Winter 2007

ARPKD/CHF ALLIANCE NEWSLETTER

ARPKD/CHF Alliance...Research. Education. Support.

SPECIAL POINTS OF INTEREST:

- **An ARPKD/CHF Public Service Announcement "Faces of ARPKD/CHF" is now available on our website: www.arpkdchf.org**
- **Please note, our email address has changed, from info@arpkd.org to info@arpkdchf.org.**

INSIDE THIS ISSUE:

ARPKD/CHF ALLIANCE RESEARCH GRANT PROGRAM—NOW ACCEPTING LETTERS OF INTENT

The ARPKD/CHF Alliance, the only organization solely dedicated to Autosomal Recessive Polycystic Kidney Disease and Congenital Hepatic Fibrosis, is now accepting Letters of Intent for a $50,000 research grant.

The goal is to better understand the pathogenesis of ARPKD/CHF, in particular Congenital Hepatic Fibrosis (CHF). CHF produces the most problematic, life-threatening manifestations following the newborn period.

Priority will be given to interventional research that can lead to control of disease, and the development and testing of treatments for ARPKD/CHF. We are equally interested in CHF noninvasive staging procedures which are essential for clinical drug trials and would help other liver diseases.

Letter of Intent (LOI):
Submit LOI electronically to czak@arpkdchf.org by December 31, 2007.

Include hypothesis, specific aims, design and method. What problem will the project address? Identify the gaps the project intends to fill, explain the relevance to ARPKD/CHF. Why is the work important to children and young adults with ARPKD/CHF? How will the project be accomplished? Be concise, 3 pages maximum.

Notification of review results will be made by January 15, 2008 and as to whether to proceed with a full application.

Learn more: arpkdchf.org

PROFESSIONAL EDUCATIONAL PROJECT—AN AWARENESS CAMPAIGN

What is the Professional Educational Project?

The Professional Educational Project is an awareness campaign to educate professionals about this condition.

The ARPKD/CHF Alliance recognizes that the diagnosis of ARPKD and CHF can be emotionally devastating and that erroneous nomenclature, perceptions and prognoses continue to be utilized and disseminated. Accurate information is of paramount importance for correct diagnosis and appropriate managed care.

(Continued on page 6)

Greetings from the ARPKD/CHF Alliance,

Thank you to all the families that have supported us this past year and in the years past. We wouldn't have been able to accomplish so much without your help. Six years ago ARPDK/CHF was most often considered an extreme rarity that offered little hope, resulting in little attention. There is power in advocacy, we are proof. Here are some of our accomplishments specific to this disease:

· Created a voice for this disease by advocating and developing collaborations with researchers, patient community, and other nonprofits.

· Generated interest and partner for the landmark study "Clinical Investigations into ARPKD and CHF", a National Institute of Health (NIH) research project.

· Co-sponsored the First Ever NIH Medical Workshop on ARPKD/CHF.

· Promoted inclusion of CHF into NIH's "Action Plan" for Liver Disease.

· Created clearinghouse information at www.arpkdchf.org.

· Developed a Public Awareness Program, the "Professional Educational Project".

· Created "Regional Support", "Clinical Care Considerations" and "Access To Care" documents.

· Launched the "ARPKD/CHF Alliance Research Grant Program".

"Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has."

~Margaret Mead

Our goals focus on **Research. Education. Support**. We want resources galvanized towards better understanding of this disease process, improved medical care, treatments modalities, in addition to educating and supporting patients, physicians and the medical community.

Continue to support us and watch us grow for you!

Best wishes this holiday season,

The ARPKD/CHF Alliance

The ARPKD/CHF Alliance is the only organization worldwide solely dedicated to ARPKD and CHF.

Donations are tax deductable and used towards research, education and support programs. All programs, membership and services are free for affected families. Learn more @ www.arpkdchf.org

REGIONAL SUPPORT

The ARPKD/CHF Alliance has volunteers globally available to listen and provide support.* Contact information is listed on our website (www.arpkdchf.org) under "Patient Information" and "Regional Support". If you would also like to be a contact person for other parents/patients, please contact us to learn more.

*Parent volunteers do not provide medical information, advice, referrals or make suggestions regarding medical management. Users are encouraged to seek the advice of their appropriate medical advisors when medical situations arise, as individual variances in ARPKD/CHF cases require the consultation of a physician to make sound medical decisions.

2008 ARPKD/CHF CONFERENCE!

SAVE THE DATE!

On Saturday, April 5, 2008, the ARPKD/CHF Alliance will hold a conference for parents and patients affected by ARPKD/CHF.

This will be held in at the Abramson Research Building, Room 123 and 124, at The Children's Hospital of Philadelphia, located in Philadelphia, PA.

Conference fee is $30.00/adult until March 14, 2008. Conference fee includes all materials, refreshments and lunch. After March 14th, registration fee increases to $40/adult. (Scholarships available for those in need).

Please park in the Wood Building, located across from the Abramson Building. Parking passes available, but only for the Wood Building parking lot.

A block of hotel rooms are available at the *Hilton Inn Penn* located at 3600 Samson St, Philadelphia 19104, phone: 215-222-0200 (5 blocks from Abramson Building/~10 minute walk). Discounted rates are available up to 45 days prior to the meeting at $189/night. An alternate, closer hotel is the *Penn Tower Hotel* located at 399 S. 34th St., Philadelphia, PA 19104, phone: 215-387 8333 (2 blocks from Abramson Building) at $145.00/night. Both hotels have parking.

Registration info on our website: www.arpkdchf.org

Contact us early if interested in childcare @1-800-708-8892 or email: info@arpkdchf.org.

