As we approach the completion of our second full year as a Provisional Section, I would like to thank the P-SATT leadership team and its membership for their contributions to our success. Our membership has surpassed 220 and we are now accepting affiliate members who are not eligible for membership in the AAP, but hold a masters degree or doctorate (or equivalent) in pharmacy or other health science concentration and are interested in the goals of the Section. We completed a very successful educational program at the 2011 NCE led by noteworthy speakers such as Drs. Dianne Murphy (FDA), Lisa Mathis (FDA), Paul Offit (Children's Hospital of Philadelphia) and our section’s own Andrew Schuman. Planning is well underway for another impactful program at the 2012 NCE program in New Orleans. In addition, our leadership team has authored guest articles for other Sections to continue to spread the word about P-SATT.

In this issue, our Section contributing authors will be covering a number of important and diverse topics including the Best Pharmaceuticals for Children Act (BPCA), the Sunshine Act, and FDA’s Bad Ad program. The newsletter will also include a patient advocacy article written by Lindsey Elsaesser on the importance of pediatric clinical research in her daughter Evie’s life and the impact it has had on her family. Lindsey has also kindly agreed to speak live on this topic at our 2012 NCE program.

We are very encouraged by the growth and success of our young Section and look forward to another productive year. P-SATT is uniquely positioned to assist the Academy in addressing a number of the Pediatrics 2020 megatrends (PEDIATRICS Volume 126, Number 5, November 2010) and we look forward to your continued passion and participation in the work of our Section.
Letter From the Editor
Seth Toback, MD, MMM, FAAP
Newsletter Editor, Listserv Moderator, PSATT

If this newsletter had a theme it would be connectivity. In this edition we will see how those that work in drug development, those that interact with the pharmaceutical/biotechnology industry and patients are all interconnected. We have articles on the Federal Sunshine Act and the Bad Ad act which highlight the ever changing relationship between industry and practitioners. We have articles exploring new drug and device development and stories on how those drugs impact the lives of patients. We end this newsletter with articles describing educational opportunities which may help create the next generation of innovators.

I sincerely hope you enjoy reading this newsletter. If you have learned something new, share that information with a colleague, patient or friend. Feel free to share this newsletter as well. To encourage feedback we have provided contact information on our contributors so feel free to contact them directly with questions, comments or feedback.

Happy reading,
Seth

The Federal Sunshine Act:
Transparency as a Component
of Addressing Financial Conflict of Interest

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The practice of medicine is based on trust that the practitioner is acting in the best interest of patients and that the information upon which medical decision-making is based is valid and objective (albeit sometimes imperfect). Recently, concerns have been raised that financial and other conflicts-of-interest (COI) represent a significant threat to public trust in medicine, including medical research. While recognizing that many types of COI may be problematic, financial COI often take center stage, as they are more easily identified and are quantifiable.

In 2009, the Institute of Medicine published a comprehensive report Conflicts of Interest in Medical Research, Education and Practice, which focused on financial COI, particularly those at the interface of the relationships between physicians and medical institutions and the pharmaceutical industry. Key elements in dealing with COI include assuring transparency/disclosure and active management. Addressing COI is important to effective and integral collaboration between academic researchers and industry.

Legislation related to financial COI has been traditionally a state-based initiative. However, in 2009, Senators Grassley and Kohl introduced federal legislation entitled The Physician Payment Sunshine Act to increase transparency of the financial aspects of pharmaceutical relationships. The Act was endorsed by pharmaceutical trade organizations and professional medical organizations and its provisions were enacted in March 2010, with the signing of the Patient Protection and Affordable Care Act. The Sunshine Act requires drug, device and medical supply manufacturers to publically report gifts and payments to physicians and academic

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medical institutions (teaching hospitals). Recently, the Supreme Court has decided to hear challenges to the Patient Protection and Affordable Care Act. It is not clear what affect (if any) this will have on the implementation of the Sunshine Act component. However, there is a risk that if the Supreme Court finds that ACA unconstitutional in its entirety, the Sunshine Act provisions would also be struck down.

The Act required that the Department of Health and Human Services provide guidance about the details for reporting and the methods for public access by October 1, 2011, but this was delayed. In December 2011, the Centers for Medicare and Medicaid Services (CMS) published a proposed rule for the physician payment sunshine provisions of the Affordable Care Act. The proposed rule provides the agency’s draft guidance for stakeholders and solicits public comment on several key issues, including the definitions of covered entities and recipients, the methods for categorizing payments, timing and types of reporting, compliance, impact of the regulations, etc. Comments were due by February 17, 2012, and CMS has proposed that reporting begin after the final guidance is issued by CMS (initial reporting is expected now to be in 2013).

The details of the reporting requirements and the proposed guidelines for implementation (which also provide some clarification) are somewhat complex, but the essential elements are summarized below.

- Manufacturers of drugs, devices, biological, and medical supplies covered by Medicare, Medicaid and the Children’s Health Insurance Program (excluding over-the-counter products and devices exempt from pre-marketing notification to the FDA, e.g., tongue depressors, etc.) are required to comply with the Act.

- Manufacturers must annually report “payment and other transfer of value” (i.e., cash or equivalent; in-kind items or services; stock, stock options, or any other ownership interest, dividend, profit, or other return on investment; and any other form of payment determined by the Secretary HHS) to “covered recipients.” Group Purchasing Organizations have certain reporting requirements related to ownership or investment interest by physicians or immediate family members.

- “Covered recipients” include 1) doctors of medicine and osteopathy, dentists, podiatrists, optometrists, and licensed chiropractors, and 2) teaching hospitals.

- Categories of payment include: consulting fees, compensation for services other than consulting, honoraria, gifts, entertainment, food, travel (including the specified destination), education, research, charitable contributions, royalty or license, current or prospective ownership or investment interest, direct compensation for serving as faculty or as a speaker for a medical educational program; grant, and any other nature of payment or transfer of value as defined by the Secretary HHS. Excluded from the reporting requirement are transfers of value < $10 unless aggregate exceeds $100 in a calendar year; product samples not intended for sale and intended for patient use; educational materials that directly benefit patients and intended for patient use; the short term loan (not to exceed 90 days) of a covered device to permit its evaluation by the covered recipient; items or services provided under contractual warranty; transfers when then the covered recipient is a patient and not acting in a professional capacity; discounts and rebates; in-kind items for the provision of charity care; a dividend or other profit distribution from ownership or investment interest in a publicly traded security or mutual fund; provision of health care to employees by self-insured applicable manufacturers; payment for non-medical services of a licensed non-medical professional; payment solely for services with respect to a civil or criminal action or an administrative proceeding; those made indirectly to a covered recipient through a third party in cases when the applicable manufacturer is unaware of the identity of the covered recipient.

- The information (without the National Provider Identifier) will be made publicly available in a format that is downloadable, searchable, and easily aggregated; and HHS is required to provide reports to Congress and the states on an annual basis.

