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Kyle's Heroes

The first annual Kyle's Heroes golf outing was held on September 20, 1999 at Lakewood Country Club in Lakewood, NJ.

Those family, friends, golfers and sponsors gathered for the golf tournament were fortunate enough to share in the celebration of Kyle Killeen's 16th birthday as well as mark the 6 month anniversary of the complete resection of the craniopharyngioma that had hampered Kyle's physical growth and adolescence.

Kyle had been treated for headaches for four years and had undergone sinus surgery in an attempt to alleviate the daily pain. The endless testing which included a CT scan and a non-contrast agent MRI was inconclusive. Kyle began visiting an endocrinologist for evaluation of his delayed puberty and as a precaution a second MRI using a contrast agent was ordered. A 2.5cm craniopharyngioma was discovered on the stalk of the pituitary gland.



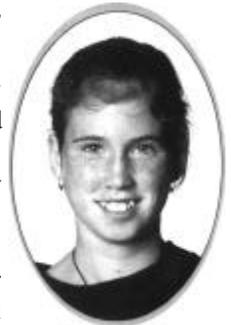
Kyle's Heroes (continued on page 2)

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Update Your Fall Calendars! (for Becca's Run fundraiser)

Before *The Childhood Brain Tumor Foundation's "Newsletter"* breaks for summer vacation, we wanted to let everyone know about an important fall family event. The fourth annual Becca's Run has been scheduled for Saturday, October 21, 2000. This 5K run and walk is in memory of Re-



becca Erin Lilly, who lost a courageous 6 year battle with brain cancer in June 1997 at age 16. Her family began the run in the fall of 1997.

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Angiogenesis Inhibitors – A New Frontier in Cancer

For over 50 years, the field of cancer therapy has been dominated by the concept that the tumor must be the selected target of the chemotherapy delivered. Therefore, any drug with the ability to directly kill tumor cells in the laboratory was by definition a candidate for use as chemotherapy in humans. However, because of the high mutation rate of cancer cells (genetic instability), repeated exposures to chemotherapy often results in a population of residual tumor cells that have become resistant to the effects of the chemotherapy. It is this genetic instability and the development of resistance to therapy that has most hindered our success in finding a cure for childhood brain tumors.

It was also readily apparent that normal cells of the body are susceptible to the effects of chemotherapy. These changes in the normal cells or organs of the body are referred to as the "side effects" of the drug and are responsible for limit-

(continued on page 4)

A Make-A-Wish[®] Experience with Mother Nature

Eric truly enjoys the beauty of nature. He has always had an affinity for the study of dinosaurs and other wondrous creatures. The 16-year-old was volunteering at a museum in Bozeman, Montana giving tours and designing displays when he decided on his wish. To no one's surprise Eric wanted to travel to the Galapagos Islands, a biological wonder unlike any other on Earth.

The Make-A-Wish Foundation[®] of Utah organized a vacation for Eric and his family to the islands, located off the coast of Ecuador. To say Eric was in his element would be an understatement. During their stay, Eric and his family went on many hikes and saw sally lightfoot crabs, sea lions, marine iguanas, sea turtles, sea rays and flightless cormorants, in addition to the amazing plantlife.

While snorkeling, Eric saw schools of thousands of fish, many of which cannot be found anywhere else on the planet. Other memorable sights included lava lizards, a Galapagos Hawk and even a penguin.

Eric was deeply touched by his wish, and very thankful for the experience. In a letter to the Foundation, Eric said, "I could never in a million years say thank you enough to everybody who helped make this trip possible for me. It was a true



Eric enjoying his Make-A-Wish Foundation[®] trip with his family.

Update Your Fall Calendars! (continued from page 1)

Becca was so active in the community, and loved athletics – so a run in her memory seemed to be a perfect way to bring people together and raise money to benefit childhood cancer related groups.

This run, now in its fourth year has grown into a major community event. Net proceeds from the first three years have been over \$80,000, benefiting the Candlelighters Childhood Cancer Foundation, Children's National Medical Center and Special Love, Inc. Participation in the run grows each year, with over 1,200 walkers, runners and volunteers last year alone!

This year the Lilly family has chosen The Childhood Brain Tumor Foundation, Inc. as beneficiary of the funds raised in Becca's Run. We hope many of you can participate on behalf of the Foundation as runners, walkers, or volunteers! Brochures will be available late this summer. Please call (301) 515-2900 for more information, or to obtain a brochure.

