STEPS TOWARD INDEPENDENCE

2008 ANNUAL REPORT

FOUNDATION FOR PRADER-WILLI RESEARCH

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Rachel Tugon
Board member since 2008
Executive Director, 2004-2008

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In 2007, we welcomed our first international partner, FPWR Canada. Among the other numerous accomplishments of the FPWR during 2007 and 2008 were:

Establishment of the Endowment for the FPWR, providing yet another vehicle for the support of PWS research

Continued and unprecedented success in fundraising, including the 2007 and 2008 FPWR Charity Golf Tournament in Washington, D.C. that each raised over $200,000 in a single day

Intensified governmental lobbying and advocacy efforts to increase the availability of public funds for PWS research

Co-sponsorship of the Archon X-Prize for Genomics, a project aimed at the development of new technology for diagnostic sequencing of the human genome

Reaching a total of 27 research projects funded since 2003, representing over **$1,000,000** committed to PWS research

LETTER FROM THE PRESIDENT

Dear friends,

What tremendous years 2007 and 2008 have been for the Foundation for Prader-Willi Research (FPWR)! We have experienced such exciting times, full of progress and hope. The FPWR has grown by leaps and bounds as more and more committed families join the cause. Our members are an amazing group of people and are determined to change the face of Prader-Willi syndrome (PWS). Our 2008 "Take the Lead … Change Their Future" Conference in Washington, D.C. focused on advocacy and the latest in PWS research, culminating in a visit to Capitol Hill, where we had the opportunity to make our voices heard on behalf of all those who struggle with PWS. We are looking forward to seeing many families and friends of FPWR join us again at our "Empower One … Strengthen All" annual conference on September 13-15, 2009 in Washington, D.C. At this year's conference we will again get up to date on the latest research developments in the area of PWS as well as visit Capitol Hill to continue to advocate for our loved ones affected by Prader Willi syndrome. Hope to see you there!

The success and accomplishments of the past two years are a direct reflection of your dedication and support. You are making a real difference in the lives of those with Prader-Willi syndrome. Still, despite our progress, individuals with PWS continue to struggle with their symptoms on a daily basis. We have so much work yet to do in order to extend and enhance the lives of those with PWS. Although we look forward to many more successes in 2009, there is no time to waste. Those who suffer with Prader-Willi syndrome are counting on you to take the lead and change their future!

Finally, I would like to thank our outgoing Board Members, Kathryn McGhee, Laurie Baskin and Carol Craig for their tireless and constant commitment to the FPWR for the last 6 years. We will miss your contributions to the board but know that your voice and passion will still be with FPWR.

Sincerely,

Lauren Schwartz Roth, Ph.D.

President, FPWR Board of Directors

FOUNDATION FOR
PRADER-WILLI
RESEARCH
Working Toward an Independent Future

“FPWR began as a tiny spark and we have now becoming a raging blaze with each and every member, donor and sponsor feeding the fire!”

LETTER FROM THE EXECUTIVE DIRECTOR

Dear Friends of FPWR,

As I reflect on FPWR as an organization and the work that we have done over the past five years, a sense of pride swells up in my heart and a renewed sense of hope fills my spirit. FPWR has exploded in size and scope since 2003 and we have each of you to thank for this. Your support for our ever-expanding schedule of events and your generous donations to our campaigns has helped us support 20 innovative research projects and this is just the beginning!

As an organization, we have been strengthened by a membership of intelligent, committed, creative families who, out of intense love for their children, are willing to offer their professional and personal skills to help build FPWR and meet our goals. The combination of incredible talents that our members bring to the table is exactly what we as an organization have needed to move forward.

The energy that has been created by all of our supporters will lead us down new pathways and help us secure the future for our children with PWS. Vince Lombardi said, "Individual commitment to a group effort — that is what makes a team work, a company work, a society work, a civilization work." That is also what makes FPWR work!

FPWR began as a tiny spark and we have now becoming a raging blaze with each and every member, donor and sponsor feeding the fire! With what we have all done together, and what we are going to do, FPWR will continue to lead the Prader-Willi community in the acceleration of PWS research. The research we support will give our children their best chance to have the lives they deserve--lives full of health, happiness, and choices, all the basic components of an independent future.

We have taken on a powerful foe in Prader-Willi syndrome, but we know that the love we have for these children is even more powerful than PWS. We believe that FPWR is the catalyst that will transform the lives of children with PWS. I am so very thankful to be a part of this organization, and I am thankful for each person who is, in any way, involved in making FPWR the agent of change that we all want it to be. We move forward knowing that the days ahead are full of hope and healing. Thanks again for all you have done to help secure the future for all of our precious children.

Sincerely,

Rachel W. Tugon

Former Executive Director 2004-2008

Member FPWR Board of Directors

FOUNDATION FOR PRADER-WILLI RESEARCH

Working Toward an Independent Future

WHAT IS PRADER-WILLI SYNDROME?

Prader-Willi syndrome (PWS) is a genetic disorder that occurs in one out of every 15,000-25,000 births. PWS affects males and females with equal frequency and affects all races and ethnicities. The symptoms associated with PWS are caused by a lack of active genetic material in a particular region of chromosome 15 (15q11-q13), but it remains unclear how inactivation of this region leads to the PWS characteristics.