- If manufacturers fail to report in a timely manner, they are subject to penalties of $1,000-$10,000 for each infraction ($150,000 maximum per year), and, for those who knowingly fail to report, penalties of $10,000-100,000 ($1M maximum) may be imposed.

Although implementation has been delayed a bit, there
is now increasing momentum by CMS. The proposed rule has laid out the first view of the details of the process, including some estimates of its cost and impact. Since the introduction of the Act, the potential benefits have been clear, including increased transparency, identification of financial COI, and ferreting out those who engage in activities that violate federal kickback and other laws\textsuperscript{12}. But it also has raised a number of concerns, including its potential negative impact on interactions between researchers and industry in the development of critical innovations for children, public confusion between direct personal payments to physicians and fee-for-service payments for collaborative clinical trials or other research, the bureaucracy and cost of the system, potential impact on availability of financing for continuing medical education for physicians, and its value relative to existing state and “voluntary” and institutional reporting.

We have a duty to protect the integrity of the research and development process and the public’s trust in medical research and innovation. In doing so, we need to assure that the interests of children are first and foremost and that we avoid circumstances where this primary interest is compromised. Especially in pediatric drug and device development, collaboration between industry and academic researcher is often elemental. Orphan drug development for rare metabolic diseases and therapeutics in Cystic Fibrosis are examples of successful and highly productive collaborations. Processes to enhance transparency of these relationships are laudable and necessary, but in parallel we need to ensure that legitimate collaborations are fostered and that both the benefits and risks of these relationships are explicit.

Public comment on the current CMS proposed rule provides an opportunity for individuals, professional societies and others to help clarify and refine the details of the Act’s implementation. Previously, Bernard Lo, the chair of the IOM Committee on COI, and colleagues have pointed out some potential issues, such as “ambiguous” disclosure, and suggest approaches to standardization of public information (e.g., distinguishing direct payment to practitioners from institutional reimbursement for clinical trial costs)\textsuperscript{13}. Others have suggested a unique identifier system and extension of reporting to non-physician investigators\textsuperscript{14}. CMS has now requested comments on a number of aspects of the implementation process, including the types of reporting information (e.g., whether names of family members with investment interest should be included).

While increased transparency is necessary, it is not sufficient to address integrity and trust in academic-industry relationships and other collaborations with financial aspects. In addition, there needs to be a robust process for review and management (including an option for prohibition if necessary) of COI. The NIH has recently promulgated guidance for COI management that represents an important step\textsuperscript{15}.  

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The Federal Sunshine Act: Continued from Page 4

This guidance provides reasonable controls, while recognizing the value of legitimate scientific relationships, and places responsibility for assessment and management of COI with academic institutions.

References:


Have you heard about the Bad Ad Program? If you visited the Food and Drug Administration's (FDA) Bad Ad booth at the October American Academy of Pediatrics National Conference and Exhibition (AAP NCE) in Boston, you may have learned that the Bad Ad Program is FDA's new initiative to encourage health care professionals to recognize and report misleading prescription drug promotion.

Specifically, the Bad Ad program is an educational outreach initiative, targeting health care professionals. The program is designed to enlist the help of health care professionals to ensure that prescription drug promotion is truthful and not misleading. The program also helps explain what constitutes appropriate promotion and how to report potential violations. As part of the Bad Ad program, FDA created a unique phone number and email address for health care professionals to submit their concerns. To submit a Bad Ad report, health care professionals can simply call 877-RX-DDMAC (877-793-3622) or email BadAd@fda.gov. To help raise awareness about the program, FDA representatives have staffed exhibits at medical conferences, presented at grand rounds at teaching hospitals, and spoken to health care professionals at seminars.

FDA's Office of Prescription Drug Promotion (OPDP) administers the Bad Ad program. OPDP is charged with protecting the public health by ensuring that prescription drug promotion is truthful, balanced, and accurately communicated. OPDP is responsible for regulating all written and printed prescription drug promotional materials developed by sponsoring drug companies, including TV and radio commercials, sales aids, journal ads, patient brochures, and drug websites. OPDP also regulates oral presentations made by representatives of sponsoring drug companies, including those by sales representatives and hired spokespeople. OPDP staff works to ensure that prescription drug advertising and promotion is accurate and balanced in its presentation of risks and benefits. OPDP staff evaluates the claims in advertising and promotional materials to make sure they are consistent with FDA-approved prescribing information and supported by substantial evidence from clinical studies. The most common violations identified in prescription drug promotional materials include omitting or downplaying risk information, overstating product effectiveness, promoting off-label or unapproved uses, and presenting misleading drug comparisons. If it sounds or looks too good to be true, it probably is!

FDA's traditional method for monitoring prescription drug promotion relies on the review of promotional pieces submitted by sponsoring drug companies, complaints submitted by industry, and field surveillance conducted at medical conventions. Although the traditional method has been effective, FDA wanted a creative solution to be able to better monitor those promotional activities that occur in private, such as office visits by sales representatives and industry-sponsored dinners. Thus, the Bad Ad program was launched on May 11, 2010. As part of the program's kick-off, FDA issued a press release, and FDA Commissioner Hamburg issued a letter to more than 30,000 physicians detailing the new program.

Once a report is submitted to the Bad Ad program, OPDP’s Regulatory Review Officers evaluate the information and work to determine if the information can be used in an enforcement action or as part of ongoing surveillance activities. OPDP takes a risk-based enforcement strategy to achieve the most beneficial impact on FDA's public health mission. This includes focusing on newly approved products, products with significant risks, products cited for violations in the past, products cited in complaints, and products promoted with far reaching campaigns. Actions against false or misleading promotional activities and materials could include issuing an untitled letter, warning letter, or referral for criminal investigation. These enforcement actions stop the sponsor from making the misleading claims and, if issued a warning letter, request that they conduct a marketing campaign to correct the misleading messages.
As mentioned above, FDA’s traditional prescription drug promotion monitoring program is limited to promotions we discover. Many promotional activities occur in private settings – which is where you come in and why we need your help. By reporting false or misleading promotional activities or messages, FDA is better equipped to take appropriate actions to stop the misleading promotion. Ultimately, this is a team-based approach that benefits both health care professionals and their patients.

Over the course of the program’s first year, 328 reports of allegedly untruthful or misleading promotion were submitted by health care professionals, consumers, or industry representatives. This was a dramatic increase from the yearly average of approximately 100 reports prior to the program’s inception. Reports can be submitted anonymously, although most are not. FDA staff members evaluate each report submitted to the Bad Ad program in detail. During the first year of the program, FDA issued five enforcement letters directly linked to a Bad Ad complaint. The types of promotion that FDA acted against included oral statements made by a sales representative, a video posted on YouTube by a sales representative, a promotional website, a promotional mailer, and even a promotional magnet. Two of these five enforcement actions involved the field of pediatrics.

