



Angioma Alliance Newsletter

Editor-Cristina
Stevenson

Fall/Winter 2006
Volume 4, Issue 4

“Impressions of the Scientific Workshop”

By Ron Schechter

Note: Not all conversation is verbatim.

Heavy storms wracked the Northeast on November 16, the day approximately 30 people converged in Washington, D.C., for the 2nd Annual Angioma Alliance CCM Scientific Workshop. Miraculously, my train skirted the bad weather and avoided the train derailment that occurred later in the day. Other participants weren't so lucky, but all eventually arrived safe and sound.

I am greeted by Connie Lee in her hotel room and I help assemble folders for the next day. We are joined by Dr. Eric Johnson, one of the Alliance's Scientific Advisors.

In a few minutes time, Eric explains everything I wanted to know and more about genetic testing for cavernous angiomas including how it should be done (cleanly) and why (if it's necessary) and how much it costs (expensive) and how much it would cost if more testing is done (cost would go down) or if the FDA swoops in and regulates (cost would go up). His Wisconsin lab is the only one in North America that tests for the three known CCM genes.

Connie announces she needs to get dressed for dinner and Eric and I move to the hotel bar where we order stout beers and play Jeopardy with Alex Trebek on TV.

One by one and two by two the scientists arrive. They greet each other warmly. They introduce themselves to



Issam Awad from Northwestern University Feinberg School of Medicine; Judy Gault, University of Colorado; Brent Derry, The Hospital for Sick Children, Toronto, Canada; Jorge Marcondes, Hospital Universitário Clementino Fraga Filho, Rio de Janeiro, Brazil; and Mike Berg, Strong Epilepsy Center, University of Rochester

me and to some I confide that I have a cavernous angioma and to others I say “I'm with the Angioma Alliance” which instantly makes me cool.

Dr. Murat Gunel walks in having navigated through the storm and train derailment. He is dressed in all black; dark and handsome. He is greeted respectfully by the others. As we sit for dinner, in comes Dr. Issam Awad who is jovial in anticipation of the intense interchange of ideas about to occur.

At dinner I sit next to Kevin Whitehead and across from John Mably. A lull in the conversation is my cue to ask probing questions. Dr. Mably researches the affect of CCM genes on cardiovascu-

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ENROLL IN THE BIOBANK TODAY!

As you may recall from our last newsletter, the patient BioBank is now taking registrations! We are enrolling anyone who has an upcoming surgery and who is willing to donate their cavernous angioma(s) to research.

If you would like to assist in the advancement of cavernous angioma research, please call the BioBank at:

781-585-6205

or toll-free at:
877-585-6205

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*Angioma Alliance Announces :**Chair of the Board of Directors: Ken Ruggles*

Angioma Alliance is pleased to announce the addition of a new position: Chair of the Board of Directors. We are grateful to Ken Ruggles, of Duxbury, Massachusetts, for generously volunteering to fill this role.

Ken is the husband of Allison and father of three beautiful teenage girls. He became involved with cavernous angioma in 2005 when Allison was diagnosed with a CCM in the Pons area of the brainstem. Due to the location of the lesion, she is not currently a candidate for surgery. Allison has experienced minor neurological deficits but maintains an active lifestyle.

Ken has a background in business consulting and currently conducts business research with Fortune 500 companies. Ken has joined the Angioma Alliance Board to help further the core goals of increasing funding, research, and awareness. He wishes to see the Angioma Alliance continue to grow as a source of information and support for those affected by cavernous angiomas.

Connie Lee will continue to serve as President for Angioma Alliance and manage day-to-day operations.



Ken Ruggles is Angioma Alliance's new Chair of the Board of Directors.

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lar development in the zebrafish. I ask, why zebrafish? He carefully explains how their development, anatomy, and circulatory system make the zebrafish conducive to research. He says zebrafish are low maintenance and prolific breeders. Their embryos are transparent so their tiny hearts can be easily observed.

Dr. Whitehead works with mice. My lexicon of genetics enables the conversation to go only so far so I change the subject to animal rights. How does he feel about inducing genetic defects in mice that render the poor creatures dead in five days or less? He informs me that I don't understand. The mice "breed very easily" and it takes about one week to replace the defective mice. Among other things, the two scientists discuss sources of mice and whether their research departments charge by the cage-full or per mouse.