2008 ARPKD/CHF Conference Agenda

8:15-9:00 am
Registration & Light Breakfast (networking opportunity)

9:00-9:45 am
Living with ARPKD

9:45-10:30 am
CHF & Caroli's

10:30-10:45 am
Break/Refreshments

10:45-11:30 am
Kidney Transplant

11:30-12:15 pm
Liver Transplant

12:15-1:15 pm Lunch

1:15-2:00 pm
Research Update

2:00-2:45 pm
Q&A with Doctors

2:45-3:45 pm Parent/ Patient Panel (sharing experiences)

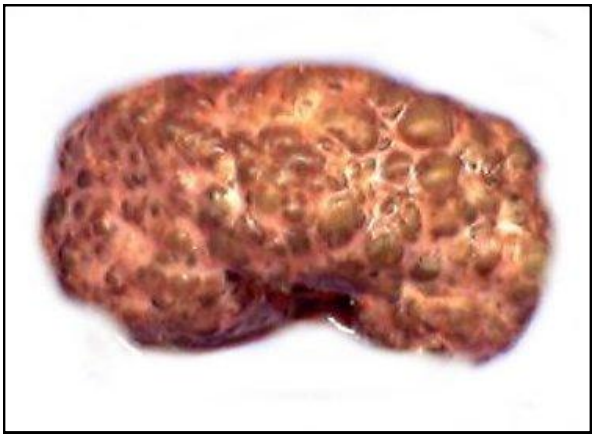
IMPORTANT NOTICE: REQUESTING ORGAN TISSUE FOR RESEARCHERS

If you are preparing for a transplant, do not let your precious organ go to waste, please make it available to researchers.

On several occasions the ARPKD/CHF Alliance has been involved in procuring organs for researchers.

Contact us, and we will get the ball rolling for your affected organ to be used for research purposes, at no cost to you. Our contact information: 1-717-529-5555/toll free at 1-800-708-8892 or Email: info@arpkdchf.org.

Thank you for your consideration.



ARPKD kidney

NATIONAL INSTITUTES OF HEALTH (NIH) STUDY ON AUTOSOMAL RECESSIVE POLYCYSTIC KIDNEY DISEASE/CONGENITAL HEPATIC FIBROSIS

The National Human Genome Research Institute (NHGRI) at the NIH has an ongoing research study to investigate ARPKD/CHF and other related disorders. The objective of the study is to produce comprehensive longitudinal data on the kidney and liver disease in these disorders to provide the groundwork for more focused studies and novel therapeutic interventions. The protocol enrolls children and adults with a suspected clinical diagnosis of ARPKD/CHF, apparently isolated CHF, or Caroli's disease. Patients with CHF, Caroli's disease or kidney involvement associated with other syndromes (Joubert, COACH, Senior-Loken, Dekaban-Arima, Cogan oculomotor apraxia, nephronophthisis, Bardet-Biedl, Oral-facial-digital, ADPKD) are also enrolled. Patients who have received a kidney and/or liver transplant and have stable graft function without severe complications are eligible. The study requires patients to be evaluated as outpatients at the NIH Clinical Center for 3-4 days, with follow up visits every 1-2 years. Laboratory tests include 24-hour urine collections and blood tests to comprehensively assess kidney and liver function, hormones and growth factors. Complete sequencing of the ARPKD/CHF gene (*PKHD1*) and other related genes is performed as needed. Imaging studies include high-resolution ultrasound, Doppler measurements of blood flow, MRI of the kidneys and liver, MR cholangiography and echocardiogram. Twenty-four hour ambulatory blood pressure monitoring is also performed. Screening abdominal ultrasounds are performed on siblings and parents. The families and referring physicians are provided with copies of the test results. No change in the patient's therapy is made during the protocol admissions, and routine medical care continues to be provided by the referring physician. Any medical findings that require a change in the patient's treatment regimen are discussed with the referring physician. There are no medical expenses for the patients, and travel, accommodation, and meal expenses are provided.

To date, a total of 237 individuals (100 patients and 137 siblings/parents) have been evaluated on this protocol, with 152 patient admissions. This includes several patients seen for 4 follow up visits. The 100 patients evaluated to date include 62 ARPKD/CHF, 7 CHF associated with ADPKD, 2 CHF of unknown type, 10 CHF/PKD/Caroli's of unknown type, 5 PKD of unknown type, 9 Bardet Biedl syndrome, and 5 Joubert syndrome patients.

"To date, a total of 237 individuals (100 patients and 137 siblings/parents) have been evaluated on this protocol..."

The data from the study are currently being analyzed and prepared for publication. The presentations and publications to date include a consensus statement on ARPKD/CHF (Autosomal Recessive Polycystic Kidney Disease and Congenital Hepatic Fibrosis: Summary Statement of a First National Institutes of Health/Office of Rare Diseases Conference. Journal of Pediatrics. 2006:149:159-64), which summarized the highlights of the NIH ARPKD/CHF workshop organized by the NIH ARPKD/CHF study investigators, and several oral presentations at international scientific meetings including those of the Pediatric Academic Societies/American Society of Pediatric Nephrology (2006), the American Society of Human Genetics (2004, 2006, 2007), and the American College of Medical Genetics (2007).

This study (www.clinicaltrials.gov, NCT00068224, NIH intramural protocol number 03-HG-0264) continues to enroll new patients. For more information or referrals please contact Dr. Meral Gunay at 301 594 4181 or mgaygun@mail.nih.gov.

See NIH testimonial next page and many more on our website: www.arpkdchf.org.

NIH STUDY TESTIMONIAL

I am writing today to urge those individuals who are debating/ reviewing going to the NIH study. I admit, my family and I really had to think about the pro's and con's of this study and initially my thought was "why put our son through more testing, etc"....however, how wrong we were to think that...we did decide to go to the NIH and I can honestly and with great happiness say that we have really enjoyed participating in this study, and learned more than we thought we already knew! This study is so important. Not just to us, but to all those affected currently or in future years. The NIH is incredibly supportive and informative. The Children's Inn was awe-some and my son never wanted to leave.....they had camps and activities for the kids and our son thought he was on vacation! We even managed to do some sightseeing. I am compelled to post this message to urge people to go to the NIH, so that they can collect data on our kids, learn from them and hopefully find a way to STOP this disease which will benefit OUR kids! But they need kids in order to help them...I am from Canada and I know primarily those participating are American but they need as many families as possible to go...so to those Canadians that are debating going...GO!

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We live at SickKids in Toronto and it's a great hospital and all our team at home thought it a great study to participate in. Probably the most wonderful part out of all of this was that this disease can make you feel so isolated as a family sometimes, and what was so wonderful for my son and my family was that we met 3 other families with the same illness all staying the week with him at the Inn and the day hospital...he felt so connected and part of 'something" (and he is only 7). To Colleen and her family at the ARPKD/CHF Alliance, she is truly to be commended for helping launch this protocol and the NIH.....I know for sure this Canadian family will be back next year in hopes that we can help learn more from this illness ...and my son tonight in bed has already requested that he try to go the same time next year as all the other kids he met!