We are encouraged by the initial success of the Bad Ad program and plan to expand the program. Future initiatives may include a web-based continuing education program and targeted outreach to students in medical, nursing, and pharmacy schools, and to early career health care professionals.

In closing, I encourage you to take advantage of this program and report misleading promotional activities to FDA. As specialists practicing in the field of pediatrics, you serve a vulnerable patient population, making it even more important for you to stay vigilant when it comes to promotional messages. You are our eyes and ears in the field – and we thank you for that! For more information on the Bad Ad program, visit our website at http://www.fda.gov/Drugs/GuidanceCompliance RegulatoryInformation/Surveillance/DrugMarketing AdvertisingandCommunications/ucm209384.htm.

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Is it possible to develop medications that treat the core impairments of autism spectrum disorders (ASD) and genetic conditions like Fragile X syndrome (FXS)? As a developmental-behavioral pediatrician, I know that pediatric care for these conditions has typically consisted of a diagnostic work-up and referral for educational and behavioral treatments. While medications can be helpful for secondary symptoms such as hyperactivity (treated with psychostimulants) or irritability (controlled with antipsychotics), there are no drugs that address the core symptoms of any neurodevelopmental disorder, and certainly none that are FDA-approved for such uses.

The field of oncology has provided the best examples of new drug treatments that target the specific molecular pathways that are affected in each type of cancer. Now, this “targeted” approach is being applied to neurodevelopmental disorders. Research in neurobiology is elucidating the core pathophysiology of ASD, FXS, and other genetic syndromes, and suggests that it may be possible to improve social function, learning, and cognition for patients with these conditions. In FXS, studies in animal models show that synaptic plasticity is abnormal. According to the “mGluR theory of FXS,” these abnormalities result from excessive signaling downstream of the “metabotropic glutamate receptor type 5” (mGluR5).1 Multiple laboratories have shown that the synaptic and behavioral abnormalities associated with FXS can be rescued either by blocking mGluR5, or by genetically “knocking-down” mGluR5.

Another line of research shows that there is an elevated ratio of excitatory to inhibitory neurotransmission in FXS. Data from animal models show that levels of gamma-amino butyric acid (GABA), the primary inhibitory neurotransmitter, are too low, and brain circuits tend to be hyperexcitable.2 In functional MRI studies of human patients with FXS, there is an analogous finding: the amygdala becomes hyperexcited when patients view pictures of faces.3

Can these insights be translated into new treatments for patients with FXS? Yes. In fact, several companies are working to do so. A Phase 2 study of AFQ056, an mGluR5 negative allosteric modulator (effectively, an antagonist) was published early in 2011.4 This study enrolled 30 adults with FXS, and was sponsored by Novartis. There was no improvement in the full study population, but there were hints of behavioral improvement in a very small study subgroup (n=7). Two follow-up studies are now underway, in adults and adolescents (clinicaltrials.gov identifiers NCT01253629 and NCT01357239).

My own company, Seaside Therapeutics, is testing STX209 (arbaclofen) in children and young adults with FXS. STX209 is the active enantiomer of baclofen, and is a specific agonist of the GABA-B receptor. Animal studies of STX209 show that it has the same effects as mGluR5 blockers. In a Phase 2 clinical study (n=63), STX209 did not show benefits in the pre-specified analyses, but a post-hoc analysis showed benefits in the full study population on a measure of social avoidance. (This new measure had not yet been validated when the study began, so the analysis was not pre-specified).5 Two Phase 3 follow-up studies are underway, in subjects aged 5 to 25 years old. (NCT01282268 and NCT01325220)

ASD also is hypothesized to show an elevated ratio of excitatory:inhibitory neurotransmission, suggesting that medications like STX209 could have relevance in that population.6 A controlled Phase 2 study of STX209 in ASD is now underway (NCT01288716). Another potential therapeutic approach to ASD is to administer oxytocin (or analogs of oxytocin).7 Most pediatricians already know of oxytocin’s role in lactation, and animal research suggests that it has a key role in social bonding. A few small-scale, very short-term studies in healthy volunteers and

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in individuals with ASD suggest that it may increase social orientation and interpersonal trust.  

Research on animal models of many other genetic syndromes have elucidated core aspects of the brain pathophysiology, and have shown that learning and memory can be improved, even in mature adult animals.  

For example, in Rett syndrome, abnormalities of the autonomic nervous system, brain morphology, and lifespan in animals can be improved by targeting the regulation of brain-derived neurotrophic factor (BDNF), which is reduced in Rett syndrome.  In mouse models of Down syndrome, treatment that blocks excessive inhibitory neurotransmission (the opposite of the pathology in FXS) improves learning and memory. Analogous research is being conducted in several other conditions, including neurofibromatosis, tuberous sclerosis types 1 and 2, and Angelman syndrome.

When I entered the subspecialty of Developmental-Behavioral Pediatrics, I didn't believe that the treatment options could someday include truly therapeutic medications. None of the drugs discussed above have come through Phase 3 studies yet, obviously none are FDA-approved, and there are many hurdles in study design and clinical assessment (and other areas!) that have yet to be overcome. But the field now holds promise that it never has before.

References:


When our daughter Evie was born, we held on for dear life, literally. During the 20th week of my pregnancy we had been given a lethal diagnosis for our second child. Her bones were translucent on ultrasound; she had beaded ribs and showed signs of possible fractures. Her limbs were bowed and measured weeks behind normal size. The doctors concluded she had Type 2 Osteogenesis Imperfecta and her lungs wouldn’t have enough support from her fragile body to breathe for long. If she survived the second half of my pregnancy and delivery, Evie was expected to live for minutes, maybe hours then die due to respiratory failure. We were devastated.

On September 19, 2009 Evie survived birth at 37 weeks and we started “comfort care.” She weighed 6 pounds 11 ounces, had short arms and legs, and labored breathing. She made it through the night and the following morning had a full set of skeletal x-rays and an ultrasound of her brain showing weak bones, but nothing life threatening. We didn’t have a diagnosis, but we had our baby girl. To the surprise of all of our doctors Evie came home with us a few days later.

Two weeks following her birth, Evie was hospitalized with unexplained seizures and low oxygen saturation. The geneticist who had come to look at her the night she was born combed through her labs to find that she had low alkaline phosphatase on a blood panel. He concluded that she may have “hypophosphatasia” and remembered a clinical trial he had heard about at a conference.

When my husband and I heard the words “clinical trial,” and “investigational drug,” we were extremely cautious. From what we knew, our daughter would be the tenth child in the world to try the medication, and the only one with seizures. Our tireless doctor brought us two more files of paperwork, the first on hypophosphatasia and the second on the clinical trial. All other children recorded with infantile hypophosphatasia and seizures had died before the age of 18 months. The first nine children on the trial had no severe adverse events, all were growing and thriving. When Evie’s case was presented to the company sponsoring the investigational drug, it was clear that seizures were not a good indication of survival, but they wanted her in the clinical trial nonetheless.