In the conference room on Friday morning I am afforded a front row center aisle seat so I can keep an eye on the video projector and Connie's super-slow laptop computer that we use to load the PowerPoint presentations.

One by one each researcher presents her or his material. They rigidly follow the scientific method. Hypothesis, experiment, results. When wrapping up, the presenters make mention of their team members: graduate students, assistants, and advisors who all work diligently behind-the-scenes with the goal of advancing the science of CCMs. I evidence that a majority of the presentations are

made with at least one caveat – the sample populations and tissue specimens used in CCM research are often too small to draw lock-tight conclusions. Intuition tells me this is the reason why the Angioma Alliance Biobank and Patient Registry are so important and urgently needed.

In the room, the rivalry is palpable but courteous. Challenges and disagreements among peers are cordial even if superficially. Serious work costs serious money and money comes from a limited pool of grants provided by the Federal government. So one scientist's bread is another scientist's meal and there is only so much to go around. The real currency in research is query and discovery; therefore a certain competitiveness exists. However, the Angioma Alliance breaks down barriers and enables essential information to flow more freely for the betterment of mankind and those who have CCMs.

As the hours pass I keep track of jargon I don't understand on a note pad. By 2pm there seems to be a haze in the room. My eyes glaze over. I catch myself taking micro naps. The conference is visited by a representative of the N.I.H. and the discussion about funding research turns decidedly pessimistic. However Dr. Awad sees a silver lining in all of this – CCM research affects a large part of the population and CCM research may lead to practical applications for the treatment of cancers, HIV and other diseases. He makes the case for funding CCM research at higher levels than before. Now it's up to the Angioma Alliance to help make it so.



ANGIOMA ALLIANCE UK UPDATE

By Ian Stuart and Kirk McElhearn

Angioma Alliance UK is growing – and not just by the number of its members. Our Board of Trustees has grown too. We now have six volunteer members on the board: Ron Davis continues to be our Treasurer; Ros St. Clayre is our Secretary, and Ian Stuart still acts as Coordinator. Two of the additional three members of the Board are also members of Angioma Alliance UK. One member comes from Yorkshire – a six hour train ride. Another is from an area just south of London. And a third is from just outside Dorchester, Dorset, home of Angioma Alliance UK.

One of our new Board members was aged 16 when she had a major brain haemorrhage, which occurred spontaneously. She opted for surgery which sealed up the blood vessels in the brain enough to stop further large bleeds. However, this member had another smaller bleed a few months later which left her totally paralysed on the left side (this was due to a combination of the bleed and swelling in the brain caused by the radiation). Over a couple of years she learned to walk again. Annual scans showed that the abnormality was changing slightly, and it appeared to continue bleeding very tiny amounts. These amounts gradually had an effect and she developed hydrocephalus on her brain in 2000. She lost her eyesight in 2001 (on honeymoon) and had another stroke in 2004 after having her little girl. It appears that these tiny brain haemorrhages occurred fairly frequently, but there is nothing the doctors can do about it.

A second new Board member, who is also a member of Angioma Alliance UK, was unaware that she had a cavernoma until July 20 1999 when she had a cerebral haemorrhage in Canada, where she was admitted to the hospital for nine days at a cost of over Canadian \$20,000. The movement of her eyes was affected and her right eye was fixed looking to the right and the left eye straight ahead. The member was referred to the neurological hospital in Toronto and then to The National Hospital in the UK at Queen Square. The final recruit to our board is unaffected by cavernous angioma and works full time at a local college. My deepest thanks to everyone serving on the Board.

Putting together summer holiday plans? Come and join us for the **First International Angioma Alliance UK Forum** to be held at Conway Hall, 25 Red Lion Square, London WC1 (nearest “tube”: Holborn) on Saturday June 16 2007. Thanks to a grant from the UK’s National Lottery it will be a full day, with lectures by two leading neurosurgeons, two geneticists – including Dr. Eric W. Johnson, from Wisconsin who spoke at the Angioma Alliance Family Conference last year, and a senior lecturer and neurologist from Scotland. Admission is free and the event will be catered, with morning coffee, lunch, and, of course, tea and biscuits. Angioma Alliance UK is also able to offer some travel relief to UK members (although not to our American friends unless there is someone out there in the aviation industry who will sponsor a UK registered charity).