With great hope for the future for our kids. *~Doug and Deborah from*

Our Week at NIH...

Patients, families and NIH Research Team gather

Online Support:

ARPKD listserv:
http://groups.yahoo.com/subscribe/ARPKD

Kidney Corner-Group:
http://kidneycorner.googlepages.com

PROFESSIONAL EDUCATIONAL PROJECT

What is the Professional Educational Project?

The Professional Educational Project is an awareness campaign to educate professionals about this condition.

The ARPKD/CHF Alliance recognizes that the diagnosis of ARPKD and CHF can be emotionally devastating and that erroneous nomenclature, perceptions and prognoses continue to be utilized and disseminated. Accurate information is of paramount importance for correct diagnosis and appropriate managed care.

Frequently perceived as a hopeless condition by professionals, it is crucial to eliminate the misconception that ARPKD/CHF always results in death. One of our goals is to end the fatalistic outlook associated with this disease, by educating sensitively and sensibly, providing cautious yet optimistic information, keeping in mind the high proportion of newborn death it causes, but also the potential for a viable outcome if the newborn period is survived.

Since it is rare condition, professionals frequently are not well informed. When parents, caregivers and affected persons receive outdated and bleak information, there is a sense of hopelessness for survival or for a quality lifestyle. An essential goal of this project is to illustrate that although chronic and progressive, this disease need not preclude the potential for a viable, good quality of life once the newborn period is survived.

The more informed a health care professional is, the better informed and well cared for the patient will be. When professionals and families are fully informed, enhanced decision-making will result. Research suggests well informed patients/caregivers are more willing to follow directions, adhere to treatment, ask questions, thus increasing life expectancy.

Why has the ARPKD/CHF Alliance chosen to implement this project?

As the "voice" of this disease, the ARPKD/CHF Alliance has a responsibility to refute inaccurate information, as it has a major impact in reaction and is of paramount importance in diagnosis, managed care and outcomes. As long as inaccurate information is perpetuated, managed care will be less than optimal. To do nothing is to deny a better future to those affected by ARPKD and CHF. The ARPKD/CHF Alliance would like to not only promote realistic outlooks, but ultimately improve medical care approaches.

Professionals targeted by this program:

Geneticists, perinatologists, neonatalogists and obstetricians frequently are first to diagnosis this disease. Many of them still perceive this to be unconditionally lethal. Other medical professionals who care for this patient community: nephrologists, gastroenterologists, hepatologists, endocrinologists, social workers, nutritionists, nurses, pediatricians and family physicians, often view this condition discouragingly, disastrous, or fatal, passing on this mentality to ARPKD/CHF families. When the patient population and newly diagnosed are misinformed, misguided or lead astray, this can have unfortunate and dire consequences resulting in over treatment, under treatment, lack of medical care or ill-conceived abortion.

Although 30% of the newborns die at birth or soon afterward, the remaining 70% survive. Living with a chronic and progressive disorder, many children grow to adulthood and lead productive lives. The ARPKD/CHF Alliance would like all customary encountered health care professionals to be aware that for those who survive the newborn period, there is potential for a quality lifestyle with appropriate managed care.

Primary approach:

Develop and disseminate educational materials to health care professionals involved in the care and treatment of the ARPKD/CHF population. Factual information about this disease, with access to diagnostic, prognostic, and clinical management information will support optimal managed care and improve outcomes. Accurate information will trickle down to caregivers and patients, resulting

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PARKER'S STORY

"Doctors (with exception to our pediatric nephrologist) do not have enough information about this disease and jump to the worst case scenario."

Last October when I was 19 weeks pregnant, we found out my son Parker had ARPKD in utero. We went in for a regular ultrasound and the tech stepped outside saying something about needing to double check our due date, which was odd because she already verified it at the beginning of the ultrasound. She was gone for a few minutes and returned with the doctor. No one said anything, as he was looking at the screen. Then he told us there was a problem and when did we want to terminate? We were completely blown away and asked what was going on. The doctor said the baby had large kidneys which indicated infantile polycystic disease. Again he asked us how soon we would be terminating. I started crying and said we wouldn't be doing that. So, he referred us to a specialist.

The next day we saw a specialist. She confirmed it was ARPKD (although she called it the infantile form) and told us there was nothing we could do but wait for the baby to die in utero. We went home very hopeless. She had us come back every 2 weeks from then on to have an ultrasound done. Each time his kidneys were growing and we were given the same gloom story.

I came across the ARPKD listserv and got some names and phone numbers that I got real hope for the first time. Families shared their stories that not all babies die. I held onto that for the rest of my pregnancy. We met with our pediatric nephrologist and discussed everything prior to the birth. We also talked with our pastor, just in case. As well as our insurance company for worst case scenario of a funeral- which we were told would be the case. Each night before ultrasounds I would cry and pray that his kidneys wouldn't grow so much.

Parker and his mom

We scheduled a c-section to prevent less strain on his lungs. They had the NICU team right there in case he needed the vent. He started crying right away and only ended up in the NICU for 5 days. He is doing awesome except for extreme thirst due to lack of concentration in his kidneys. He is 9 months old now and is just starting to have high blood pressure issues.

We are very lucky and very grateful to the families who gave us hope in the most difficult time of our lives. Doctors (with exception to our pediatric nephrologist) do not have enough information about this disease and jump to the worst case scenario. I know there are families who experience worse case scenarios, but there is hope and support out there and this should be available as well. I don't know if it is better or not to find out. It definitely gave us a chance to prepare, but it was the longest 4 months of my life.

PROFESSIONAL EDUCATIONAL PROJECT (con't)

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in diminished feelings of hopelessness, helplessness, apprehension and anxiety, which are common. The "Professional Educational Project" is a well-designed cycle of education – educate professionals and they will educate caregivers and patients.

Geographical area served by this project:
The scale and scope of the ARPKD/CHF Alliance's "Professional Educational Project" is not limited to the United States but is global.

Funding sources for this project:
Our budget relies solely on donations.

How you can help:
Implementation requires people as well as financial resources to pursue and realize project goals. The more persons involved in dissemination of materials, the sooner the goals can be realized.