With limited options our decision became very clear. We spent nearly two nervous months waiting, and were thrilled when the trial was approved by The Nebraska Medical Center, meaning we wouldn’t need to move. Evie started the investigational medication with a subcutaneous injection and an overnight stay in the hospital in December of 2009. This was followed by injections in the hospital and monitoring lasting two to four hours, three times a week at the hospital with two year old sister, Lyla, in tow. These visits lasted for the first three months until we were able to administer the medication at home. As a mother who planned the vague details of her daughter’s funeral, this time with my girls was precious and cherished.

At the start of the protocol we were overwhelmed with blood draws, urine samples, kidney ultrasounds, and a low calcium diet. December 22, 2009 we went home with portable oxygen that would become our constant companion 24 hours a day for the next 17 months. The following January, Evie stopped breathing in the car and we spent a week in the hospital figuring out she needed a car-bed. We spent the entire month of February 2010 in the hospital as she had contracted RSV and was on a ventilator for 8 days. These were the hardest days of my life, I have never felt so desperate or exhausted but losing her never entered my thoughts. In July of that same year Evie had skull decompression surgery for craniosynostosis, and a follow up surgery December 5, 2011.

Evie is still enrolled in the clinical trial, which is ongoing. She continues to thrive and our hospital visits have grown farther apart, from days to weeks to months. Her seizures are rare and under control. She is still well under the zero percentiles in height and weight, but has maintained steady growth. Evie’s geneticist has become a close contact and we credit him with her success. We have incredibly difficult memories of the hard times of that first year, but the prayer and petition for Evie’s life sustained us. Nothing compares to watching her learn to talk, crawl up the stairs, or pull herself up to stand. We are planning a three year old party with our precious girl, who is eagerly anticipating opening presents. She hasn’t learned to walk yet, but her paper ripping and shrieking with excitement skills are right on target. We don’t know what Evie’s future holds and that’s okay, we are just delighted that she’s here.

A link to the NEJM manuscript and news article concerning this clinic trial are below:


I am sorry to report that the information age has provided us with too much information. After years of wishing for more, many of us find ourselves wishing for less. We are constantly inundated with news, opinion, and advertisements, to the point where it has become very difficult to separate the wheat from the chaff. The modern issue of information overload has been shown to reduce productivity and affect mood, and the problem is growing as we are exposed to increasing volumes of data.

Despite the chaos, this vast sea of information has inherent value. As anyone who follows professional baseball knows, advanced statistical and data analysis has become integral to the long term success of any team. The recent movie Moneyball (from the excellent book by Michael Lewis) portrays the rise of the 2002 Oakland Athletics based in part on their rigorous and novel use of an individual’s statistics to better quantify player value. The unlikely hero of the story is the very unathletic math nerd whose analyses are derided by the old guard. Ultimately the modern analytics win out and the team is better for it.

The problem of information overload has become especially acute in the practice of medicine, where technology now provides us with a spectacular volume of clinical data, but with little additional support to deal with it. A patient in a modern ICU will produce many gigabytes of data every day, yet only a tiny fraction of these data will actually be analyzed by any human or computer. Thus medicine is ripe for systems with the capability to exploit this trove of information.

In February of 2011, the IBM computer named Watson defeated two of the most successful Jeopardy players in the game’s history using advanced natural language processing, knowledge representation, and machine learning. After this impressive feat, it was announced that physicians at Columbia University and the University of Maryland were exploring ways to apply this technology to clinical diagnosis. I suspect that this announcement may have caused some consternation amongst my colleagues. Becoming an accomplished diagnostician takes decades of training and experience—it is disheartening to think that one day a desktop computer with a few terabytes of memory could reproduce that level of expertise. On the other hand, it is easy to see that computers have an amazing capacity to improve technological fields; why should medicine be any different? It is my suggestion that we embrace the advent of these technologies. I suppose that it is theoretically possible that physicians will be replaced by compassionate, medically omniscient robots in the future, but for the moment it seems clear that computers will continue to serve as medical tools, no different from a blood pressure cuff or an otoscope.

One such set of tools that might be of value is ‘alternative vital signs’ that can better represent the underlying physiologic dynamics of a patient. While traditional vital signs have proven value and are generally straightforward to capture, they rarely provide any physiologic specificity. Calculation of these alternative vital signs will clearly require overhead in terms of signal processing and hardware, but they will eliminate the traditional constraints of human calculation. Additionally, they will shed new light on the relevant physiology where traditional vital signs fall short (e.g. heart rate may be generally correlated with cardiac output in a post-operative patient, but it certainly isn’t a reliable proxy). Alternative vital signs will give us the opportunity to ‘see’ into a patient’s physiology in a way that was not previously possible, and allow us to prescribe more timely and efficient treatment.

Another tool set can be found in patient monitoring alarms. The majority of physiologic monitoring currently in use comes in the form of binary (on/off) alarms triggered at some threshold. These alarms are notoriously finicky, and even when they are capable of presenting an accurate reflection of a patient’s physiologic state, they may not be of much diagnostic value. These weaknesses lead to alarm fatigue among practitioners, reducing the overall value of the system. It is a given that monitoring systems will always generate some amount of corrupted or imperfect data. Instead of building rigid analytic systems that demand perfect inputs,
we must accept the existence of incomplete and incorrect information. Mathematically, this amounts to the adoption of probabilistic physiologic and analytic models that quantify risk. Practically, it means presenting 'grayscale' information to clinicians in an organized, efficient, and intuitive manner. We need to take advantage of the brain's ability to weigh treatment options based on more abstract factors, while utilizing the computer's ability to churn through data and distill information into a manageable volume.

With each of these technologies, there will clearly be a considerable acceptance hurdle. Medicine is slow to adopt broad clinical changes, especially when it comes to teaching the old guard new tricks. It is inevitable, however, that these types of computational technologies will become critical tools of modern medicine. The hope is that the development can be guided to ensure that physicians are allowed to do what they do best - make decisions.
Despite recent advances in medicine, a paucity of evidence still exists on the dosing, safety and efficacy of many medications used to treat children. In 1997 the Food and Drug Administration (FDA) Modernization Act provided an incentive of an additional six months of patent exclusivity in exchange for industry performance of pediatric studies as requested by FDA in a Written Request. In 2002 Congress enacted the Best Pharmaceuticals for Children Act (BPCA), which continued the exclusivity provision and added a role for the National Institutes of Health (NIH), for the performance of pediatric clinical trials in cases where the NDA or ANDA holder declined the FDA’s Written Request. The role of the NIH, specifically the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) to which the responsibility for implementing this legislation was delegated, is to prioritize therapeutic areas and specific drugs within those therapeutic areas requiring study, and to publish this list annually in the Federal Register; sponsor pediatric clinical trials of prioritized drugs; and submit the data from these clinical trials to FDA for labeling changes. The NIH also has the capability to submit and negotiate Proposed Pediatric Study Requests (PPSRs), which are draft Written Requests, with the FDA.