LATEST RESEARCH:

An Update on Cavernous Malformation Research

By: Connie Lee

The laboratory of Elizabeth Tournier-Lasserre has been examining the differences in how people with the three different genetic mutations exhibit the illness. In its group of patients, it appears that the CCM1 mutation and the CCM2 mutation are very similar in the severity of the illness, the age of first symptoms, and the type of symptoms experienced. The CCM3 mutation, however, tends to create an illness that is far more likely to first appear in childhood (50% of patients present before age 15 as compared to 25% for the other mutations) and more likely to cause hemorrhage rather than seizure or chronic headache as the primary symptom. This would indicate that those with the CCM3 mutation should have their children tested early and that there may be a need for increased MRI monitoring with this population.

Reference: Denier C, Labauge P, Bergametti F, Marchelli F, Riant F, Arnoult M, Maciazek J, Vicaut E, Brunereau L, Tournier-Lasserre E. Genotype-phenotype correlations in cerebral cavernous malformations patients. *Ann Neurol*. 2006 Oct 3;60(5):550-556



Common Hispanic CCM1 Gene in New Mexico

By: Joyce Gonzales

Cerebral cavernous malformations (CCM) is an illness that plagues a significant number of Hispanic families in New Mexico. This condition is especially prevalent in the northern part of the State. It is in this area that the families whose ancestors colonized what was known as Nuevo Mexico live today.

Research suggests that these families share an ancestor born about 446 years ago who probably helped colonize New Mexico with Juan De Onate. This person's genes mutated and he or she was the first person to have familial cavernous angiomas in the area. The native New Mexico, Southern Colorado, and Eastern Arizona Hispanics with this illness all descend from this original ancestor.

In New Mexico, the gene responsible for this condition is the common Hispanic CCM1 gene - a hereditary and dominant gene. This means that if a person has the common Hispanic CCM1 gene, each of his or her children has a 50% chance of having the illness. If both parents have the gene, then each of their children has a 75% of having CCM. Also, the CCM1 gene in NM usually causes multiple cavernous angiomas in an affected person rather than just one.

There are several family surnames in New Mexico, Colorado, and Arizona that have been identified as, or are suspected of, carrying this gene. It is important to note that, because it does not skip generations, not all people with these last names will have the gene. One parent must have the illness in order for it to be passed down to the next generation. It is also important to note that the illness is not limited to these family names since many marriages and name changes have occurred in the past 446 years.

The surnames are: Marquez, Baca, C'De Baca, Campos, Saiz, Luna, Vallejos, Gonzales, Romero, Martinez, Contreras, Sisneros, Padilla, Tafoya, Vigil, Trujillo, Roman, and Garcia.

Genetic testing for the CCM1 gene can now be done by sending a blood test to the Prevention Genetics Lab in Wisconsin. If a small child is to be tested, a cheek swab test can also be done. Also, Dr. Leslie Morrison is a Pediatric Neurologist and CCM researcher at UNM Hospital. Because she is very knowledgeable about this illness, she has been seeing adult patients in New Mexico with cavernous angiomas.

For additional information please contact:

Dr. Leslie Morrison, 505-272-3342, UNM Hospital Neurology Department

Dr. Eric Johnson, 715-387-0484, Prevention Genetics

Joyce Gonzales, 505-473-1622, New Mexico Angioma Alliance Coordinator

Fundraising Update

Lollipop Fundraiser for Angioma Alliance

Lauren Ruggles, Michela North, and Lindsey Cobb of Duxbury, Massachusetts sold lollipops at their school as a fundraiser for Angioma Alliance. They raised \$200 with their efforts. Thanks so much for your great work, girls!

Angioma Alliance is excited to announce that we have received an anonymous grant of \$15,000 to support our patient registry. We are very grateful to the foundation for their generous support.