To learn more, visit our website: www.arpkdchf.org

Diagnosing ARPKD/CHF* FACT SHEET

Overview: ARPKD/CHF is a chronic, progression disorder, affecting primarily two organs, the liver and kidneys.

Principle Clinical Diagnostic Criteria: ARPKD/CHF can be diagnosed by a definitive, previous family history of a sibling with ARPKD, CHF, or Caroli's Disease/Syndrome, clinical findings and diagnostic radiological findings. If clinical findings and diagnostic testing are negative, genetic testing can confirm no disease. Genetic testing also confirms a diagnosis. Biopsies are no longer needed to confirm a diagnosis. If a patient has ARPKD, they always have some degree of CHF. Suspect ARPKD with Congenital Hepatic Fibrosis, or Caroli's.

CLINICAL FINDINGS/MANIFESTATIONS

Prenatal Findings	**a)** Oligohydramnios (low or absent amniotic fluid). **b)** May have absence of fetal bladder filling (does not necessarily correlate with postnatal severity). **c)** Grossly enlarged, "bright" echogenic kidneys, in some cases can be seen as early as 13 weeks gestation, yet may not be visualized until the 3rd trimester or after birth.
Postnatal and Childhood Findings	**a)** Possible Potter's facies or syndrome (severe cases), and inguinal/umbilical hernias (not indicative of severity). **b)** May have respiratory distress that requires ventilation due to spontaneous pneumothroaxes, huge cystic kidneys and underdeveloped lungs (lung maturation dependent on sufficient amniotic fluid during fetal lung development). Respiratory failure/complications are responsible for 30-50% infant mortality . **c)** Huge flank areas, large, palpatable, echogenic kidneys. **d)** Significant hypertension is common, with or without normal renal function; aggressive treatment may be needed with multiple antihypertensive medications. **e)** Decline in renal function variable, usually early in life, yet ESRD sometimes does not occur till adulthood. **f)** Glomerular Filtration Rate (GFR) may improve the first 6 months of life. g) Increased thirst with large amounts of dilute urine. h) White blood cells in urine without infection is common. **i)** Bed-wetting common in school age children due to a concentrating defect and large volume output. **j)** Increased risk of dehydration with prolonged fevers and sweating. **k)** Low stature not uncommon, and approximately 25% have failure to thrive, exact cause unknown. **l)** Many have an enlarged liver (hepatomegaly) and enlarged spleen (splenomegaly). **m)** All have microscopic liver changes. **n)** Most liver labs and enzymes remain normal, even with clinical manifestations. **o)** As fibrosis progresses clinical symptoms become more pronounced and may include: upper GI bleed (vomiting of copious amounts of blood due to esophageal varices-- life threatening), or lower GI bleed (varies in stomach or elsewhere resulting in tarry stools). Both require prompt, proper care. **p)** Possible petechiae (due to low platelet count), and high PTT (from abnormal liver function/production). **q)** Cholangitis can occur due to bile sluggishness/status; ascending cholangitis is life-threatening and requires aggressive IV antibiotics. **r)** Caroli's Syndrome/Disease may or may not be present, but provides increased risk of cholangitis that *decreases* with age. **s)** Those patients with primary kidney involvement should have periodic GI consultations.
Adolescent, Adult and other Important Findings	**a)** ARPKD/CHF is occasionally diagnosed in adolescence and adulthood; clinical course of these patients is not well documented at this time, but it appears fibrosis tends to advance and CHF clinical findings become more prominent with age including those with early kidney transplant with no apparent liver involvement. **b)** Because of improved healthcare, the pediatric population is now living into adulthood. **c)** There are no guidelines to predict prognosis or outcomes. **d)** Due to progression and changing typical kidney shape, some mistakenly are diagnosed with ADPKD. A CT scan can effectively visual collecting tubules which are always involved. **e)** There are a few documented cases of liver cancer associated with CHF. **f)** Clinical findings may suggest other diseases and should be ruled out: MODY type 5, ADPKD, cystic dysplastic kidneys, glomerulocystic kidney disease, medullary sponge kidney and nephronophthisis.

***Autosomal Recessive Polycystic Kidney Disease and Congenital Hepatic Fibrosis.**

DIAGNOSTIC TESTS AND FINDINGS

Ultrsonography (has largely replaced IVPs for diagnosing PKD)	**1) Kidney** **a)** Always bilateral involvement a) Presence of precaliceal tubular ectasia or bilateral renal cysts in children **b)** Loss of corticomedullary differentiation **c)** Massive renal enlargement in patients diagnosed the first year of life **d)** Kidneys become smaller relative to body size in all with ARPKD; size stabilizes at 4-5 yrs of age unlike ADPKD. **e)** Macroscopic cysts appear in childhood and in adolescence, sometimes resulting in ADPKD diagnosis; cysts change the typical kidney shape **f)** Adult patients presenting with renal insufficiency from ARPKD do not have markedly enlarged kidneys and may have only a small number of cysts **g)** Increased echogenicity and irregular contour **h)** Finding consistent with calcifications may be present	**2) Liver** **a)** Most patients have increased hepatic echogenicity **b)** Dilated intrahepatic bile ducts (the ADPKD liver shows normal ducts and normal echotexture with/without presence of cysts) c) With severe portal hypertension, spontaneous shunting may occur or blood flow may reverse.	**3) Spleen** **a)** Splenomegaly may be present
IVP/EUG (Intravenous Pyelography)	**1) Kidney** **a)** Enlarged kidneys **b)** Findings may suggest medullary sponge kidney (collecting duct ectasia) and calcifications may be present		
CT (Computerized Tomographic Scanning)	**1) Kidney** **a)** Enlarged kidneys, cysts **b)** Increased parencymal echogenicity **c)** Medullary calcifications **d)** Bilateral renal parenchymal	**2) Liver** **a)** Tiny biliary liver cysts **b)** Intrahepatic and less commonly extrahepatic bile duct dilatation	**3) Spleen** **a)** Splenomegaly **b)** Splenic hilar varices
MRI (Magnetic Resonance Imaging) and MRC (Magnetic Resonance Cholangiography)	**1) Kidney** **a)** Kidney enlargement, enlarged cysts **b)** Reniform but 'lumpy humpy bumpy' shape **c)** Homogeneously grainy renal parenchyma **d)** Normal renal pelvis and normal calyces **e)** By RARE-MR urography a hyperintense, linear radial pattern is seen in the cortex and medulla which represents the characteristic microcystic dilatation of collecting ducts in ARPKD **f)** To confirm a diagnosis of ARPKD, RARE-MR urography seems to be a non-invasive imaging tool that shows directly microcystic dilated water-filled collecting ducts	**2) Liver** **a)** Dilated intrahepatic bile ducts consistent with Caroli Syndrome/Disease **b)** Intrahepatic bile duct stones	
Amniocentesis/ Genetic Testing/ Pre-implantation	**1)** Amniocentesis cannot provide an ARPKD/CHF diagnosis and direct genetic testing is not available. Prenatal diagnosis of ARPKD/CHF, on the basis of haplotype and mutation analysis is possible when previously affected sibling and disease free parental analysis are available. Pre-implantation genetic diagnosis is also available. For more information: http://www.arpkdchf.org/information/testing/index.htm).		