Four criteria were initially considered for prioritization: existence of safety and/or efficacy data; need for additional data; determination of health benefits to be derived from further study; and need for reformulation. In 2007, the prioritization criteria added therapeutic gaps, potential health benefits of research, and infrastructure. Input has been requested of stakeholders in this annual process, including representatives from the Institutes and Centers of the NIH, FDA, the American Academy of Pediatrics (AAP), advocacy groups, and experts in numerous areas including general and subspecialty pediatrics, and clinical pharmacologists.

The NIH has sponsored pediatric clinical trials for the following medications, which are being used as part of routine clinical care, under an Investigational New Drug application (IND). A Data and Safety Monitoring Committee oversees the safety of the studies, and a Data Coordinating Center is responsible for data collection and regulatory activities. The bolded studies below are completed, and data are in the process of being submitted to FDA. The legislation mandates that the data be available publicly in the FDA docket; all data will be submitted to both the IND and to FDA docket in de-identified PDF format.

- **Lorazepam for sedation:** randomized, blinded, active comparator pharmacokinetic (PK), pharmacodynamic (PD), safety and efficacy trial of lorazepam vs midazolam for sedation in children receiving mechanical ventilation;
- **Oral baclofen for spasticity in cerebral palsy:** pharmacokinetics and pharmacodynamics (PK/PD), safety and efficacy of oral baclofen in children with spasticity
- **Meropenem for severe intra-abdominal infections in infants:** PK, safety and efficacy study for treatment of suspected necrotizing enterocolitis in neonates
- **Nitroprusside for blood pressure control:** Study 1-randomized, double-blind, dose-response, safety and efficacy study of children undergoing surgery who require blood pressure reduction; Study 2-study to determine presence of tachyphylaxis during long-term infusion
- **Hydroxyurea for sickle cell disease in young children:** (co-funded with NHLBI): randomized, double-blind, placebo controlled PK, safety and efficacy study of oral hydroxyurea for young children with sickle cell disease. A liquid formulation of hydroxyurea was required for these young children; a relative bioavailability study to compare this liquid formulation to the commercially available capsule is ongoing.
- **Vincristine in pediatric cancers:** safety and PK study (co-funded with NCI/COG)
- **Actinomycin-D in pediatric cancers:** safety and PK study (co-funded with NCI/COG)

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• Methotrexate for children with high-risk acute lymphoblastic leukemia: study of neurocognitive outcomes (co-funded with NCI/COG)

• Daunomycin in pediatric cancers: effect of body habitus on drug disposition and effect (co-funded with NCI/COG)

• Dopamine feasibility study in neonatal hypotension (co-funded with the Neonatal Research Network);

• Lorazepam for status epilepticus: Study 1-PK study to determine the appropriate dose for Study 2; Study 2-randomized, double blind, active comparator (diazepam) safety and efficacy trial. Due to the difficulty of obtaining informed consent from parents in this emergency situation, the FDA issued an Exception from Informed Consent for this trial, the first for a pediatric trial; procedures have been followed under this Exception, including community consultations at all study sites.

• Lithium for mania: **Study 1-PK/safety trial to determine the appropriate dose for Study 2;** and Study 2- a double-blind, placebo control safety and efficacy study which is ongoing.

• IV azithromycin in neonates with Ureaplasma urealyticum pneumonia and prevention of bronchopulmonary dysplasia: **Study 1 - PK study to determine the appropriate dose for Study 2;** and Study 2- randomized efficacy/safety trial which is ongoing.

• Morphine for neonatal pain: PK, pharmacogenomics, safety and efficacy of morphine sulfate for pain management in neonates, which is ongoing.

• Isotretinoin for neuroblastoma: data from a completed NCI/ Children's Oncology Group trial will be submitted to the FDA for a new indication (isotretinoin is currently labeled for acne). A PK study comparing the current capsule formulation to a new liquid formulation is planned.

In evaluating the challenges in the implementation of BPCA, several needs have emerged. Neonates are underrepresented in drug development, despite urgent need for therapeutic strategies in this unique and fragile population. There is a need for validated pediatric-relevant outcome measures. To address the BPCA infrastructure needs, we have therefore co-funded, with the National Institute of General Medical Sciences, pediatric clinical pharmacology training sites at several NIGMS-funded institutions and have funded a T32 pediatric clinical pharmacology training initiative under an NICHD Request for Applications (RFA). Pediatric clinical trials infrastructure has also been an unmet need. We solicited a Request for Proposals (RFP) in 2010 for a Pediatric Trials Network contract, and funded Duke University in 2010 to perform this function. In 2010, two task orders were funded, and in 2011 10 more task orders to perform clinical trials in therapeutic areas prioritized under BPCA. The primary focus of these initial studies was in the area of neonatology.

There is a clear lack of commercially available pediatric formulations, and many formulations that are developed for use in pediatric clinical trials are not commercialized following trial completion. The scarcity of these dosage forms creates many problems, including lack of treatment efficacy, dosing errors, and adherence problems. The pediatric market is small, and so there is limited financial incentive to produce such dosage forms. The NICHD funded an NIH-FDA Intra-Agency Agreement (IAA) in 2010 as a partnership between the two agencies. The goal is to develop an algorithm for development of pediatric formulations with the following properties: solid and orally dissolvable; stable at high heat and humidity; tasteless or taste masked; correct dosage increment for infants; and use of minimal, safe excipients. The NIH and FDA are working together to develop a technically feasible platform using the chemical properties of drug molecules to determine what types of technologies might be used to produce an appropriate pediatric dosage form. The results of this IAA are publicly available; the first report from the IAA looking at the chemical properties of drugs approved by FDA can be found on the NICHD BPCA web site at [http://bpca.nichd.nih.gov/collaborativeefforts/initiatives/index.cfm](http://bpca.nichd.nih.gov/collaborativeefforts/initiatives/index.cfm) and on the FDA web site at [http://www.fda.gov/scienceresearch/specialtopics/pediatrictherapeuticsresearch/default.htm](http://www.fda.gov/scienceresearch/specialtopics/pediatrictherapeuticsresearch/default.htm).

NICHD welcomes public involvement in this important BPCA process. Involvement can be either in the prioritization process or as a clinical site in the Pediatric Trials Network. Please contact Dr. Anne Zajicek at zajicek@n mail.nih.gov or at 301-435-6865 to discuss how you might be involved in this important initiative to improve pediatric drug information and labeling.
The Problem
Children account for about 25% of the United States population however the number of products developed to treat childhood diseases is disproportionately smaller than those developed for adults. In 2011, only 4 New Molecular Entities (NME) were approved by the U.S. FDA with pediatric indications. The history for medical devices is similar with only 2 of the 29 devices approved in 2008 labeled for use in children.