- submitted by Kristen Savercool

Kyle's Heroes (continued from page 1)

Kyle underwent a successful tumor resection at Columbia Presbyterian Babies & Children's Hospital in New York, NY on March 19, 1999. Thanks to the extraordinary talents of the neurosurgeon, the entire medical team and Kyle's own determination he was playing Ping-Pong in the hospital game room six days post surgery.

Kyle continues to require medications to do the work for his damaged pituitary gland and has recently started hormone and growth replacement therapies. He self-manages daily injections and other oral and spray medications.

Kyle recently attended his high school prom and completed the third semester of his junior year with an A average. Kyle is looking forward to selecting a college and even though the surgery has left him with a peripheral vision loss he is preparing to take his driver's test in the fall.

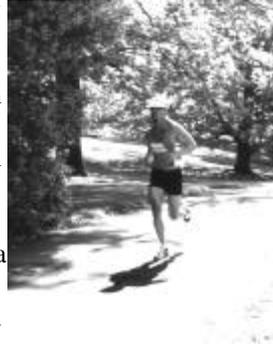
Kyle's Heroes is a group established by the family and friends of Kyle Killeen. The group's goal is to help defray medical costs and support funding for research and the development of treatment.

We are thankful for all the information provided to us by the Childhood Brain Tumor Foundation and are honored to support its hard work.

The second annual golf outing is being planned for September 18, 2000 at Lakewood Country Club in Lakewood, NJ. Anyone interested in joining us can contact Peggy Killeen at PegKilleen@aol.com for further information.

Spring Biathlon 2000

In the early morning of April 29th, CBTF, in conjunction with The Capitol Sea Devils and The Madeira School hosted the 6th annual Spring Biathlon. The race consisted of a 525 yard swim and the usual challenging 5k cross-country run. Participants could either compete as individuals or as a team. Blessed with another gloriously sunny day, the race was a smashing success. Despite all the hills in the run, everyone had a great time.



Biathletes of all shapes, sizes and ages successfully completed the race. The overall mens winner this year, with a time of 26:18, was Jesse Leifert, a local triathlete. Emerson Davis two year stint as the overall champion was ended by Penny Bates in an outstanding time of 30:47 barely eking out Kristin Balint for who finished second in 30:50. Emerson Davis place third in 31:06. It is important to note that Emerson is only 13! One of the most impressive performances was by the brother-brother team of Daniel and Eric Rohleder who dethroned the defending male/male relay team of father-son Dolan and Patrick Sullivan (9 years old) in a smoking time of 26:11. The Sullivans finished close behind in a PR of 26:48 Other winners include Felice Physioc (14-UF), Sarah Aronoff (15-19F), Laura Toth (20-29F), Cheryl Conlin (30-39F), Sumie Emory (40-49F), Ann Lyttle (50+ F), Simon Gilna (14-UM), Charlie Palen (15-19M), Tom Campbell (20-29M), Bradley Binford (30-39M), Tom Cook (40-49M), Dick/Amy Stark (M/F Relay), and Ginny Sasser/Sarah Oxford (F/F Relay).

Before and after the race, participants feasted on bagels, various juices and fruits, Snickers, hot dogs and assorted donuts. As you can see there was a little something for everyone!!! A fond thank-you to our generous snack contributors, including DrinkMore, Chesapeake Bagels, Lake Ridge, Giant Food, Safeway, and Shoppers. Thank you to all participants and volunteers for their time and efforts. A special thanks to the Whipkeys, Swigers, Hawes, and



Emorys for their generous contributions. We look forward to seeing you again next year.

White House Easter Egg Roll

The Childhood Brain Tumor Foundation was delighted to be invited by President Clinton and Mrs. Clinton to be their guests at the special event, the annual White House Easter Egg Roll, held on Monday, April 24, 2000. Twenty-one of our CBTF families were represented, with children ages 3-6, along with their parents. The wonderful Egg Roll tradition dates back to 1878 and is one of the most cherished traditions in our nation's capital.

The White House Easter Egg Roll included Prescription for Reading featuring Cabinet Secretaries and Administration Officials who read stories throughout the event. Many of the children were delighted to see Justin Timberlake and Lance Bass of N'Sync who were the Masters of Ceremonies on the Cotton-tail Stage. Other featured entertainers were Julie Andrews, J.K. Rowling, Deborah Norville, Ted Danson and Mary Steenburgen. Each child attending received a lovely Longaberger Easter basket filled with special storybooks and jelly beans. Autographed celebrity eggs were given to the children as an added treat.



Exciting events of the morning included colorful egg decorating, ongoing story telling sessions, strolling Easter-related characters in full costume, a CD Pavillion, and a virtual tour of the White House. The children enjoyed having photographs taken on the Great Nest and participating in easter egg rolling on the South White House Lawn. Everyone had a wonderful time at the White House on the beautiful spring day.