Early on, PWS is characterized by low muscle tone in infants, with poor feeding and failure to thrive. Later, this is replaced by an unregulated appetite and a strong drive to eat. Individuals with PWS lack normal hunger and satiety cues. They usually are not able to control their food intake and will overeat if not closely monitored. Food seeking behaviors are very common. In addition, the metabolic rate of persons with PWS is lower than normal. Without appropriate dietary intervention and constant vigilance, the combination of these problems will lead to early onset childhood obesity and its many complications.

In addition to obesity, a variety of other symptoms are often associated with PWS, including growth hormone deficiency, abnormal body composition, speech impairment, scoliosis, sleep disturbances and learning disorders. Behavioral difficulties may include symptoms of obsessive-compulsive disorder and difficulty controlling emotions. Behavior and mental health issues can represent some of the most challenging aspects of caring for an individual with PWS.

PWS is a spectrum disorder and symptoms vary in severity and occurrence among individuals. With the benefit of an early diagnosis, access to growth hormone replacement therapy, and a good environment, those with PWS are accomplishing more than ever. Nevertheless, even as many with PWS have the intellectual capacity to live independently, the challenges of the disorder are limiting, and the vast majority of individuals with PWS are not able to live without constant supervision.

Currently there is no cure for Prader-Willi syndrome, but our goal is to change that. For many individuals who are affected by the disorder and their families, the elimination of some of the most difficult aspects of the syndrome, such as curbing the insatiable appetite, has the potential to dramatically improve the quality of life and open up an abundance of new opportunities. Through advancement of FPWR's mission, we intend to do just that.

KARSON'S KURE

Watch out, PWS!
Here comes Karson's Kure!!!

The Childs family of Hitchcock, Texas has put Prader-Willi Syndrome on notice that they are going to do everything they can to bring it down! In their very first fundraiser, Mandy and Chad, along with their family and friends, organized an event in honor of their son, Karson, 3, that raised $50,000 for FPWR—enough to fund an entire research project.

"It was a dream come true," said Mandy. "Chad and I are still in a state of awe as we think of what was accomplished that day."

Karson's Kure had something for everyone. The day began with a walk/run and continued with a silent auction, live entertainment, food, festival, car show, and more. To prepare for the event, the Childs advertised in the local newspapers and in the local schools. Friends and families passed out flyers in their neighborhoods, and in nearby communities. Thanks to the good weather, they had a large and enthusiastic crowd of 400-500 people.

As a follow-up to Karson's Kure, the group participated in the annual Christmas Parade by creating the first FPWR parade float. They passed out flyers and wore their event t-shirts "with pride."

All of us in FPWR are thankful for the energy and commitment that the Childs family and their friends have shown so early in their Prader-Willi journey. It is the sacrifice and dedication of families like this that has allowed FPWR to become the clear leader in Prader-Willi research.

FPWR ANNUAL CHARITY GOLF & TENNIS TOURNAMENT

FPWR has hosted an incredible event for the last three years, one that has raised over $450,000 to support PWS research. The FPWR Annual Charity Golf Tournament held outside Washington, D.C. has become our largest fundraising event and has allowed us to support PWS research at a higher level than ever before. Sponsored by the California State Society, this event has introduced FPWR and PWS to hundreds of people, including members of Congress, business leaders, and other D.C. area residents.

Amy Porter, a fundraising powerhouse and chief of staff for Rep. Ed Royce (R-CA), founded this event in support of her niece, Abby Porter, age 6, who has Prader-Willi syndrome. Due to the size of the events, Amy not only involved her family in the process, but also utilizes the services of Aventum, FPWR's management company.

"I love my niece and I want to do something to improve her life, and the lives of so many others like her with PWS," said Amy. "It gives me a purpose in life greater than any other."

Thinking further about the experience of fundraising, Jeff Porter, Abby's dad, notes another benefit within his own family.

"The bond between my brother, my sister, and me has grown tremendously strong through our work to support FPWR and research in Prader-Willi syndrome." said Jeff.

Involving the entire Porter family in this event brought benefits beyond the original purpose of the golf tournament. When Jeff reflects on the effects of fundraising in his own life, he says, "It deepens relationships with people. Some of our best supporters are my very good friends, and Abby's struggles and our efforts to address them have only strengthened those relationships."

Many people express a fear of fundraising, a hesitancy to ask others for money. In fact, few people are initially comfortable in this role, but when the stakes become high enough, this can and does change.

Recalling the days after Abby received the diagnosis of PWS, Jeff said, “I felt like I needed to do something. Call it ‘a guy thing,’ but men like to fix things. I am not a doctor, so I can’t fix the problems that my daughter has, but I know that others can if we can just equip them to do so.”