Product development (e.g., drugs, devices, biologics, diagnostics) requires significant capital and often involves significant financial risk. Additional barriers have been recognized in pediatric product development, including a small market, need for more complex and multicenter clinical trials, ethical issues and liability. Given that unmet medical needs in children are great (e.g., treatments for life-threatening orphan diseases, child-friendly drug formulations, new products for newborns, etc.), it is important to find innovative solutions to the challenges of product development for children. A number of initiatives, including the national Clinical and Translational Science Award (CTSA) consortium are making progress in addressing these issues.

Moving Toward an Innovative Training “Solution”
A knowledgeable and experienced workforce is needed to catalyze and sustain pediatric clinical and translational research. Graduate educational programs (Masters and Doctorate) in clinical and translational science have been developed at many CTSA institutions. In 2010, the Office of Innovation Development at Children’s National Medical Center in Washington DC launched a unique pediatric-focused initiative, the Laboratory for Entrepreneurial Achievement in Pediatrics (LEAP) Scholars Program. The LEAP Scholars program received initial funding from the Florence Nesh Charitable Trust through the PNC Foundation.

The LEAP Scholars Program is part of an institutional strategic goal to enhance the culture of innovation for children. It was established in parallel with educational programs (e.g. the Robert Fellowship) at the Sheikh Zayed Institute for Pediatric Surgical Innovation at Children’s National. LEAP provides a comprehensive experiential training platform in pediatric product development and academic entrepreneurship. It utilizes the innovation ecosystem in the DC metro region including the CTSA at Children’s National and George Washington University, other academic institutions, non-profit organizations, government scientific and regulatory programs, pharmaceutical and biotechnology companies, venture capital and other healthcare investors, and private foundations. During the 1 to 2 year training period, scholars regularly interact with a wide range of relevant stakeholders as part real-world pediatric product development projects.

LEAP Goals and Areas of Focus
The main goal of the LEAP Scholars Program is to teach professionals the comprehensive and pragmatic set of skills necessary to successfully develop products for pediatric populations. Six integrated focus areas help scholars understand key aspects of innovation development through experiential and theoretical learning. Table 1 summarizes the core area of focus and LEAP scholar functions in each area.

Needs and Discovery Driven Innovation: Finding unmet needs and the right opportunity
Innovation development requires analyzing and prioritizing unmet needs, identifying potential solutions and...
envisioning the path to a “product” that will be accessible to pediatric healthcare practitioners. In some instances, this process is initiated by a new discovery that is then applied to a specific disease or problem (i.e., a “push” process) or can be driven by the need, which informs the creation of a “solution” (i.e., “pull”). The LEAP Scholars Program attends to the skills and experience for conceptualizing these processes, applying them to actual situations, and troubleshooting real-life problems.

Managing and Supporting Innovation: Financial catalysts and partnerships
It is critical to understand the “value” proposition of new ideas and the process of leveraging value to assure sustainable product development. LEAP scholars learn skills in the management of intellectual property (IP) assets from invention disclosure to licensing and commercialization; learn methods for financing product development (including innovative partnerships in fields like orphan diseases); and gain practical experience in the business processes relevant to product development.

Figure 1. Interactions between LEAP scholars, mentors and other stakeholders in product development
### Table 1. Areas of Focus and LEAP Scholar Functions

<table>
<thead>
<tr>
<th>Area</th>
<th>Description</th>
<th>LEAP Scholar Functions/Goals</th>
</tr>
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<tbody>
<tr>
<td><strong>Needs &amp; Discovery Driven Innovation</strong></td>
<td>Involves two main processes: 1) Needs driven innovation by assessing unmet medical needs and finding best solutions/products. 2) Discovery driven innovation by applying new discoveries to a specific disease or problem and developing products in that area.</td>
<td>Learn, understand and apply the process of innovation by interacting with stakeholders, including: clinicians, scientists, patients/parents, NIH, FDA, industry and biotech. Perform needs analysis in specific hospital areas to identify unmet medical needs.</td>
</tr>
<tr>
<td><strong>Managing &amp; Supporting Innovation</strong></td>
<td>From idea generation to licensing and commercializing of the technology, this includes: when/how to protect inventions, management of IP, financing and the business side of product development.</td>
<td>Understand the importance and timing of IP protection and how to manage and support IP. Gain practical experience in the process of IP filing and business concepts in product development.</td>
</tr>
<tr>
<td><strong>The Product Development Pathway</strong></td>
<td>What are the necessary pre-clinical and clinical studies to safely and efficiently move a product to its clinical application and the necessary clinical development steps before FDA approval.</td>
<td>Learning how to write a product development plan and the necessary steps to answer product development-driven questions during pre-clinical and clinical development.</td>
</tr>
<tr>
<td><strong>Regulations &amp; Legislation</strong></td>
<td>Regulations and government incentives available for developing products in pediatrics and for diseases of low prevalence (Orphan).</td>
<td>Learn about BPCA, PREA, Orphan Drug Act, and other legislation and government incentives in developing products and research data in pediatric populations.</td>
</tr>
<tr>
<td><strong>Ethics &amp; Policy</strong></td>
<td>Conflict-of-interest (COI) management and other relevant ethical, compliance and policy considerations needed to assure high quality product development.</td>
<td>Learn and apply concepts in COI, risk benefit evaluation of clinical trials, human subjects protection, good clinical and manufacturing practices and informed consent/assent in pediatric research.</td>
</tr>
<tr>
<td><strong>Collaborations &amp; Entrepreneurship</strong></td>
<td>How to move forward products by synergistic collaborations and the importance of an &quot;entrepreneurial&quot; mind in this part of the process.</td>
<td>Understand the types of collaborations in product development as well as when/how to collaborate with external partners. Experience the importance of milestone-driven product development timelines.</td>
</tr>
</tbody>
</table>
Regulations and Legislation in Pediatric Product Development:
Maximizing the utilization of available programs and resources
A core part of the program is gaining knowledge about and application of laws, regulations, and government programs/incentives aimed at fostering innovation and product development in pediatrics. These include The Best Pharmaceuticals for Children's Act (BPCA), Pediatric Research Equity Act (PREA), Pediatric Exclusivity, the Orphan Drug Act, the Humanitarian Use Exemption, Therapeutics for Rare and Neglected Disease (TRND), and other relevant program. Working skills in the application of these resources are essential to product development in pediatrics.

Pediatric Product Development Ethics and Policy:
Designing scientifically and ethically sound programs, collaborations, and clinical trials
Throughout the program, attention is paid to assuring that scholars have required knowledge of conflict-of-interest management and other relevant ethical, compliance and policy considerations needed to assure high quality product development. As clinical trials represent one of the essential “tools” of product development, scholars are actively involved in planning, implementation, analysis and reporting of trial results.

Collaborations and Entrepreneurship: Finding the right partner and the right deal
Developing products for children involves collaboration among industry, pharmaceutical, biotechnology, academia, government and/or non-profit organizations to successfully take a product from an idea or concept to its safe use in children. Scholars provide critical evaluation (with mentorship) of active programs that involve interactions among stakeholders in the for-profit and non-profit sectors. The LEAP scholars are exposed to exemplar projects at different stages. To gain practical experience, scholars often serve as project managers for real time entrepreneurial initiatives.