Written by Dr. Kevin E. Meyers, M.D., Assistant Divisional Chief of Nephrology, at The Children's Hospital of Philadelphia, P.A., developed and supported by the ARPKD/CHF Alliance.

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There are not words to sufficiently say thank you to all the families that give of their time, talent and treasure. ~*The ARPKD/CHF Alliance*

CONCERT BENEFITS RESEARCH

Heidi and her family recently held a benefit concert to raise money to fund research.

"When Heidi was a baby we were not given any hope that she would live beyond a toddler," said Heidi's mother.

Despite Heidi's medical problems, she excels in day-to-day living! By age 14 she earned her first college credits through an awarded scholarship. She has earned other scholarships and won the 2007 Nazarene Northwest Region Main Event in the instrumental solo category!

Congratulations Heidi and a sincere thank you! More articles about Heidi are on our website at www.arpkdchf.org.

EZRA'S EVENT III

Erza's Event was held September 15, 2007 and raised $5400.00 for research!

Ezra has touched the lives of many. When he was diagnosed with ARPKD/CHF, the doctor's told his mother and father he would not live more than a few minutes to a few hours due to complications. They were told not to feed him, as "it would only prolong his pain and suffering". His courageous mother insisted on feeding him and against odds, he is living a quality lifestyle.

Ezra turned six on September 12th. The Family Fun Walk is now an annual event to celebrate Ezra's life.

CROWLEY GOLF TOURNAMENT

Back in September, Dan and Maureen Crowley of Flemington, N.J. hosted a benefit golf tournament for their daughter, Meghan. The event was held in Penfield, NY, Dan's home town. The event drew 36 foursomes and raised around $1500 for the ARPKD/CHF Alliance. Dan's close friends "The Taddeo boys," were instrumental in helping organize the event and recruited old friends from the area and from around the country to participate. The Crowley family encourages others to be advocates and to leverage any potential resources at their disposal in order to generate funds for research. Let's continue to create and accelerate interest and awareness on ARPKD/CHF. These are the type of events that we love to hear about to support our cause!

NEW ARPKD-LOSS PARENTS GROUP

I am pleased to announce a NEW ARPKD Loss Group! This is web-based support group for parents who have lost a child to ARPKD. The concept is the same as the original group, but now however, there are parameters in place to ensure a safe, private and spam free environment.

We are blessed to have a forum where we can provide strength and courage to each other through both good and difficult times. Whether you were diagnosed prenatally, postnatally, had a child that passed at or before birth, or had time with your baby, there is someone who has been through similar experiences.

The issues we face not only relate to grief but also to ARPKD: shock and acceptance that we are carriers, future family planning, etc. It helps to connect to other parents who have similar experiences. Personally, my husband and I received so much support from our friends in the original group, I am not sure what we would have done without it!

Grief is complex and unrelenting. It can make a person feel isolated and misunderstood by those who haven't experienced the gut-wrenching loss of a child. Encompassing our entire being, grief is a part of our existence we are forced to accept. It is around each corner, behind every thought and sneaks up when least expected to steal your breath along your heart. There are no book of directions when it comes to grieving, however, there is support and choices which can help embrace grief in a healthy way.

If you have experienced an ARPKD Loss, you don't have to face it alone. I encourage you to join our group by visiting http://groups.yahoo.com/group/arpkdlossparents.

May you find peace and comfort in the days ahead,

Jessie Goodall

Mama to Remi Elaine Goodall 2/2/06-5/6/06 ARPKD/CHF
http://www.freewebs.com/remisgift
(Help face a negative prenatal diagnosis through life and death.)

"When angels visit us, we do not hear the rustle of wings, nor feel the feathery touch of the breast of a dove; but we know their presence by the love they create in our hearts"

Q AND A

Answered by Dr. Kevin E. Meyers, M.D., Assistant Divisional Chief of Nephrology, at The Children's Hospital of Philadelphia , P.A.

What is the most effective, yet least invasive way to determine an ARPKD diagnosis?
When the clinical and ultrasound findings are not confirmatory of ARPKD, RARE-MR urography is a non-invasive imaging tool that shows directly the microcystic dilated water-filled collecting ducts.

Biopsies of the kidney and liver continue to be performed for diagnostic purposes. When is there an indication for this?
Kidney biopsy is not usually performed to make a diagnosis of ARPKD. Although the conventional method of diagnosis of CHF is liver biopsy, the use of imaging may permit a correct non-invasive diagnosis. Characteristic imaging features are generally present and recognition of these findings may obviate liver biopsy while preserving the diagnostic accuracy.

There have been situations where a child has been diagnosed with ARPKD, only to later discover they have a different kidney disease. What tests should be done at the time of diagnosis?
Additional clues to the diagnosis are the demonstration of an associated malformation. If no malformation is found, the main diagnosis remains polycystic kidney disease, i.e. ARPKD or ADPKD. If a malformation is found evaluation for a different genetic syndrome is required. Renal cysts associated with symmetrically enlarged hyperechoic kidneys can be found on ultrasound. However modern sonographic equipment permits a much greater ability to show renal parenchyma in detail. We can now see multiple tiny cysts, occasional dilated tubular structures and unusual focal rosettes consisting of clusters of radially oriented, dilated collecting tubules. When clinical and ultrasound findings are not confirmatory of ARPKD, RARE-MR urography is a non-invasive imaging tool that shows directly the microcystic dilated water-filled collecting ducts.