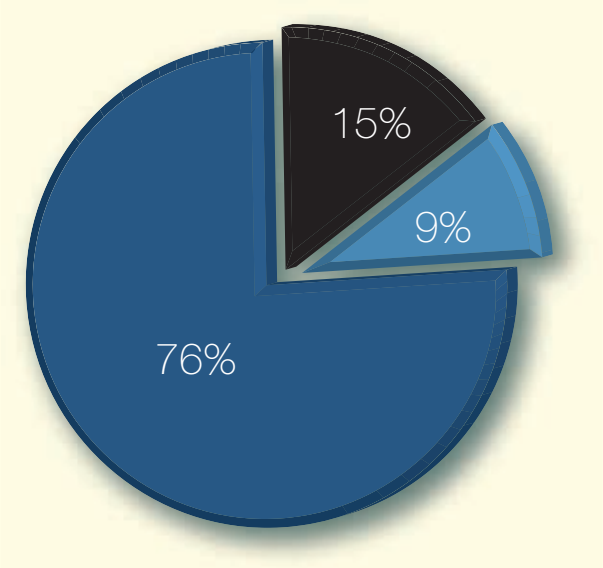
Although fundraising is not something that comes naturally to Jeff, he has learned that it is something that is necessary. “I can confidently say that asking people for money, even for a worthy cause, is not something that I was born to do. I really don’t know that anyone is, but fundraising can be learned, and anyone can be successful at it if they want to be.”

Equipping those who can make a difference is one of the major roles of FPWR. With the enthusiastic support of families like the Porters and events like the DC Golf Tournament, we will continue to enable investigators to unravel the mystery of Prader-Willi syndrome and secure the future for all of our loved ones.

FINANCIAL HIGHLIGHTS

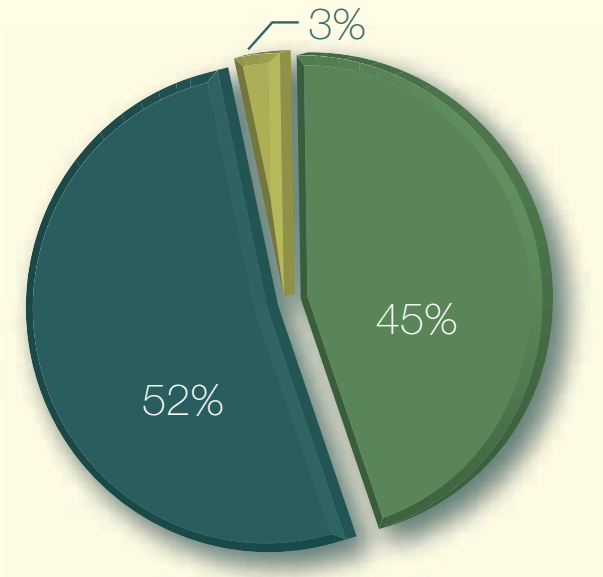
	Audited 2008	Audited 2007	Audited 2006	Audited 2005	Unaudited 2004*	Unaudited 2003*
Contributions	$250,101	$174,583	$143,828	$37,027	$155,198	$132,006
Event Revenue	288,165	345,282	376,456	195,763		
Event Expenses	(95,986)	(75,756)	(74,756)	(15,872)		
Total Public Support	**442,280**	**444,110**	**445,528**	**216,918**	**155,198**	**132,006**
Other Income	7,025		3,084	0		
Interest Income	15,950	19,614	10,952	5,743	1,334	1,196
Total Revenue	22,975	19,614	14,036	5,743	1,334	1,196
Total Public Support and Revenue	**465,255**	**$463,724**	**$459,564**	**$222,661**	**$156,532**	**$133,202**
Program	436,149	326,656	213,321	105,878	160,000	2,678
Management	85,959	45,296	16,149	10,853	8,652	4,171
Fundraising	53,368	29,691	18,281	10,115	0	976
Expenses	575,476	401,643	247,751	126,846	168,652	7,825
Increase in Net Assets	$(110,221)	$62,080	$211,813	$95,815	$(12,120)	$125,377
Expenses as a % of Total Expense						
Program and Educational Expenses	76%	81%	86%	83%	95%	34%
Management and General Expenses	15%	11%	7%	9%	5%	53%
Fundraising Expenses	9%	7%	7%	8%	0%	12%
	100%	100%	100%	100%	100%	100%
Fundraising Expense as a % of Revenue	11%	6%	4%	5%	0%	1%
Balance Sheet						
Cash	$556,670	$655,650	$492,820	$292,632	$174,421	$185,225
Total Assets	$624,670	$690,850	$593,804	$296,530	$174,421	$185,225
Research Commitments	$223,496	$202,500	$120,000	$35,000	$-	$-
Net Assets	$380,502	$488,317	$473,343	$261,530	$174,421	$185,225
Unrestricted Net Assets	$312,502	$453,817	$372,359	$257,632	$174,421	$185,225

FINANCIAL HIGHLIGHTS



FUNCTIONAL EXPENSES **$575,476**
for the year 2008

Management & General	$85,959
Fundraising	$53,368
Research Grants	$436,149



PUBLIC SUPPORT & REVENUE **$554,216**
for the year 2008

Contributions	$250,101
Fundraising/Events	$288,165
Interest/Other	$15,950

FINANCIAL HIGHLIGHTS

INDEPENDENT AUDITORS REPORT

Board of Directors

February 26, 2009

Foundation for Prader-Willi Research, Inc.

