FSMA Families and Professionals Conference**

San Diego, CA

Workshop Dates: Friday, July 14 and Saturday, July 15

- *Get research updates first hand; Network with other families; Experience a kid’s program where wheelchairs are the norm and siblings are included; Experience new adventures*

Registration by May 10, 2006 go to [www.fsma.org](http://www.fsma.org) for more info.

### **Abilities Expo**

Southern California (June 16-18)

- *Expo showcases the latest products and services to enhance the lives of people with disabilities. The exhibit hall is packed with vendors, live equipment demonstrations, and special events throughout the weekend.*

Go to [www.abilitiesexpo.com](http://www.abilitiesexpo.com) for more info, locations, and dates.



## Upcoming Studies



Columbia University has been accepted as a clinical trials site for an upcoming Phase I dose-finding trial of sodium phenylbutyrate in children with Spinal Muscular Atrophy (SMA). The trial is organized through NPTUNE which stands for the NINDS (National Institute of Neurological Disorders and Stroke) Pilot Therapeutics Network (NPTUNE). The NINDS has established this network to facilitate the rapid conduct of high quality clinical trials and research. The NINDS provides funding as well as infrastructure for the design and implementation by partnering with Westat, a contract research organization located in Rockville, Maryland.

SMA is caused by deletions in the “Survival of Motor Neurons” (SMN1) gene. Researchers are hopeful to find a treatment for SMA, because nature has provided humans with a second gene, almost an identical copy of the SMN1 gene. Normally, the second gene (SMN2) does not contribute very much to the production of full-length SMN protein. However, researchers think that its expression of full length protein can be increased by medications. They have therefore tested the effect of a large number of medications on SMN expression in the laboratory. When researchers treated skin cells from SMA patients with sodium phenylbutyrate in the test tube, they found that it increased SMN expression. That is promising because we hope the increased full length SMN would benefit SMA patients. However, no study has shown to date that increased SMN expression leads to clinical improvement.

Sodium phenylbutyrate is approved in the US for the treatment of “urea cycle disorders”, a group of rare metabolic diseases. It has been used for many years in the treatment of pediatric and adult patients with urea cycle disorders. In that group of patients, its adverse events include menstrual irregularities, metabolic acidosis, anemia, decreased appetite, and bad taste, taste aversion or body odor. Some of these problems are more likely related to the underlying, severe metabolic disease rather than to sodium phenylbutyrate.



Based on the expectation that sodium phenylbutyrate might increase SMN expression in humans which in turn would hopefully benefit SMA patients clinically, the NINDS has chosen to conduct a clinical trial of sodium phenylbutyrate in SMA as a NPTUNE protocol. The upcoming protocol will be the first step in evaluating a new medication, a so called Phase I trial. In a short term trial, it will answer the question as to which dose can be tolerated in SMA patients. Once a safe dose of sodium phenylbutyrate has been determined, this study would have to be followed up with a larger and longer trial to find out if sodium phenylbutyrate is actually beneficial to patients with SMA. Researchers would like to know which dose is tolerated for patients with all types of SMA (types 1 – 3). The NPTUNE protocol will sequentially test sodium phenylbutyrate in children with different types of SMA. We are hoping that a first trial for some of the children with SMA will begin during this year, pending final NIH and FDA approval of the protocol.

## Spotlight: Tony Budinic wins Robotics Contest

Hofstra University, NY – This past March Tony Budinic and his team, Team 1803 from Schreiber High School in Port Washington competed in the Long Island Regional FIRST Robotics Competition, finishing 8<sup>th</sup> out of 39 teams. Tony, a senior at Schreiber High School, worked on the construction, programming, and driving of the team’s robot Woody.

The 3-day competition included one day of practice followed by two days of matches. The teams competed against each other in a game where their robots had to collect balls and deliver them to hoops in order to score points. At the end of each match the team with the most points won. A total of 12 matches were played and Team 1803’s final record was 8-4-0.

In order to design and construct their robot Woody the team met every day for 6 weeks. Even though it was hard work Tony had a lot of fun working on the robot with his brother Michael, a sophomore, who was also a member of the team. The team named their robot “Woody” because it was made of wood, which varied from the aluminum that most of the other robots were made of. During the matches, each robot drove on its own for the first 10 seconds. Tony, the only team member familiar with programming, programmed the robot for this 10 second performance as well as helped with the construction and designing aspects of the project. Tony’s knowledge of programming reflects his interest in engineering and next year he will be attending Hofstra University to study Mechanical Engineering.

On top of placing 8<sup>th</sup> at the competition, Team 1803 was awarded Highest Seeding Rookie, All-Star Rookie, and Honorable Mention for Safety. Due to their outstanding performance the team qualified for the National Competition in Atlanta, Georgia, where they will compete against more than 250 teams. GREAT JOB, TONY!

# SMA Foundation Donates to Columbia

Columbia University has been awarded up to \$15 million from the Spinal Muscular Atrophy (SMA) Foundation. The grant will fund activities by Columbia's newly established Center for Motor Neuron Biology and Disease to accelerate the discovery of medical advances for SMA, a devastating disease that is the number one genetic killer of infants and toddlers.