Should periodic testing be done on siblings?
This is a difficult question to answer. If one sibling has a diagnosis of ARPKD should the same diagnosis be sought after in the other siblings? Most nephrologists would answer yes as this will permit forward screening for complications associated with ARPKD/CHF. If however kidney function is normal, there is no protein in the urine, and blood pressure is normal one could argue to wait and watch. Once a definitive therapy is available for treatment of progression of ARPKD/CHF is available the latter argument would no longer be valid.

TOGETHER WE CAN…

RAISE AWARENESS...

"Faces of ARPKD/CHF", a public service announcement, is now available for viewing on our website and downloadable for your personal website, bulletinboard, Facebook, MySpace, ect.

No disease is rare when it affects someone you love. We all have the power to increase public awareness and counteract inaccurate characterizations and negative representation of this disease.

It is easy…just pass out "Diagnosing ARPKD/CHF" included in this newsletter to all health professionals you come in contact with, including your nephrologist, GI specialist, OB/Gyn doctor, geneticist, perinatalogist, endocrinologist, social worker, nutritionist, nurses, pediatrician, and family physician. Go to our website and print off "What is ARPKD/CHF?", and disseminate this also.

In addition, we now have a public service announcement (PSA) located on our website —"Faces of ARPKD/CHF". Do you have a website, MySpace, blog, community bulletin board, or other place where any of the above might be placed to raise awareness? The PSA can be viewed, downloaded, and linked to different sites, it is GREAT for raising awareness about this disease.

Help increase awareness and stop the antiquated, obsolete information flow. Take action. Set the record straight. Empower. No disease is rare when it affects your loved one. Take matters into your own hands, you <u>can</u> make a difference.

Organ Donation.
Give the Gift of Life.

MAKE A DIFFERENCE ...

Have you ever wished you could do something to help eradicate this disease? You can! You don't need special ability. Become an advocate simply by raising funds for research. (Or donate online at www.arpkdchf.org.)

The most important factor for any fundraiser is to match the fundraising event with the community and members who will run it. This can be as simple as collecting spare change to coordinating a black tie event. There are many ways to raise funds for research, push towards treatments and improve the lives of those affected.

The ARPKD/CHF Alliance has developed a packet called: "Successful Fundraising" a guide to help maximize your effects. Whether you want to do something really simple or plan a Gala Event, it details how to involve the community, teamwork approaches, celebrating, thanking and much more.

In addition, we are developing kits for specific events, step-by-step guides for year around fundraising:

- GALA/SPECIAL EVENT
- GOLF TOURNAMENT
- STOMP OUT ARPKD/CHF (Walk/Run)
- STRIKE OUT ARPKD/CHF (Bowling)
- COIN COLLECTION (great school fundraiser)

The ARPKD/CHF Alliance wants research galvanized *specifically* to this disease. Help us help you!

If you would like more information contact us at 1-800-708-8892/717-529-5555, or email: info@arpkd.org

All above materials were created by the ARPKD/CHF Alliance and cannot be shared, reproduced, used for other nonprofit fundraising or webpages.

There are many approaches to raising research funds...

One penny , one mile at a time...

Per an ARPKD/CHF mom…"an easy school fundraiser"… 16 pennies (laid side by side) equals one foot. There are 5,280 feet in a mile, a mile of pennies equals $844.80!

SHANIA'S STORY

When I had my daughter in 1997 she appeared healthy, but at three years of age, she was diagnosed with Congenital Hepatic Fibrosis and ARPKD. I took her to the doctor for what I thought was another ear infection, but they found an enlarged spleen. They took blood and thought she had mono, but the tests kept coming back negative. So finally they sent us to Children's Hospital for an ultrasound. I didn't even have her dressed when they had her doctor on the phone. Her liver and spleen were enlarged. The following week she had a biopsy and was diagnosed. The doctor said, "don't do anything different, it's a wait and see game".

Shania was first hospitalized at age three for a UTI, she has had several. At age five she had her first GI bleed, she's had a total of three GI bleeds, her last one was in May 2007. She had her first endoscopy after her first bleed; they had to band her varices. She was going once a year until she had her second bleed in July 2006, then had endoscopes scheduled every 6 months. Varices at her last endoscopy were grade 3 & 4.

Shania has had numerous hospitalizations over the years. She hasn't been able to fight off infections due to her low white blood count. She has had lots of bacterial infections, knee surgery in 2005 from a staph infection, ascites, portal hypertension, encephalopathy (which caused severe confusion), low platelets, enlarged kidneys with cysts, fibrosis to the liver (scarring) and enlarged spleen. When she was eight years old, someone asked if she was pregnant, her stomach was so extended.

When Shania was first diagnosed I was told liver transplants were rare, but that she would need shunt surgery when she got older, yet in January 2007, Shania was evaluated for a liver transplant or shunt surgery. Everyone was thinking shunt surgery, until they spoke with a Chicago doctor that had lots of experience with shunts. He said Shania wouldn't be a good candidate for the surgery and that she would still need a liver transplant. Shania was listed in March 2007, and received her liver April 20, 2007! She had a rough start. In May she had an ERCP for stents to widen her bile ducts, the following day she ended up with a GI bleed, so they had to do an endoscope. At the time they intubated her she stopped breathing due to a blood clot traveling to her lungs. She was without oxygen for 15 minutes and suffered some brain damage. She had to learn how to dress and feed herself, etc. all over again, with the help of OT, PT and speech therapy. She has healed since then and now is only receiving speech therapy! She has had four ERCP's, and will have another in late November 2007. If her bile structure isn't wider, she'll have surgery, but if the stents are working, she can go home!

Shania has been through lots over the years, but since her post-transplant she has energy, wants to go out and play, and her stomach has shrunk. She looks like a normal child and is much happier. Without her gift I probably would've lost her, since her liver wouldn't have lasted much longer. So far her kidneys are doing good, hopefully they will stay that way!

Shania had a clinic appointment on November 15, 2007 and everyone thought she looked great! She was singing and dancing around! The Transplant Coordinator wants to nominate her for Ambassador for the hospital! Shania has overcome huge hurdles, but she's a fighter, which has been an asset!