President and Mrs. Clinton warmly greet the crowd for the eighth year in a row.

Angiogenesis Inhibitors (continued from page 1)

ing the amount of chemotherapy that can be safely given. However, recent discoveries that alterations in specific functions of normal cells can also inhibit tumor growth has led to enthusiasm for the development of drugs that effect their function is unlikely to occur. With this approach, oncologists no longer need to restrict their attention to the individual cancer cell, but may focus on the entire tissue environment as potential targets of therapy.

Angiogenesis inhibition: One of the most promising avenues in this field of cancer research is the study of a group of drugs called *angiogenesis inhibitors* (AIs). These are drugs that block the development of normal new blood vessels, a process known as angiogenesis. By blocking the development of new blood vessels, researchers are hoping to cut off the supply of oxygen and nutrients to the tumor. Although the blood vessels of tumors have been studied since the early 1800s, it is only in the past few years that this approach as an effective therapy has become realistic. The concept of cancer anti-angiogenic therapy stems from the work of Dr. Judah Folkman, a pediatric surgeon at the Children's Hospital in Boston, in the early 1970s. Dr. Folkman was the first to emphasize that solid tumors cannot grow beyond the size of a pinhead (1 to 2 cubic millimeters) without inducing the formation of new blood vessels to supply the nutritional and other needs of the tumor. He then recognized that inhibiting the growth of tumor blood vessels should lead to effective methods in attacking malignancy. This theory, now confirmed by a large body of experimental evidence, implies that tumors can potentially be starved to death by inhibiting their blood supply.

How AIs work: In normal tissue, new blood vessels are formed in response to signals generated during tissue growth and repair (wound healing), during the normal female reproductive cycle, and during the development of the fetus in pregnancy. About 15 proteins are known to activate new blood vessel growth. Of these, the most potent is called vascular endothelial growth factor (VEGF). Other important ones include fibroblast growth factors (FGF), angiogenin, epidermal growth factor (EGF), placental growth factor (PIGF), platelet derived growth factor (PDGF), and tumor necrosis factor alpha (TNF-alpha) to name a few. In cancerous tissue, tumor cells produce their own VEGF and other chemical signals that induce the existing blood vessels in the surrounding tumor environment to make new blood vessels for the growing tumor. Endothelial cells, the cells that form the walls of blood vessels, are the source of new blood

vessels. In response to these chemical signals, endothe-

lial cells divide and grow, breakdown their surrounding tissue barriers with enzymes called matrix metalloproteinases (MMPs), and migrate toward the tumor to form a connection to the body's blood supply. Each of the steps in this process is a potential target for AIs to block. Some of the naturally occurring inhibitors of angiogenesis include angiostatin, endostatin, interferons, platelet factor 4, thrombospondin, transforming growth factor beta, and tissue inhibitor of metalloproteinase. In general, four strategies are being used by investigators to design anti-angiogenesis agents:

- 1) Block the ability of endothelial cells to break down their surrounding tissue barriers.
- 2) Inhibit normal endothelial cells directly.
- 3) Block the chemical signals that stimulate angiogenesis.
- 4) Block the action of proteins called integrins that are on the surface of endothelial cells and are responsible for the continued survival of endothelial cells undergoing angiogenesis.

AIs in clinical trials: Today, about 20 angiogenesis inhibitors are being tested in adult human cancer trials (see below). Most are in early Phase I or II adult human clinical studies. Some are in or entering phase III testing. With the exception of thalidomide, pediatric studies with angiogenesis inhibitors have not been started. The first group-sponsored pediatric trial will be conducted by member institutions of the Pediatric Brain Tumor Consortium (PBTC) in early 2000. This will be a phase I trial with the VEGF blocking compound, SU5416. In phase I/II trials, a limited number of people are given the drug to determine its safety, dosage, side effects, and preliminary activity. In phase III trials, hundreds of people around the country are involved in studies to determine how effective the drug is. Since all of these trials are in the early stages, commenting on their usefulness against tumors in humans would be premature, but all have been shown to retard tumor growth either in the test tube or in animals. The following AIs are currently in trial or about to begin and are grouped according to their method of inhibition, which is denoted by one of the four corresponding numbered strategies listed above:

- 1) Marimastat, AG3340, COL-3, Neovastat, BMS-275291
- 2) TNP-470, Thalidomide, Squalamine, Combretastin A-4 Prodrug, Endostatin
- 3) SU5416, SU6668, PTK787/ZK 22584, Interferon-alpha, Anti-VEGF Antibody

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Spring Retreat Day

Spring Retreat Day was held on Sunday, May 7, 2000 at the Bannockburn Community Center in Glen Echo, Maryland. Sixty-six people attended the Retreat Day. The medical topics included Dr. Roger Packer's topic *Alternative Treatments for Childhood Brain Tumors* and Dr. Marianna Horn's topic *Stem Cell Rescue in Children*. Stacey Springer, LCSW, session was *Healing Back to Health*. Many thanks to our speakers who gave so generously of their time.