The gift, which will be distributed over five years, is the largest ever made by a private foundation for SMA research. The grant symbolizes a new type of funding between private foundations and universities — "active funding," a style popularized by the Gates Foundation. As part of the grant agreement, the Center for Motor Neuron Biology and Disease will recruit new investigators to complement existing

Columbia expertise and is driven to reach specific scientific goals.

Since its inception, the SMA Foundation, led by co-founders Dinakar Singh and Loren Eng, has pledged nearly \$30 million to researchers at academic medical centers and biotech companies. The grant to the Center for Motor Neuron Biology and Disease is meant to unite, consolidate and amplify previous funding for SMA research and clinical efforts at Columbia University. These include:

- The SMA Clinic at Columbia University Medical Center, directed by Darryl De Vivo, M.D., the Sidney Carter Professor of Neurology
- The Pediatric Neuromuscular Clinical Research Network, a multi-center

network that will conduct clinical trials in SMA patients as drug candidates are discovered. The center is also led by Dr. De Vivo.

- A 2004 Young Investigator Award in Spinal Muscular Atrophy to Umrao Monani, Ph.D., Assistant Professor of Neurology, who was instrumental in developing a mouse model of SMA.

Brent Stockwell, Ph.D., Assistant Professor of Biological Sciences and Chemistry, who uses new technology to screen tens of thousands of compounds for potential SMA drugs. In 2004, indoprofen, a close cousin of ibuprofen, was the first candidate identified by this new screening technology.



Join us at our support group meetings this year. See below for details and dates!

## Support Group to Begin

The SMA Research Center is happy to announce the start of a Support Group. The group will be sponsored by the MDA and will meet monthly. An informational session will be held on June 22nd from 6-8pm at All Souls' Church (1157 Lexington Avenue- corner of 80th and Lexington).

The group's primary goals will be to provide education and support for families living with pediatric neuromuscular disease. Meetings will include educational lectures from guest speakers on topics such as therapy, medical equipment, and new research. The group will also allow individuals the opportunity to give and receive support through the exchange of experiences, feelings, and coping techniques.

### Dates

- June 22-Informational Session
- July 20
- August 17
- September 21
- October 19
- November 30
- December 21

## Events

**June 3-4 2006:** Batsto Village, NJ Walk -n- Roll fifth annual Pinelands Hike for SMA.  
Contact Jason or Jessica Moyer at [southjesey@fsma.org](mailto:southjesey@fsma.org)

**June 3 2006:** Long Beach, NY Dylan and Kiley's 2<sup>nd</sup> annual Walk -n- Roll to cure SMA.  
Contact Debbie Cuevas at [smawalkfordylan@yahoo.com](mailto:smawalkfordylan@yahoo.com)



**August 5 2006:** Grand Island, NY 3<sup>rd</sup> annual SMArt Walk at Beaver Island State Park.  
Contact Karen Shiesley at [wny@fsma.org](mailto:wny@fsma.org)



**THE SMA CLINIC**  
Columbia University's  
SMA Clinic



### Columbia University

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If you know of any exciting up-coming events that would be helpful or interesting to the individuals who receive this publication, please contact us and let us know.

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# Kids Page - Jokes, Fun Facts, and a WordFind

## JOKES, JOKES, AND MORE JOKES!

Here are some hilarious jokes to tell your family and friends...

**\*Why don't African animals play games?**

Because there are too many cheetahs (cheaters)!

**\*Why don't bikes stand up by themselves?**

Because they are two tired (too tired)!

**\*Knock-Knock**

Who's there?

Cash

Cash who?

No, thanks. I prefer peanuts.

**\*What do you call a blind dinosaur?**

Do-you-think-he-saurus??



**\*Why are fish so smart?**  
Because they live in schools.

**\*What do you call a computer superhero?**  
A Screen Saver.



**Knock, knock.**

Who's there?

Woo.

Woo, who?

Don't get so excited, it's just a joke.

## FUN FACTS

- There are 119 grooves on the edge of a quarter.
- A camel has three eyelids.
- No piece of paper can be folded more than seven times.
- Only male turkey's gobble.
- 1.3 billion pounds of peanuts are produced in Georgia each year.
- Holland is the only country with a national dog.
- TV dinners originated in the Arctic.
- All porcupines float in water.

## Words to Find:

- |           |             |
|-----------|-------------|
| BLUE      | CENTRALPARK |
| COLUMBIA  | LIONS       |
| MANHATTAN | NEWYORK     |
| NYPH      | RESEARCH    |
| ROSE      | SPRING      |
| TULIP     |             |



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K N A M A N H A T T A N S S U
P R E S E A R C H B U B E K D
X J M Z C W T Z P H W L R N S
X U T U B H S I N N K O L J G
P C F D A S L S O Y Y W Y S N
R B X H P U W H I W R F T N K
U K X R T C K R E S C S G P K
N L I L M Y O N T F N R K G T
V N K C R S S T G T V O V S K
G B L U E H V Q W U E X I U G
U K I Q N Y P H N O E G A L Q
A X A I B M U L O C Q Q L K X
B V W I W P U R H P Y D M E Q
U S J E K R A P L A R T N E C
S Q T D W U P D G T O T E D M

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