Conclusions
Developing products for children requires professionals with the necessary skills to overcome some of the perceived and/or real issues of pediatric product development. Training professionals in product development and entrepreneurship relevant to the challenges in pediatrics is a foundation of progress in innovation for children. By combining knowledge, expertise and synergistic partnerships in a highly collaborative environment, the LEAP Scholars Program is helping to overcome some of the issues in pediatric product development and is currently helping to move ideas into products for the health and wellbeing of children. The program provides Scholars with the skills of academic entrepreneurship and equips them to serve as leaders and knowledgeable collaborators in the product development enterprise.

For more information about the LEAP Program please contact:
Edward Connor, MD, FAAP econnor@childrensnational.org or Pablo Cure, MD, MPH at pcure@childrensnational.org

References:


6. Report to Congress: Barriers to the Availability of Medical Devices Intended for the Treatment or Diagnosis of Diseases and Conditions that Affect Children October 2004 U.S. Department of Health and Human Services Food and Drug Administration http://www.fda.gov/MedicalDevices/ProductsandMedicalProcedures/ucm135105.htm#es


Is it possible to both practice and teach biomedical innovation within a hospital setting? That is what we are aiming to do at The Sheikh Zayed Institute for Pediatric Surgical Innovation. At not quite two years old, and named after the founder of the United Arab Emirates, the Institute consists of a diverse group of intellectually curious radiologists, surgeons, anesthesiologists, biologists, immunologists, geneticists, bioengineers, and computer scientists that came together thanks to a historic gift of $150 million from the Health of Abu Dhabi. Our mission? To make surgery more precise, less invasive, and pain-free for children.

Children’s National Medical Center in Washington, DC is the ideal setting for such an Institute, as many governmental institutions such as the NIH and the FDA are located within a few miles, and we can draw on the strengths of nearby world-class universities. In-house, we collaborate with experts in the many pediatric sub-specialties of our institution as we establish our research and development priorities. Our work today ranges from developing a device to measure pain objectively in non-verbal patients, in particular in neonates, to researching the promise of high-intensity ultrasound to treat tumors and exploring the potential of a robot-controlled endoscope for safer pediatric procedures.

Under the leadership of Peter Kim, MD, CM, PhD, the Sheikh Zayed Institute is taking an integrated approach to thinking about pediatric health care that includes:

- outstanding healthcare delivery, provided by our colleagues within Children’s National;
- translational research in pediatrics combining medicine, surgery, biological sciences, engineering, and business expertise; and, the topic of this piece,
- educational opportunities that are both informative and transformative, and contribute to our society’s need to develop leaders for the future.

One of our objectives from the very beginning as an Institute was to design a post-doctoral fellowship in biomedical innovation. Named after a beloved donor to Children’s National, The Joseph E. Robert, Jr. Fellowships in Pediatric Surgical Innovation are intended to support the development of surgeons, physicians, scientists and engineers into professionals who understand and practice biomedical innovation as an integral part of their careers.

Unique at the Sheikh Zayed Institute is the way in which clinicians and non-clinicians work side-by-side, identifying clinical needs, and brainstorming about possible solutions. The college- and graduate-level Student Innovators that we welcomed last summer found the diversity in our environment very enriching.

When our first class of Robert Fellows (two general surgeons, one urologist, and one biomedical engineer) arrived, they were immediately engaged in ongoing and new research projects across the Institute and began their study of innovation as a business discipline. They enrolled in the 45-hour Innovation Curriculum created to introduce faculty, fellows and staff to the principles of innovation management and to business models, intellectual property, and funding opportunities in the healthcare industry. Workshops covered best practices in areas such as effective brainstorming techniques, discovery-driven planning, project management, and presenting new product ideas. Over a period of several months they co-wrote a business plan for an innovation in neonatal care, presenting everything from a needs analysis to a market analysis for the expected product.

Our strategic approach of bringing business savvy to the service of researchers intent on creating new knowledge and bringing improvements to pediatric surgical health care builds economic opportunity and puts us on the cutting-edge of the profession in the 21st century. Our focus on the “bedside” in our educational programs will in turn inspire the next generation to greater heights.

For more information on the program contact Director of Education Martha M. Houle, PhD, at mhoule@childrensnational.org.
I am pleased to announce that since our fall newsletter of this year our section has grown to 225 members. We are one of the few sections in the AAP that are currently growing in size and we have you thank for it. Our grass roots membership campaign is really getting the word out about our section. We continue to hope that any member who enjoys being a part of the P-SATT will continue to reach out to colleagues or old friends from residency and encourage them to join. Remember, it costs nothing for AAP members to join the P-SATT so please pass along the word about our section. Our number of affiliated members also continues to grow with 4 members from diverse backgrounds such as non-AAP medical doctors, PhDs and PharmDs.

You may have noticed an e-mail from our section asking you to fill out a brief survey. We are hoping to add value to our membership by providing others information about your interests, work and place of employment. Our hope is this will allow like minded members an opportunity to network. So please fill out the survey when you can.

We have also worked on growth in both ends of the career spectrum by providing articles and information about our section to the newsletter for the Sections on Seniors and Young Physicians. We feel that both of these groups would benefit from learning about advances in therapeutics and other career options within pediatrics.

**Who Can Join?**
Membership in the section is open to Fellows, Specialty Fellows, Candidate Members, Post Residency Training Members, Honorary Fellows, Emeritus Fellows, and Corresponding Fellows with an interest in advances in therapeutics and technology. Also now any Affiliate Member can join. Affiliates are those who are not eligible for membership in the AAP and hold a masters degree or doctorate (or equivalent) in pharmacy or other health science concentration. Affiliates must submit and application and have a signed letter of support from an AAP fellow in good standing. There is no fee to join the Section as a regular member and a $40 fee for affiliate members.

**How to Join**
If you are already a member of the AAP and would like to become a P-SATT member, join online by:

1. Going to Member Center of the AAP website and use your AAP login and password.
2. Click on "Join a Section or Council" under Member Community
3. Choose “Advances in Therapeutics and Technology”, answer a few questions, and click “Submit”.

Membership applications can be found at:

Members: [http://www.aap.org/moc/memberservices/sectionform.cfm](http://www.aap.org/moc/memberservices/sectionform.cfm)

Affiliates: [https://www.formrouter.net/forms01@AAPED/2010_APP_Affiliate.pdf](https://www.formrouter.net/forms01@AAPED/2010_APP_Affiliate.pdf)

In our efforts to enhance communication between members with similar interests we have created a very brief survey. The information you provide will remain within the AAP and will be periodically shared with P-SATT members.