Los Angeles, California

We have audited the accompanying statements of financial position of the Foundation for Prader-Willi Research, Inc. (a nonprofit organization) as of December 31, 2008 and 2007, and the related statements of activities, cash flows, and functional expenses for the years then ended. These financial statements are the responsibility of the Foundation for Prader-Willi Research, Inc.'s management. Our responsibility is to express an opinion on these financial statements based on our audits.

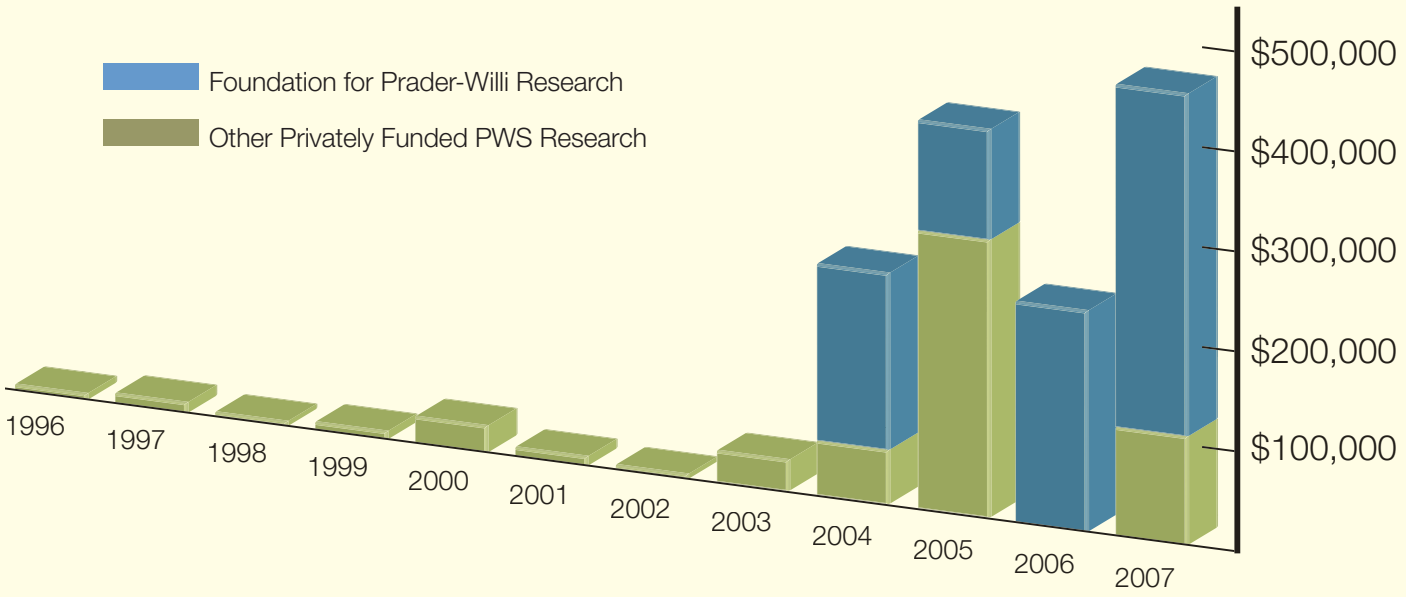
We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Foundation for Prader-Willi Research, Inc. as of December 31, 2008 and 2007, and the change in its net assets and its cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America.

Haynes Downard LLP

Haynes Downard LLP

FPWR TAKES PWS RESEARCH TO A NEW LEVEL



MEASURING A RETURN ON OUR INVESTMENT

Since our first grants were funded in 2004, the following studies have been published (grant recipient underlined)

van den Top M, Lee K, Whyment AD, Blanks AM, Spanswick D. Orexigensensitive NPY/Ag RP Pacemaker neurons in the hypothalamic arcuate nucleus. Nature Neuroscience. 7:493-493, 2004

Stefan M, Ji H, Simmons RA, Cummings DE, Ahima RS, Friedman MI, Nicholls RD. Hormonal and metabolic defects in a Prader-Willi syndrome mouse model with neonatal failure to thrive. Endocrinology. 146:4377-4385, 2005

Talebizadeh Z, Kibiryeva N, Bittel DC, Butler MG. Ghrelin, peptide YY and their receptors: gene expression in brain from subjects with and without Prader-Willi syndrome. International Journal of Molecular Medicine. 15:707-711, 2005.

Ding F, Prints Y, Dhar MS, Johnson DK, Garnacho-Montero C, Nicholls RD, Francke U. Lack of Pwcr1/MBII-85 snoRNA is critical for neonatal lethality in Prader-Willi syndrome mouse models. Mammalian Genome. 16:424-431, 2005.