Searching for a Cure: Angioma Alliance Enrolls in GoodSearch.com

GoodSearch is a Yahoo-powered search engine which donates 50% of its advertising revenue to charities and non-profits that searchers designate. Now, Angioma Alliance can earn approximately one penny per search! All you have to do is visit <http://www.goodsearch.com>, enter Angioma Alliance in the appropriate place, and start searching the internet! With your help and the help of friends and family, we can raise additional thousands of dollars to help fund cavernous angioma research.

Here's how you can get started:

1. Send an email to your friends and family, and encourage them to use GoodSearch for all of their internet searching—it's easy, free, and each time they use GoodSearch they will be contributing to the important efforts of Angioma Alliance!
2. Download the GoodSearch toolbar and get started yourself! <http://www.goodsearch.com/toolbar/>



Raising a Child with or at Risk for Cavernous Malformations Frequently Asked Questions, Part III of III

This material is intended for informational purposes only and does not replace consultation with a knowledgeable physician.

By: Connie Lee

Note: We use the term “cavernous malformation” as a synonym for cavernous angioma, cavernous hemangioma, and cavernoma. Venous malformations (venous angioma, DVAs) and arterio-venous malformations (AVMs) are different types of vascular malformations and information for these conditions is not included here.

Should I have any concerns about the use of CT scans for my child?

CT scans do expose a child to low levels of radiation. It is important to know if your hospital is able to calibrate their CT scanner for use with children. Children are more likely to have long term effects from radiation exposure, and calibration allows a more focused, lower level of radiation to be used to obtain the same result. CT scans should be used only when there are symptoms or circumstances that outweigh the possible long term risks inherent in radiation exposure. There are no official guidelines at this time concerning how often is too often for a child to be exposed to a CT scan.

CT scans are able to detect a gross change in the size of a cavernous malformation. They are also very good at detecting fresh blood from a new bleed. They can be preferable to MRI in certain circumstances. A CT scan usually takes only 5 minutes, and children usually do not require sedation. This can be much easier on the child. In cases where a bleed requiring emergency intervention must be ruled out, a CT scan may be the most appropriate technique.

My child seems tired most of the time. What could be causing this?

There are a number of factors that may be causing your child to be fatigued:

Research has shown that fatigue is a common long term effect of stroke and of mild traumatic brain injury. There is no reason to believe that this would not be the case for cavernous malformation hemorrhage. The mechanism behind the fatigue is not understood, but the fatigue itself can feel debilitating to those who experience it. Making sure your child gets enough rest at night and has opportunity for rest during the day is essential. A 504 plan to address fatigue at school may be needed. See our webpage on Special Education for information about 504 plans. If your child has difficulty sleeping at night, another common after effect of brain trauma, it would be wise to consult his neurologist for suggestions.

Children with seizure disorders that emanate from the parietal lobe or with cavernous malformations in the pons have a lower quality of sleep than children without seizure disorders. This means that even if a child has what appears to be sufficient sleep, the lower quality of sleep will make them feel less rested.

Most anti-seizure medications have sedation as a side effect. If your child seems debilitated by this, speak to his neurologist to see if there might be an alternative medication.

Children with even mild muscle weakness or decreased coordination resulting from a cavernous malformation bleed often have reduced physical stamina. It simply requires more energy to use legs that feel heavy or that won't do what the child asks of them.

My toddler has deficits as a result of cavernous malformation. Are there any programs that can help us?

Most states offer early intervention programs that serve children from birth to age three. The criteria for entering these programs can vary among localities. Most often, children can receive occupational, speech, and physical therapy at no cost to the family and can participate in socialization programs such as playgroups. Early intervention services that must be provided by each state can be found in Part C of the Individuals with Disabilities Education Act (IDEA). You can read more about IDEA at http://www.house.gov/ed_workforce/issues/109th/education/idea/ideafaq.pdf. You should be able to find your local early intervention service provider by calling the Special Education Coordinator for your school district.

My preschool child has deficits as a result of cavernous malformation. How and when should I tell our school district?

Many children can begin receiving special services through their school district at the preschool level.