Thank you to the volunteers from *BIA Financial Network* who donated and dedicated their time to make sure the children were well entertained. Donna Brooking and friends supplied some wonderful craft activities for the children throughout the day. The children were also delighted about the limousine trips to Glen Echo Amusement Park, compliments of David Shalap from *Washington Sedan*. He also helped provide additional entertainment by bringing the clown, *Dot.com* who accompanied the children and volunteers on trips to Glen Echo to ride the carousel. Yvonne Soghomonian did a superb job putting together a terrific luncheon for everyone.



Above: Brynne, Alyssa and Danielle pose for pictures after having their faces

Right: Children enjoying the carousel rides at Glen Echo Amusement Park



Above: *Washington Sedan's* David Shalap with a few volunteers from *BIA Financial Network* and a few of the children.

Right: *Dot.com* entertains the children

Angiogenesis Inhibitors (continued from page 4)

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CAI, Interleukin-12, and IM862 are also in clinical trials; however, their mechanism of inhibition is unknown.

Some of the differences between standard chemotherapy and anti-angiogenesis therapy are the result of AIs targeting dividing endothelial cells rather than tumor cells. AIs are not as likely to cause bone marrow suppression, gastrointestinal symptoms, or hair loss. Also, AIs may not necessarily kill tumors, but rather hold them in check indefinitely. Therefore, it may be necessary to continue therapy with AIs for the life of the individual or use in combination with other standard chemotherapy drugs.

In summary, AIs offer an exciting new approach to the treatment of childhood tumors. Potential important benefits over standard chemotherapy are the lack of resistance to therapy and the lack of significant side effects on other normal tissues. How realistic are the prospects of anti-angiogenesis therapy? The final answers will come only through the completion and analysis of ongoing clinical trials.

This article was written by *Tobey MacDonald, M.D.*, pediatric oncologist, *Children's National Medical Center, Washington, DC.*



Your Dash.....

"I read of a man who stood to speak
At the funeral of a friend.
He referred to the dates on her tombstone
From the beginning...to the end.
He noted that first came her date of birth
And spoke the following date with tears,
But he said what mattered most of all
Was the dash between those years. (1934 -
1998)

For that dash represents all the time
That she spent alive on earth...
And now only those who loved her
Know what that little line is worth.
For it matters not, how much we own;
The cars...the house...the cash,
What matters is how we live and love
And how we spend our dash.
So think about this long and hard...
Are there things you'd like to change?
For you never know how much time is
left,

That can still be rearranged.
If we could just slow down enough
To consider what's true and real,
And always try to understand
The way other people feel.
And be less quick to anger,
And show appreciation more
And love the people in our lives
Like we've never loved before.
If we treat each other with respect,
And more often wear a smile..
Remembering that this special dash
Might only last a little while.
So, when your eulogy's being read
With your life's actions to rehash...
Would you be proud of the things they
say

About how you spent your dash?"

--Author Unknown

Poem provided by Karen Dunbar

After a long and courageous battle against cancer, Dash passed away on May 9, 2000. He will be missed by those who knew and loved him.



In memory of Nicole Ringes

"Sometimes, no matter how much faith we have, we lose people. But you never forget them. And sometimes, it's those memories that give us the faith to go on."

Monologue from
CBS' Early Edition

Left: Poem in
memory of Dash
Dunbar.
Right: Photo

Dash: *The Big
Dog of Super
Heroes* was our
feature story in
the Winter 2000
newsletter.



Remembrances

Stephen Boyce
Jeff Brown
Kelley Bula
Janice Carpenter
Catherine Cason
Ryan Caspar
Ryan Crozier
Dash Dunbar
Shawn Edwards
Vanessa Gonzalez
Katie Harris
Erica Holm
Samuel Robertson Johnson
Tommy Kelleher
Mitzi Levine
Jodi E. Lewis

Wesley Hall Lewis, II
Wesley Hall Lewis, Jr.
Jay Rowley
Lauren Lockard
Margie Kane
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Nicole Ringes
Amy Schiller
Lynda Santelli
Teresa Stargel
Jaime Vanderheyden