Stefan M, Claiborn KC, Stasiek E, Chai JH, Ohta T, Longnecker R, Greally JM, Nicholls RD. Genetic mapping of putative Chrna7 and Luzp2 neuronal transcriptional enhancers due to impact of a transgeneinsertion and 6.8 Mb deletion in a mouse model of Prader-Willi and Angelman syndromes. BMC Genomics. 6:157, 2005

Boey D, Lin S, Karl T, Baldock P, Lee N, Enriquez R, Couzens M, Slack K, Dallmann R, Sainsbury A, Herzog H. Peptide YY ablation in mice leads to the development of hyperinsulinaemia and obesity. Diabetologia. 49: 1360-1370, 2006.

van den Top M, Spanswick D. Integration of metabolic stimuli in the hypothalamic arcuate nucleus. Progress Brain Res. 153:141-154, 2006.

van den Top M, Lyons DJ, Lee K, Coderre E, Renaud LP, Spanswick D. Pharmacological and molecular characterization of ATP-sensitive K+ conductances in CART and NPY/AgRP expressing neurons of the hypothalamic arcuate nucleus. Neuroscience. 144:815-824, 2007.

Boey D, Lin S, Enriquez RF, Lee NJ, Slack K, Couzens M, Baldock PA, Herzog H, Sainsbury A. PYY transgenic mice are protected against diet-induced and genetic obesity . Neuropeptides. 42(1):19-30, 2008.

Ding F, Li HH, Zhang S, Solomon NM, Camper SA, Cohen P, Francke U. SnoRNA Snord116 (Pwcr1/MBII-85) deletion causes growth deficiency and hyperphagia in mice. PLoS ONE. 3(3), 2008.

Lutter M, Sakata I, Osborne-Lawrence S, Rovinsky SA, Anderson JG, Jung S, Birnbaum S, Yanagisawa\ M, Elmquist JK, Nestler EJ, Zigman JM. The orexigenic hormone ghrelin defends against depressive symptoms in chronic stress. Nature Neuroscience. 11:7530753, 2008

Tennese AA, Gee CB, Wevrick R. Loss of the Prader-Willi syndrome protein necdin causes defective migration, axonal outgrowth, and survival of embryonic sympathetic neurons . Dev Dyn. 237(7):1935 1943, 2008.

Jiang YH, Wauki K, Liu Q, Bressler J, Pan Y, Kashork CD, Shaffer LG, Beaudet AL. Genomic analysis of the chromosome 15q11-q13 Prader-Willi syndrome region and characterization of transcripts for GOLGA8E and WHCD1L1 from the proximal breakpoint region . BMC Genomics 9:50, 2008

Kishore S, Khanna A, Stamm S. Rapid generation of splicing reporters with pSpliceExpress. Gene. 427(1-2):104-10, 2008.

MEET OUR SCIENTIFIC ADVISORY COMMITTEE

Theresa V. Strong, Ph.D. (Chair)
Associate Professor of Medicine
University of Alabama at Birmimgham
Board member since 2002

Susan Sell, Ph.D.
Associate Dean
University of North Carolina - Charlotte
Board member since 2002

Matthias Tschop, M.D.
Associate Professor
Department of Psychiatry & Obesity Research Center
University of Cincinnati
Board member since 2002

Andrew Zinn, M.D., Ph.D.
Associate Professor, Internal Medicine
University of Texas Southwestern Medical Center
Board member since 2004

Edmund Funai, M.D.
Co-Chief of Maternal/Fetal Medicine
Yale University
Board member since 2002

Rachel Wevrick, Ph.D.
Professor, Medical Genetics
University of Alberta, Canada
Board member since 2008

Mayim Bialik, Ph.D.
Los Angeles, CA
Board member since 2008

JOHNSON FAMILY

Happy 30th Birthday to you, Keegan Johnson, and, by the way, your son has Prader-Willi syndrome! Although the news wasn't delivered in song, that was what was presented to Keegan and Tanya Johnson on the day they planned to celebrate Keegan's first 30 years of life. A jolt like that requires more than a cake with 30 candles to get over.

"We listened to our geneticist along with eight other medical staff tell us that Dante would always be hungry and have major cognitive and developmental delays," remembered Tanya. "It was the same night that we sat in the hospital and decided that everything would be okay as long as we chose to believe that everything was going to be okay."

The Johnsons are not the kind of family to take things like this sitting down. In an effort to do everything in their power to help Dante to reach his maximum potential, they began to raise money for research.

"It was worth all the planning and hard work," smiled Tanya. "I will never forget how I felt on Aug 20th, 2005 when our drum roll was followed by, 'We raised a total of $50 000 for PWS research!' From this day on I knew there was no such thing as limits!"

The Johnsons soon went to their first FPWR conference with their baby, Dante, in Kentucky where they met "the most amazing, like-minded people and their beautiful children." Keegan and Tanya felt that FPWR was the group that would truly make a difference in Dante's life through the support of research.

"They inspired us to start FPWR Canada (FPWRC) and expand the vision of research internationally," said Keegan. "It is our hope that we can reach out to families all over the world and unite all PWS organizations to come together and eliminate the challenges of PWS."

The Johnsons are living proof that anything can happen when you believe that there are no limits. In only their third year, the Johnsons have raised over $200,000, in support of PWS research, and introduced over 1,000 people to PWS and FPWR. The scope of their events has expanded to include galas, garage sales, poinsettia sales, walkathons, volleyball tournaments and much more. Beginning with one walkathon for family and friends, they

now intend to raise “millions of dollars” for FPWR!

Meanwhile, Dante, age 4, remains the delight of their lives, along with his brother, Denzel, age 3. “We take it one day at a time and tackle each challenge as it comes,” says Tanya. “So far so good! Dante is running and jumping, singing and dancing. He is happy and social, and everyone who comes into contact with him is sure to fall in love instantly!”