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Children can begin in-school programs at the beginning of the school year in which they will turn three. In other words, your child may begin receiving services at age two, if he/she will be three at some time during that school year. Receiving services through the school district requires an eligibility determination and the development of an Individualized Educational Plan (IEP). For most school districts, this takes months to accomplish. Beginning the process by contacting the school in January for a September enrollment is not too early. The services your child receives will be determined by the IEP. For a new parent entering the system, it's a good idea to have someone who knows the rules of the process coach you and even attend meetings. This may include a parent advocate, a therapist from your child's early intervention program, or an attorney. Please see our Special Education page for more information about developing IEPs.

My child is hyperactive and has attention problems. Could this be from his or her cavernous malformation?

ADHD is a label for a cluster of symptoms, but does not explain the cause of the symptoms. Any number of disorders can cause ADHD or ADD. Any brain trauma, including that from a cavernous malformation hemorrhage, can cause changes in attention and activity level.

Stimulant medications do work for many children who have ADHD as a result of brain trauma. As was noted above, some controversy exists regarding the safety of many of the medications used to treat ADHD in children with cavernous malformations because most increase blood pressure, if only slightly. It is not known whether increased blood pressure contributes to cavernous malformation bleeding, but many physicians encourage caution.

Behavioral and environmental interventions can also be used to help your child in the classroom. A pediatric neuropsychologist, if you have access to one, can help you to design a program that could work for your child. Otherwise, a school psychologist or child psychologist with a background in working with children with ADHD can help. The most common obstacle to implementing a successful behavioral intervention is the inability of the teacher to carry out the intervention. This can happen for many reasons including a large student to teacher ratio or a lack of understanding/skill. It is important to advocate for your child with the school district so that he/she receives the needed assistance.

If one is available to you, a special private school that targets children with ADHD or LD can provide a learning environment geared to your child. These schools usually feature small class sizes, individualized instruction, and special needs accommodations as an integrated part of the learning program. With a letter from a physician indicating the medical necessity of the placement, tuition for this kind of private school can be tax deductible as a medical expense. With a great deal of advocating, and perhaps the help of an attorney, you may also be able to receive partial tuition compensation from your school district.

What should I include in the emergency plan that I give to my child's school and caretakers?

1. An emergency plan is unique to each child, but some common features include:
2. A list of possible symptoms with appropriate responses: for example, unusual fatigue might require a note home; projectile vomiting or a seizure might require a call to a parent; a loss of consciousness might require a call to a parent and to emergency services
3. A list of allergies (required by schools anyway) and medications your child should not take (NSAIDs)
4. A list of people who can be reached and could be at the school within an hour of the call. These individuals should have written permission to make decisions about your child's care
5. A list of physicians and hospitals treating your child
6. A list of current medications; this should be updated with each medication change
7. A list of restricted activities, if any
8. If you do allow someone other than you or the other parent of your child to make decisions regarding your child's medical care, you will need to give each of those people a signed letter indicating your permission. They will need to take this with them to a hospital or doctor's office.

How do we transition from pediatric care to adult care?

Transitioning to adult care can be challenging emotionally for many children. This transition usually

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occurs after high school when so many other changes are affecting your child. It is difficult to leave doctors and hospitals that your child may have known all of his/her life. There are several things you and your doctor can do to ease the transition:

1. Have your pediatric neurologist or neurosurgeon talk to your child about the transition and about the new doctor, if they are known to each other. Acknowledging the anxiety and sense of loss can provide a validation that makes the transition easier. If the pediatric doctor knows the adult doctor, your doctor's expression of confidence in the referral may also reduce anxiety.
2. If possible, go to your child's first appointment with his/her new physician. If your child will be away at college and seeing the doctor on his/her own, try to arrange a phone conference either during the appointment or soon after – your child may need to sign a release to allow you to talk to her doctor. Seeing or talking to the doctor will give you some insight into any complaints or misgivings your child expresses.
3. If your child has serious concerns about the new doctor, allow for the possibility of seeking another adult neurologist or neurosurgeon. Giving your child some control over the decision may help.
4. If your child had been treated at a children's hospital, call the new adult hospital to set up a tour of the facility for you and your child. Seeing a hospital room and knowing how to get to the imaging department and EEG before they are needed can reduce anxiety and resistance.