REMEMBRANCE QUILT - REQUESTING YOUR HELP

I will be piecing together a quilt for the ARPKD/CHF Alliance in memory of all our children who have passed from this disease. The quilt will belong to the ARPKD/CHF Alliance as part of their "Professional Educational Project" for public display to increase awareness of how horrific this disease can be.

If you would like to memorialize child, please email me at everettmom@msn.com with your name and mailing address and I will mail a square to you. This is a healing and creative way to remember your child! Your square can be decorated with fabric paint or markers, stitching, a photo (there are places that can transfer a photo to the square for you), etc. You could put your child's name and dates if you wish, a quote or verse that helped you, a square from your other children to their sibling, a message to others about this disease...there are many possibilities. The squares must be back to me by March 1, 2008 so the quilt can be ready for the April 5, 2008, ARPKD/CHF conference.

~Jessie Goodall

UNDERSTANDING INTERACTIONS BETWEEN DIFFERENT CELL TYPES IN ARPKD/CHF: CLUES TO THE MECHANISM OF FIBROSIS"

My laboratory is interested in basic mechanisms of liver fibrosis. This process can be thought of as a wound-healing reaction, akin to the development of a scar after cutting the skin. In the case of the liver, the scar tissue that forms as part of fibrosis is highly disruptive to the function of the liver, often leading to complications such as bleeding and ascites (fluid build up in the abdomen) and necessitating transplant. Fibrosis in patients with ARPKD/CHF is slowly progressive but is nonetheless a significant clinical problem, particularly in older children.

"…the scar tissue that forms as part of fibrosis is highly disruptive to the function of the liver, often leading to complications such as bleeding and ascites (fluid build up in the abdomen) and necessitating transplant."

As part of our general research on fibrosis, my lab has studied hepatic stellate cells, the major cells believed to be responsible for liver scar formation. We have examined the effects of different growth factors (those released during liver injury) on the scar-forming ability of these cells, and have also demonstrated that changes in the mechanical properties of the surroundings of a hepatic stellate cell can have important effects on its function and fibrogenesis.

We have also investigated other cells we believe to be important in scar tissue formation in the liver, particularly cells that are important in biliary fibrosis (fibrosis that occurs around the bile ducts, such as seen in ARPKD/CHF). We hope that identifying the important cells in ARPKD/CHF fibrosis and determining why and how they become fibrogenic will enable us to better treat CHF in the future.

Two cell types of particular interest are portal fibroblasts (a major source of scar tissue in biliary fibrosis) and biliary epithelial cells (the cells that line the bile ducts and the main cells that are abnormal in the livers of patients with ARPKD/CHF). As part of trying to understand the development of fibrosis in ARPKD/CHF, we have hypothesized that the interaction between biliary epithelial cells and portal fibroblasts in affected livers is abnormal. We have isolated cells from normal and ARPKD-affected livers and are culturing the cells together. Additionally, we are using cells from Dr. Nicholas LaRusso's lab at the Mayo Clinic to identify abnormal functions of affected biliary epithelial cells that may stimulate portal fibroblasts to become fibrogenic.

In all of this work we have been supported by the ARPKD/CHF Alliance, which has served as a source of information and recently enabled us to obtain a portion of a human liver taken from an ARPKD/CHF patient at the time of transplant. We are grateful for their continued support and encouragement.

Rebecca G. Wells, MD

"Dr. Wells is an adult gastroenterologist at the University of Pennsylvania who has been studying mechanisms of fibrosis for the last nine years, first at Yale Medical School and, since 2002, at UPenn. Her lab has recently begun studying pediatric liver fibrosis (including biliary atresia and ARPKD/CHF), applying insights from general fibrosis research to the study of the unique pediatric diseases and in turn using these diseases as models for understanding general mechanisms of fibrosis."

NEW RESOURCE DEVELOPED FOR CHILDREN WITH POLYCYSTIC KIDNEY DISEASE AT THE CHILDREN'S HOSPITAL OF WISCONSIN: FINDING COMPREHENSIVE SOLUTIONS FOR PATIENTS

Children's Hospital of Wisconsin, in Milwaukee, has developed a unique multidisciplinary clinic for children for ARPKD/CHF and ADPKD. This clinic has been developed by Dr. Ellis D. Avner, who relocated from Cleveland in 2004 to assume the new positions of Director of Children's Research Institute, Children's Hospital Health System of Wisconsin; and Associate Dean for Research and Professor of Pediatrics and Physiology at the Medical College of Wisconsin. Dr. Avner has dedicated his professional life to PKD research and to the care of children with PKD (particularly ADPKD/CHF) and other developmental kidney disorders. Dr. Avner is well known in academic pediatric circles as a leading investigator in the field of PKD research, and his clinical expertise is reflected in the fact that he serves as the senior editor of the standard global textbook for children with kidney disease, entitled *Pediatric Nephrology,* which is now entering its 6th edition. Among many activities, Dr. Avner has maintained a funded program in PKD research for more than 20 years, is the former president of the American Society of Pediatric Nephrology, former president of the Council of American Kidney Societies, and a former member of the scientific advisory board of the PKD Foundation, the Council of the International Pediatric Nephrology Association, and the Executive Committee of the International Pediatric Association. He has published more than 230 scientific articles and basic reviews on PKD and other children's kidney diseases, and currently directs only one of two national NIH-funded **Centers of Research Excellence in Childhood Kidney Disease**.

One of Dr. Avner's goals in moving to Children's Hospital of Wisconsin was to develop this unique resource for patients with PKD and their parents. As a clinic solely devoted to childhood PKD, Dr. Avner and his colleagues have developed the only translational clinic which bridges the daily advances in their laboratories with clinical care of children with PKD. In addition to a uniquely talented team of specialized coordinators, nurse clinicians, social workers, nutritionists and child psychologists, Dr. Avner has been joined in this venture by his **pediatric nephrology physician colleagues** (including Professor Cindy Pan, MD, Associate Professor Scott Van Why, MD, and Assistant Professor Raji Sreedharan, MBBS); a **Pediatric Hepatology Team,** led by Associate Professor Dr. Grzegorz Telega; and a **Clinical Genetics** group led by Professor David Bick, MD.