Survey can be accessed at: [https://www.surveymonkey.com/s/G89DT9S](https://www.surveymonkey.com/s/G89DT9S)

If you have any questions about membership please contact Seth Toback, MD, FAAP at TobackS@MedImmune.com or staff at jburke@aap.org.
Partners in Progress: Pediatricians Bringing Medical Advances to Patients

Program Description

The mission of the P-SATT is to advance pediatric health and well-being by collaboration, communication and education on the discovery and development of therapeutics and technology and their successful translation into practice. The program will target pediatric practitioners, researchers and others interested in new medicines and technology for children and the pediatric practice. Expert faculty will review the need for and study of medicines in children, alternative career paths for pediatricians and important new technology for pediatricians. The session will conclude with a one-hour reception open to all attendees to meet faculty, network with colleagues and learn more about the P-SATT.

- P-SATT Business Meeting/ Lunch (12:00-1:00PM)

- Introduction to H-program (1:00-1:15PM)
  Gwen Levy, MD FAAP (NCE Program Chair, P-SATT)
  - Introduction of Executive Committee
  - Review of mission, goals and objectives
  - Introduction of speakers and agenda

- Pediatricians Involved in the Process (Multiple Career Path Opportunities) (1:15-2PM)
  Moderator: Edward Connor, MD
  - Academia, private practice, industry, government, non-government organizations
  - Panel discussion

- The importance of pediatric clinical trials from a parent/family perspective (2-2:45 PM)
  Lindsey Elsaesser- parent; Richard Lutz MD FAAP FACMG-Genericist

- The Drug Label and Beyond (2:45-3PM)
  Ralph Kauflman, MD (suggested speaker)
  - Focus will be on what the label is (legally), how to read the label, how the label comes to be, and the new label format
  - Regulations around promotional activities & promotional materials.

- US Drug Development legislation for the practicing pediatrician-what do we need to know?
  (3-3:45 PM)
  John Bradley, MD
  - BPCA/PREA: Discuss legislation and what this means for the practicing pediatrician

Continued on Page 23
Welcome New Members
(September 2011 to March 2012)

Ihor Bilyk, MD, FAAP
Joshua Ephraim Chesir, MD, FAAP
Susan K. Cummins MD, MPH, FAAP
Pablo E. Cure, MD
Mitchell R. Goldstein, MD, FAAP
Kathleen Rachel Klemm, PharmD
Jill Ratner, MD, FAAP
Douglas Andrew Roepke, MD, FAAP
Roslyn Fleischer Schneider, MD
Timothy Owolabi, MD
Kimberly A. Silva, MD
Liza Ann Squires, MD, FAAP
Kenneth Hark Hong Tan, MD, PhD
Michael G. Vitale, MD, FAAP
Muhammad Waseem, MD, FAAP
William Charles Wassel, MD, FAAP
Keith A. Wintermeyer, MD, FAAP
Nancy Diane Witham, MD, FAAP

P-SATT Section Now Accepts Affiliate Members!

In May 2011, the AAP Board of Directors approved a request by the P-SATT to recruit affiliates to the Section. Affiliates are thus defined:

Those holding masters or doctoral degrees (or the equivalent) in pharmacy or other health science concentrations that contribute toward the discovery and advancement of pediatrics and who do not otherwise qualify for membership in the AAP.

An applicant for Section Affiliate Member must submit one letter of support from a Fellow or Specialty Fellow who is a member of the PSATT Section.

Do you know of a colleague who would be interested in joining the PSATT? There is no fee to join the Section as a regular member and a $40 fee for affiliate members.

Membership applications can be found at:

Affiliates: https://www.formrouter.net/forms01@AAPED/2010_APP_Affiliate.pdf

If you have any questions about membership please contact Seth Toback, MD, FAAP at TobackS@MedImmune.com or staff at jburke@aap.org.

AAP Provisional Section on Advances in Therapeutics and Technology Web Page Now Includes A Posting of Relevant Seminar and Webinar Resources for Members

The AAP Provisional Section on Advances in Therapeutics and Technology Web page now includes a list of meetings that may be of interest to Section members.

You can access the list at:
http://www2.aap.org/sections/pedsadvances/Meetings.cfm

Please note that this listing of meetings and conferences does not imply endorsement by the AAP Provisional Section on Advances in Therapeutics and Technology or the American Academy of Pediatrics.
From the AAP Early Brain and Child Development Work Group

Early Brain and Child Development (EBCD) is a current AAP strategic child health priority. A Leadership Workgroup is working on implementing EBCD principles throughout the Academy, as well as creating multidisciplinary partnerships, bringing health, education, business and communities together to ensure that every child has the best opportunity to meet his/her potential.

The foundation of the EBCD initiative is grounded in biology and developmental science, and there is a need to convey the understanding that there is a biological basis for disparities in health, education and future productivity. Toxic stress has potential lifelong consequences, and significant adversity in the early childhood years changes the architecture of the brain. Positive parenting and stable, nurturing relationships help immunize against the negative consequences of toxic stress, and pediatricians play an important role in promoting nurturing environments for their patients.

The AAP has released three new documents to help pediatricians and others understand how to reduce the precipitants of toxic stress in young children and mitigate their negative effects on health across the lifespan. The policy statements and technical report were published in the December 2011 and January 2012 issues of Pediatrics and can be found at:

**Policy Statement: Early Childhood Adversity, Toxic Stress, and the Role of the Pediatrician:**
Translating Developmental Science Into Lifelong Health

The policy statement discusses how pediatricians are ideally positioned to inform science-based policies and programs that prevent or mitigate the damage associated with such health-threatening adversities as poverty, maltreatment, parental depression, and exposure to violence.

**Technical Report: The Lifelong Effects of Early Childhood Adversity and Toxic Stress**

The technical report proposes an instructive framework that helps us understand how the biological consequences of psychosocial adversity are no less real than the damaging physical effects of poor nutrition or exposure to lead.

**Policy Statement: The Pediatrician's Role in Family Support and Family Support Programs**
[http://aappolicy.aappublications.org/cgi/reprint/pediatrics;128/6/e1680.pdf](http://aappolicy.aappublications.org/cgi/reprint/pediatrics;128/6/e1680.pdf)

This policy statement recommends opportunities for pediatricians to develop their expertise in assessing the strengths and stresses in families, in counseling families about strategies and resources, and in collaborating with others in their communities to support family relationships.

We encourage you to read the policy statements and technical report, as well as the summary article on the toxic stress documents in the January 2012 issue of AAP News [http://aapnewsde.aap.org/aapnews/201201#pg29](http://aapnewsde.aap.org/aapnews/201201#pg29).

In the months to come, you will be hearing more about the EBCD initiative and how you can make a difference in the health and well-being of children and their families, both now and across their lifespans.

Please feel free to share your comments or feedback on the toxic stress documents with Dr. Andy Garner (Andrew.Garner@UHhospitals.org); your comments or feedback on the family support statement with Dr. Jill Fussell (fusselljillj@uams.edu); and suggestions about the ongoing work of the EBCD Leadership Workgroup with Dr. David Willis (davidw@artzcenter.org).