I am writing my will – what do I need to consider?

If your child has special needs or if you think that there is a chance that your child might become disabled in the future, it is essential to always have a will in place. What most people do not realize is that it may be best to prevent your affected child from directly inheriting any of your assets. As of this writing, if your child has assets in excess of \$2000, he/she may not be eligible for government benefits such as Medicare/Medicaid or SSI. There are several types of trusts that can be established as alternatives to direct inheritance. You should discuss these with an attorney who is familiar with estate planning. Additionally, well-meaning relatives may have written your child into their will – this should be addressed as soon as possible in order to avoid jeopardizing your child's benefits.

I have to change jobs and my new health insurance has a pre-existing claims clause that will not cover my child's illness for one year. What can I do?

Perhaps the best place to find information about pre-existing condition exclusions is the US government's HIPAA site. There are many circumstances in which it is not legal for a medical insurance carrier to exclude a condition. You can find this information at <http://www.dol.gov/dol/topic/health-plans/portability.htm>, the Department of Labor's HIPAA page.

Can I apply for Supplemental Security Income (SSI) for my child?

For a child to qualify for SSI, the family must meet income eligibility criteria. Check with your local Social Security Administration (SSA) office to learn the exact income levels that are eligible. If qualified your child will be receiving SSI, not Social Security disability insurance, even though the determination will be made based on your child's disability.

According to the SSA website, a child "will be considered disabled if he or she has a physical or mental condition (or a combination of conditions) that results in 'marked and severe functional limitations.' The condition must last or be expected to last at least 12 months or be expected to result in the child's death. And, the child must not be working at a job that we consider to be substantial work."

The SSA will determine if the criteria are met by comparing your child's functioning to that of children who have any of 100 conditions they consider disabling (such as cerebral palsy, mental retardation or muscular dystrophy). To do so, they will ask for information from almost any professional who knows your child, i.e. doctors, teachers, therapists, and social workers. If they cannot determine your child's eligibility from this, they will ask to evaluate your child in person. If he/she is found eligible, your child will be re-evaluated every three years if his/her condition is expected to improve to confirm continuing eligibility. If your child qualifies for SSI, it is likely that he/she will also qualify for your state's Medicaid program. Visit Benefits for Children with Disabilities at <http://www.ssa.gov/pubs/10026.html> for more information.

Read this article in its entirety at www.angiomaalliance.org

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Who We Are...

Angioma Alliance is a non-profit, international, volunteer-run health organization created by people affected by cerebral cavernous malformations (CCM). Our mission is to improve the quality of life for those affected by CCM through education, support, and promotion of research. We are monitored closely in our educational efforts by a Scientific Advisory Board comprised of leading cerebrovascular neurosurgeons, neurogeneticists, and neurologists.

Each donation of \$10 or more will come with a CCM lapel pin thank you gift. Like the ribbons associated with other illnesses, our "little red guy" pin is a wonderful way to increase awareness of cerebral cavernous malformation (CCM), our little known illness. Increasing public awareness can go a long way toward increasing research funding and improving quality of life for those with cavernous angioma. Each pin comes with cavernous angioma business-size information cards that can be handed to anyone who might have questions.



It's the end of the year, and there's no better time to donate to Angioma Alliance! Your contributions will help fund conferences and forums, increase research, and enhance outreach and support efforts. Our pins, car decals and wristbands make great stocking stuffers while supporting the mission and growth of Angioma Alliance. Surprise your friends and family with these meaningful gifts.

2007 will be a great year for Angioma Alliance, and it will be even greater with your support. Thank you for making Angioma Alliance's goals become reality!

If you would like to consider joining Angioma Alliance's efforts in other ways, please visit www.angiomaalliance.org to read about volunteer opportunities.

Send donations (envelope provided for your convenience) to:
Angioma Alliance
142 W. York Street
Suite 708
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Or donate using a credit card with our Paypal connection.

Angioma Alliance has its own magnetic car ribbon! These unique ribbons are the larger 3 1/2" x 8" size and are available for \$5 each, including shipping. Educate while you travel!



To order, send a check or money order for \$5 to:
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