

# THE FA FAMILY NEWSLETTER

c/o Frohnmayer, 2875 Baker Blvd., Eugene, Oregon 97403 - (503) 686-0434

ISSUE # 5

NOVEMBER, 1988

## GREETINGS TO THE FANCONI ANEMIA SUPPORT GROUP AND INTERESTED HEALTH CARE PROFESSIONALS

The list of persons who have contacted our group continues to grow. We now have ninety-six families in our FA Support Group! Our combined efforts to support research and share information can make a difference in combating this rare illness. We urge all of you who can to participate in this effort.

The editors express appreciation to all of you who have helped with this newsletter. Many of you have written articles, and have been willing to share your concerns, experiences, grief and hope. Your contributions have been invaluable. We urge all of you to consider sending an article; our newsletter depends on your help! Several have made financial contributions to help defray our costs. Our deepest thanks for that assistance.

This publication is sent to FA families, physicians, researchers and concerned professionals. We take great care to report medical developments accurately. We caution again, however, that all medically-related information should be discussed directly with your treating physician.

### Inside This Issue

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- \* Special Research - Patient blood samples needed
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## FANCONI ANEMIA RESEARCH UPDATE

Research progress continues to give us hope. Most of us are not medically trained, but we can assist in these efforts through fundraising support.

The following reports are not exhaustive and we encourage other researchers to send news of their work.

### 1. GENETIC RESEARCH

Dr. Arleen Auerbach of the Rockefeller University continues her investigation of the underlying genetic cause of FA - see her letter on pages 5 & 6.

We are heartened to learn that the National Institutes of Health will award Dr. Auerbach a major, multiple year grant to continue her vital study to isolate the FA gene(s). Congratulations, Arleen!

We know, however, that the grant will not cover many expenses for supplies and testing. Unless we can raise additional funds, needed research will be delayed. We all know the urgency in finding support dollars.

### 2. TREATMENT OF APLASTIC ANEMIA WITH GMCSF: FIRST RESULTS

In issue #4 (March, 1988) of  
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this newsletter, page 4, we reported that proposed clinical trials of the new drug GMCSF, to treat aplastic anemia, had been delayed.

Dr. David Nathan of the Dana Farber Cancer Institute in Boston now reports (11/9/88) that the first trial on a patient with moderate aplastic anemia has been highly successful to date. Two additional patients are now beginning treatment with GMCSF under carefully controlled conditions.

We caution that no FA patient has received GMCSF treatment at Dana Farber, and it may be some time yet before test results show whether this treatment is even appropriate for FA. We will keep you informed. Further information on GMCSF is cited in the synopsis of the Scientific American article which appears on the last page of this issue.

### 3. FA TREATMENT RESEARCH WITH GROWTH FACTORS

Two noted researchers are beginning laboratory experiments with FA cells and newly discovered "growth factors". GMCSF is only one of these promising substances. Growth factors can improve blood and bone marrow production in some cases. These experiments will focus on whether FA cells are responsive to various doses of these new drugs.

Dr. Blanche Alter of Mt. Sinai Hospital in NY wants to look at in vitro hematopoiesis from blood and bone marrow cells of FA patients, and the possible role of hematopoietic growth factors in stimulating blood production in culture. Since there is a leukemic propensity in FA patients she will examine possible leukemogenic effects of any growth factors. She hopes eventually to be able to identify effective and safe agents to stimulate hematopoiesis.

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poiesis in patients with FA. Dr. Alter plans to study patients representing all stages of anemia and non-anemia. She stated that possible benefit might be in terms of predicting which individuals might become anemic and when the onset of anemia might occur.

Dr. N.T. Shahidi, Professor of Pediatrics at the University of Wisconsin, is exploring why some FA patients who exhibit severe chromosomal breakage do not develop bone marrow failure. Others, of course, even in the same family who may have the same or a lesser degree of chromosomal abnormalities develop bone marrow failure and other complications.