A benefit of earlier PWS research has already paid off for Dante and for many individuals with PWS. The addition of human growth hormone to the PWS treatment protocol made a dramatic improvement in his life, not only by increasing his height, but by increasing muscle mass, metabolism, and bone density, while also improving weight distribution. FPWR intends to improve the lives of individuals like Dante even further by uncovering other treatment options and, eventually, a cure for PWS.

A child with all of these things going for him needs just one more thing—treatment and a cure for PWS. With continued funding for PWS research through FPWR, that day will come, and not a moment too soon!

CANADA
FOUNDATION FOR
PRADER-WILLI
RESEARCH
Working Toward an Independent Future

WELCOME TO THE FAMILY, FPWR CANADA!

FPWR Canada has been taking an active role in the advancement of PWS research since its inception in 2005. FPWRC has raised over $400,000 through its One Small Step Galas and One Small Step Walks/Runs and only hope to increase that number in 2009! The Johnson, Zylstra, Renwick, Zadravec and Blandizzi families have all taken an active role in hosting events. Along with their many other friends, families and volunteers, we are very thankful for all their hard work!

In August 2008, FPWRC had its 4th Annual One Small Step Walk/Run in Etobicoke, Ontari. Over 500 people came out for a day of fun, exercise and the chance to get an autograph from Ontario Maples player Matt Stajan.

FPWR Canada also had its 2nd Annual One Small Step Gala in 2008 that raised over $44,000 for PWS research! This sold out event included a cocktail reception, dinner, silent auction and featured two unforgettable speakers, Alexandra Magoutis and Jacob Zavitz. FPWR Canada had a fantastic 2008 and is excited to do even more to continue its mission of raising money to advance PWS research in 2009.

2008 FPWR RESEARCH YEAR IN REVIEW

FPWR continues to energize the field of PWS research. For our 2008 funding year, we received twenty-seven applications from researchers around the world. The topics of the applications were as diverse as the many aspects of the syndrome, from basic genetic studies in the laboratory dish to clinical interventions in people with PWS. Scientific and advocate reviewers were charged with the task of working together to identify the best science that would significantly advance the understanding and/or treatment of PWS, with the highest potential of positively impacting the lives of those with the disorder. It was a difficult process as there were many more promising proposals than funds available. However, the rigorous review process led to the selection of a portfolio of grants that address many pressing needs in PWS research. In the end, we were able to fund seven exciting research projects, totaling over $325,000 in support.

Projects funded in 2008 included five new projects and two renewals. Two of the new projects focus on mouse models of PWS. One will develop and evaluate an improved mouse model of PWS (Resnick), which will allow PWS region genes to be deleted in specific tissues and at particular times during development, while the other project (Kimonis) wil explore mitochondrial dysfunction in existing PWS mouse models.

One of the new studies will focus on intriguing DNA structures (R loops) that may play a role in maintaining epigenetic imprints at the Prader-Willi imprinting center. Two new studies focus on people with PWS. Dr. Holland and colleagues will perform a survey to define the risk of early onset Alzheimer's in PWS (Holland); while another study will focus on the development of behavioral treatments for children with PWS who display problematic obsessive-compulsive symptoms (Storch). Two projects received a second year of funding in 2008: the development of approaches to reactivate gene expression in the PWS-region (Razin), and a human study to evaluate sexual development in those with PWS receiving growth hormone replacement therapy.

GRANTS AWARDED IN 2008

Behavioral treatment of obsessive-compulsive symptoms in youth with Prader-Willi syndrome: A pilot project. Dr Eric Storch, University of South Florida.

An improved mouse model of Prader-Willi syndrome. Dr. James Resnick, University of Florida

R-loop structures maintain epigenetic imprints at the Prader-Willi imprinting center. Dr Frederic Chedin, University of California, Davis

The risk of early onset Alzheimer's disease in Prader-Willi syndrome. Dr. Anthony Holland, University of Cambridge

CONT ON PAGE 26

A BETTER MOUSE

One major obstacle in the search for new treatments for PWS is the lack of a mouse that faithfully reproduces the features of PWS. Recombinant DNA technology has advanced to the point where it is increasingly common to generate mice that have the same genetic alterations found in human disorders. When these mouse models exhibit similar symptoms to human disease, they provide an excellent way not only to understand the underpinnings of the disorder, but also to evaluate novel treatments. Although technological advances in gene manipulation have made it relatively simple to generate some mouse models, the complex genetics of PWS have proven challenging. Mice with the entire PWS region deleted, similar to the situation most often found in humans with PWS, are weak and typically do not survive past the newborn period. That makes it difficult to study the underlying basis of the PWS symptoms, and near impossible to evaluate new therapies.

So, the work of Dr. Uta Francke, a Stanford University geneticist who has long studied PWS, was critical. FPWR supported Dr. Francke's work to develop and study a new mouse model of PWS. This mouse is notable for the very small portion of DNA in the PWS region that has been deleted, a region Dr. Francke's earlier human genetic studies had suggested was critical in PWS. Successfully competing for FPWR funding in 2004 first to develop the mice, and again in 2007 to systematically assess their features, Dr. Francke's group recently published the description of this PWS mouse model in PLoS One, an open access scientific journal (see http://www.plosone.org/article/info:doi/10.1371/journal.pone.0001709).