This unique clinic offers multidisciplinary "one stop shopping" for all pediatric patients with PKD. The goal of this special patient resource is to provide comprehensive, state-of-the-art care for children with ARPKD/CHF and ADPKD. As we have learned over the last decade, each of these diseases presents unique challenges which have major diagnostic, preventative, and therapeutic implications. By translating all that we learn from our nationally-recognized research program - headed by professors Avner and Patricia Wilson, (recently recruited from Mt. Sinai Medical Center in New York), and assistant professor and laboratory director William Sweeney, Jr. - we are able to develop individualized therapeutic plans for every child who is seen in the clinic. Specific services offered include a full range of molecular diagnostics, advanced imaging techniques which can assess disease severity and progression, diagnostics to prevent disease complications before they develop, and development of complete nutritional and medical care plans which can be implemented and followed by referral pediatricians and nephrologists. In the near future (early 2008), we will offer pre-implantation genetic diagnosis-in vitro fertilization (PGD-IVF) for families with ARPKD/CHF. This genetic technique will eliminate the risk of any future pregnancies resulting in the birth of a child with ARPKD/CHF. This service, coupled with new therapies for children with both ARPKD/CHF and ADPKD will offer the most advanced options for our patients and their families. We currently have four agents under pre-clinical development in our laboratories, and hope to initiate pilot clinical trials in patients as early as fall, 2008.

Comprehensive, multidisciplinary clinical care with the development of individualized treatment plans for each child with PKD is the best option for the maximal rehabilitation of the child with ARPKD/CHF or ADPKD. We hope to make therapies of the future a unique aspect of our translation of research into clinical practice through this unique clinic and program. For further information or to have any questions answered, please, contact Alison Schaffart PKD Clinic Nurse Coordinator at (414) 337-7755.

PUBLIC ACCESS TO NIH-FUNDED RESEARCH

This fall the U.S. Senate approved the FY2008 Labor, HHS, and Education Appropriations Bill (S.1710), including a provision that directs the National Institutes of Health (NIH) to strengthen its Public Access Policy by requiring rather than requesting participation by researchers.

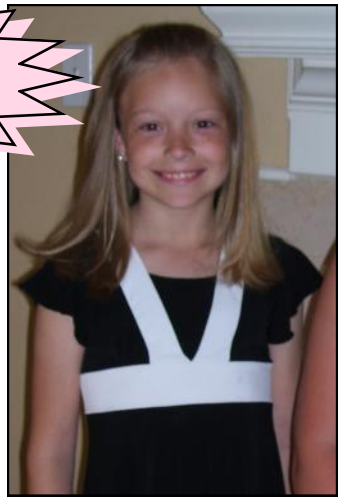
Under a mandatory policy, NIH-funded researchers will be required to deposit copies of eligible manuscripts into the National Library of Medicine's online database, PubMed Central. Articles will be made publicly available no later than 12 months after publication in a peer-reviewed journal.

The current NIH Public Access Policy, first implemented in 2005, is a voluntary measure and has resulted in a deposit rate of less than 5% by individual investigators. The advance to a mandatory policy is the result of more than two years of monitoring and evaluation by the NIH, Congress, and the community.

"We welcome the NIH policy being made mandatory and thank Congress for backing this important step," said Gary Ward, Treasurer of the American Society for Cell Biology (ASCB). "Free and timely public access to scientific literature is necessary to ensure that new discoveries are made as quickly as feasible. It's the right thing to do, given that taxpayers fund this research."

"Free and timely public access to scientific literature is necessary to ensure that new discoveries are made as quickly as feasible. It's the right thing to do, given that taxpayers fund this research."

JORDYN



I was in shock when my first daughter, Jordyn was diagnosed with ARPKD/CHF at 15 months old! She seemed completely healthy when her pediatrician felt what she thought was a possible bowel obstruction or enlargement in Jordyn's abdomen at her routine 15 month check up. After multiple sonograms the Nephrologist we were referred to confirmed ARPKD/CHF. We received some basic information and told to return in a year for a follow up since Jordyn had no immediate health issues at that time. Her kidneys decided not to wait that long. About 6 months later Jordyn started on blood pressure medication after a routine pediatrician visit and blood pressure check revealed that her blood pressure was very high. Since that time her disease has progressed slowly, but steadily.

Over the past 10 years Jordyn has consistently seen her nephrologist about every 3-6 months depending on her current challenges. She has a sonogram once a year and her kidneys continue to be very large. She has labs at every appointment now and her kidney function has gone from 95% to about 50% over the past 5-6 years or so. Jordyn's blood pressure has been controlled well with medication and she continues to take that twice a day. Anemia also continues to be a concern and she has had numerous increases in her twice daily iron medication over the past few years. Her nephrologist has discussed the possibility of needing Epogen injections sometime in the near future. We were also very close to starting growth hormone a year ago but managed to delay that with the help of a medication with a side effect that helps increase Jordyn's appetite. The improvement seemed to happen overnight! I never realized how little Jordyn ate until she actually started eating. The increase in her height and weight as well as improvements to her overall mood, energy levels and skin coloring over the past year have been unbelievable!

At 12 years old Jordyn has very few limitations, with sodium restriction being the biggest challenge in her mind (She is crazy for black olives!) She loves to spend time with her two closest friends and does all the things a regular pre-teen loves to do. She's very competitive when playing board games, she fights with her 2 younger siblings, is obsessed with shoes and shopping, loves music and books of all kinds and is an avid collector of pigs. She's also an honor student and absolutely loves school and playing percussion in the middle school band! Most of Jordyn's peers have no idea that she has spent most of her life on blood pressure medication and that, in addition to braces, a drivers license and the senior prom, a kidney transplant is likely to be a part of her future.

Like so many parents faced with the challenges of ARPKD I have spent countless hours searching for every speck of information I could find in hopes of having every question answered. Not knowing exactly where Jordyn's disease will take us and when is very frustrating. So, for today I'm grateful for knowledgeable doctors, modern medicine, the support of family and friends and decent insurance. Tomorrow I hope to be grateful for a cure for ARPKD/CHF.

Please support the ARPKD/CHF Alliance!

ARPKD/CHF ALLIANCE

improving the lives of those affected

P.O. Box 70, Kirkwood, PA 17536, Phone: 717-529-5555 or 1-800-708-8892, Fax: 1-800-807-9110, E-mail: info@arpkdchf.org, Web: www.arpkdchf.org