Notably, although born smaller and weaker than their littermates, these PWS mice survive the newborn period and grow into adulthood, when they exhibit several features of PWS, including increased appetite, high levels of the hunger hormone ghrelin, increased anxiety and deficits in motor learning. This new mouse model should prove useful in better understanding some of the defining features of PWS, and will provide a way to test the usefulness of potential interventions and therapies to lessen the severity of PWS. Dr. Francke has donated these mice to the Jackson Laboratories, a national repository for mouse models of human genetic disease. This will allow any scientist who has an interest in studying this PWS mouse to readily obtain it for analysis.

ADVOCATING FOR PWS RESEARCH

The 1st Annual FPWR-sponsored Hike the Hill Day 2008 on Tuesday, Sept. 9th was a huge success! Under the theme of "Lead the Way…Change Their Future," over 100 FPWR parents, family members, friends and children from across the country descended on Capitol Hill to personally visit their Senators and Congressman to encourage them to support HR 1386. HR 1386 would create a Prader-Willi syndrome Awareness Month and emphasize the need for more funding for research into the causes and treatment of Prader-Willi syndrome.

PWS supporters advocated their representative to support HR 1386, and 26 representatives signed on to co-sponsor HR 1386. Participants of Hike the Hill Day met with 70 Congressional offices including the offices of then Senator, now President, Barack Obama, Congressman Pete Sessions, and others. Parents, children, friends and family members were able to give a brief overview of what PWS is and advocate on the importance of funding for PWS research and provide the elected officials with information on current research being conducted.

While HR 1386 did not pass during the last session, Rep. Ed Royce (CA-40) and Rep. Jane Harman (CA-36) reintroduced it in 2009 as HR 55 and there are already 12 cosponsors.

STONE FAMILY

Valentine's Day is often a time of expressing our affection for those in our lives who are dear to us For Pat and Cheryl Stone, however, what they received on Valentine's Day of 2001 touched their hearts in a very different way. That day, instead of hearts and flowers, the Stones received a diagnosis of Prader-Willi syndrome for their precious daughter, Nicole.

"It was the mind-numbering revelation that bonds us all," says Pat. "This is not an experience that can really be described."

Everyone whose child has been given this diagnosis knows exactly what he means. There are no words to describe the pain, the fear, and the sense of hopelessness that those words bring. In spite of this, the Stones soon regrouped and sensed that not only did they have a challenge, but they had a "call to action." That's when they joined FPWR.

"The best remedy for us was to become educated and work to change the outcome," said Pat. Up until an event like this happens, we measure quality of achievement. Afterwards, you learn to measure quality of spirit. This is the lesson that Nicole came to teach us. It's not what you can do, it's who you are."

For the Stones, the mission of FPWR was consistent with their approach to PWS. "FPWR follows what we felt was the most direct path that science has to offer for Nicole (Age 8)," stated Cheryl. "We weren't a family in need of social support per se. We were a family in need of a treatments and a cure! With FPWR, there was no pussyfooting around. This was a direct line to a cure and that just felt right."

In spite of PWS, the Stones view the future with hope. As they continue to work day to day on Nicole's behalf, they are encouraged by all the amazing science and the promise it holds to help Nicole and everyone else with PWS.

The enthusiasm that Pat and Cheryl have for FPWR has spread among their family. Cheryl's mother, Nelda Ostgard, has generously given $60,000 over the years to support PWS research in honor of Nicole. This is a family who knows how to put their thoughts into action!

Valentine's Day 2001 wasn't what the Stones had ever expected, but their love for Nicole grew stronger than ever on that day and their commitment to her future and FPWR is clear. "FPWR is extraordinary. We're so pleased with how well the work of FPWR is going," said Cheryl.

Those of us in FPWR will continue to work hard and work smart so that Nicole Stone, and everyone else affected by PWS, will have the healthy and happy lives they deserve. Thanks to families like the Stones, we are confident of our ability to do just that. We have taken the lead. We WILL change the future!

STERMEL FAMILY

A southern law firm, advertising their services on television, uses the slogan "One call does it all." The Stermels, Mike and Shannon, received one call on August 4, 2006, with news that all the law firms in the world working together couldn't fix.

"We received that devastating phone call and the question as to what was wrong with our precious son was answered," said Mike Stermel. "He had PWS."

Hearing those words literally knocks the wind out of most of us, but the Stermels set their sails quickly and were on the phone with Kathryn McGhee of FPWR on the first night of the diagnosis.

"I felt that I had to dive right in with FPWR," said Mike, "and I am so glad that I did."

A few months after receiving the diagnosis, the Stermels were fundraising right and left. They activated their incredible network of friends in Philadelphia and since then have held two annual "Beef 'N Beer" nights featuring many great prizes as well as several local comedians. They also held a tailgate party after a Phillies game, and a golf outing. The group has already raised $25,000 to support PWS research through FPWR and this is just the beginning.

"We're planning another golf outing, some more tailgate parties, possibly a benefit rock concert, and what is becoming our signature event, an annual 'Beef 'N Beer' in November," reported Mike. "We plan to have our best prize list to date and we also intend to double our donation to FPWR in 2009!"

The Stermels both count their blessings every day and are so thankful for their dear baby Michael, now almost 3 years old. Mike reflected that they have learned more about feeding tubes, growth hormone shots, and hyperphagia than they ever dreamed—all part of parenting in the world of PWS.

"Michael is a wonderful, beautiful, happy child," said Shannon, "and with the help of our family, friends and the FPWR family, I believe he can achieve anything!"

The Stermels, along with their trusty crew of friends and family, are helping to turn the world of PWS upside down. Their enthusiasm, optimism, and determination will move FPWR closer to its goal of eliminating the challenges of Prader-Willi syndrome through the advancement of research.

ADVOCATE REVIEWERS

The grant selection process at FPWR is based on a collaborative approach, with scientists and parent advocates both playing critical roles. Scientific reviewers are chosen to review grant applications based on their expertise in the area of research. Their role is to determine if the work proposed in the application is scientifically sound, feasible, and will significantly advance the field. Advocate reviewers have an equally important job. They are charged with reviewing the project to determine if it matters to the PWS community. After all, a proposed research project might be terrific science, but if it isn't relevant to what people with PWS and their families feel is important, then it's not our project to fund. We want to fund the best science with the highest degree of relevance. A thoughtful advocate review is key to using our limited resources wisely, and funding the best science with the highest likelihood of positively impacting those with PWS.

Advocate reviewers dedicate considerable time and energy to the review process, but they find it well worth the effort. Adrian Connerty, Harry's dad, says this of the experience, "When I first volunteered to serve as an advocate reviewer, I really didn't know what to expect. I had a lot of reservations that I wouldn't understand the science of the grant applications or their overall significance. Along the way I learned that serving as an advocate reviewer is an amazing way to get involved and support our collective mission. It's such a meaningful way to serve because, besides that fact that you're ensuring that all of our hard-earned funds are being spent wisely, you are helping to shape the future of FPWR research. It's an empowering feeling to be able to affect the future of our children and grandchildren and nieces and nephews and friends. Once you've served as an advocate reviewer and you see some of the research that we were unable to fund, it becomes a strong motivation to work harder to collect donations. It's an important role that I would recommend to all members of FPWR."

CONT FROM PAGE 20

Exploring the potential mitochondrial dysfunction in mouse models of Prader-Willi syndrome. Dr. Virginia Kimonis, Unviersity of California, Irvine

Activation of the maternal allele at the PWS/AS domain as a potential therapeutic approach (year 2). Dr. Aharon Razin, Hebrew University Medical School

The effect of growth hormone replacement therapy on physical and behavioral sexual development in persons with PWS (year 2). Drs. Susan Myers and Barbara Whitman, St. Louis University

Energizing the Field!

In total, FPWR has provided more than one million dollars in research support since 2003, with 27 research projects funded, as well as a partnership with scientists at the Salk Institute. We look forward to the findings of the new studies, just as we are beginning to see the payoffs from our investment of previous years. FPWR support has led to numerous publications in the medical literature, advancing our understanding of the genetic alterations underlying PWS, the metabolic disturbances in PWS, and how the brain regulates hunger in normal individuals and in those with PWS. A new mouse model has also been developed which should allow therapeutic interventions to be more quickly evaluated.

With twenty-nine applications currently under review for funding from FPWR in 2009, we are extremely fortunate that many outstanding scientists are interested in studying PWS, with innovative ideas on how to better understand and treat PWS. Our task is to come up with the funds to match their enthusiasm, and allow their promising ideas to move forward. **Our goal is to leave no worthwhile research unfunded. It is an exciting and hopeful time as we press on with our mission of eliminating the challenges of PWS.**

DRAWING EXPERTS INTO PWS RESEARCH

An important goal of FPWR's grant program is to recruit new researchers with expertise in areas relevant to PWS, but who have never studied the syndrome before. One such example is Dr. Lucy Jane Miller. Dr. Miller is a pioneer in the field of sensory processing, which focuses on how the brain receives, organizes and responds to stimulation from the environment. She has written numerous articles on sensory processing disorder in academic journals, and has gotten the message out to the public through books [Sensational Kids: Hope and Help for Children with Sensory Processing Disorder; The Out-of-Sync Child: Recognizing and Coping with Sensory Processing Disorder] and appearances on television shows such as Good Morning America and 20/20.

She is currently conducting the first clinical study to examine how children with PWS differ in sensory processing compared to typical children. Says Dr. Miller, "My colleagues and I have been studying Sensory Processing Disorder (SPD) since the 1970s. Our psychophysiology lab is focused on determining biological markers of sensory over-and-under-responsivity. We are thrilled to have received a research award from FPWR. Studying children with PWS has given us more insight into sensory processing issues and made us more aware of PWS and we feel that incorporating treatment for issues related to sensory functioning may be of tremendous benefit to individuals with PWS." Dr. Miller is nearing completion of her initial study on children with PWS, and we eagerly await her findings.

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