Dr. Shahidi is currently comparing in vitro growth patterns of peripheral blood and the bone marrow of anemic and non-anemic patients with FA. He is also searching for factors which stimulate or inhibit the growth of white, red and platelet precursors in the bone marrow of FA patients. \*\*\*\*Brad and Lea Ann Curry of our group are helping to raise funds for Dr. Shahidi's research effort.

### 4. GENE RESEARCH CONTINUES IN CANADA

Dr. Manuel Buchwald, of the Hospital for Sick Children in Toronto, reports (11/16/88) continuing research efforts to discover and clone the FA gene. A multi-year award from the Medical Research Council of Canada has helped finance these efforts.

Dr. Buchwald's research also includes investigating and identifying rodent cell lines which show behaviors equivalent to those of FA cells. Present experiments include working with the RNA "message" of the DNA strands in attempts to find the location of the FA gene.

Any discussion of gene therapy for FA is strictly theoretical.

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tical at this point. However, among many diseases Dr. Buchwald holds out particularly high hopes for gene therapy for FA, if the gene is discovered.

#### CANADIAN FUNDRAISING EFFORTS DEMONSTRATE COMMUNITY CONCERN

Maureen Dodd wrote to describe a happy fundraising event held on May 28, 1988, in British Columbia. The Ballantrae Studio of Dance produced a benefit performance on behalf of the Dodds' daughter, Rebecca and other FA victims.

Through this event and a related raffle, this small community generated \$540.00 for the important FA genetic research efforts of Dr. Manuel Buchwald at the Hospital for Sick Children in Toronto.

Maureen notes that the "amount [was] good for a small place and considering it was the first annual performance for the Studio. We are extremely grateful to Loretana Maiuri [the instructor] and her mother, Frances Maiuri, for donating this money."

Maureen also reported that four fifth grade students from Ballantrae Public School held a spontaneous cookie sale. Tammy, Andrea, Amy and Tracey raised almost \$20.00 for the effort. "We were very touched that these girls did all this themselves, with no prompting from parents or teachers. It just shows that even young people care."

#### FROM OUR HOME TO YOURS

Our family would like to take this opportunity to extend to your family all best wishes for the HOLIDAY SEASON and throughout the NEW YEAR.

#### NEW YORK AREA SUPPORT GROUP MEETS

By the time you get this issue of the Newsletter the first meeting of the NY Area Support Group will have occurred. Scheduled for Monday, November 28, 1988, at the Mt. Sinai Medical Center, this will be hosted by Drs. Arleen Auerbach and Blanche Alter. They are to be commended for organizing this "first-ever" face to face meeting of FA family members. The next issue of the Newsletter will contain a detailed report of the event.

#### FA NEWSLETTER PRODUCTION & MAILING COST; CAN YOU HELP?

With each issue we add more families and physicians to our network. As a result, the production and mailing costs for over 200 copies of every issue we send out are beginning to mount.

If you can send the editors a modest contribution to help offset expenses, we'd appreciate it. We know, only too well, that many of you have enormous medical bills to meet and are simply unable to make any commitment. We understand completely! Regardless of your circumstances you will continue to receive the Newsletter as long as you wish.

#### OUR THANKS, PETER!

Special thanks to Peter Abramov for his help in editing, duplicating and mailing this issue of the Newsletter. We appreciate your cheerful willingness to help, Peter.

Dave and Lynn

NEW NAMES TO ADD TO FANCONI ANEMIA SUPPORT GROUP

- |   |   |
|---|---|
| 1. Vicki & Andrew Athens<br>29113 East River Road<br>Grosse Ile, MI 48138<br>(313) 671-2021 - Home<br>(313) 675-8383 - Work | 2. (Mrs.) Lynne Baervoets<br>c/o Mongeau, Gouin, Roy<br>1596 Pine Avenue West<br>Montreal, Quebec<br>H3G 1B4 Canada |
| 3. Diane & Michael Bradley<br>28671 Denise<br>Madison Heights, MI 48071<br>(313) 398-7735                                   | 4. Barb & Ed Brookover<br>9712 Harr Court<br>Burke, VA 22015<br>(703) 455-0614 - Home<br>(202) 347-0202 - Work      |
| 5. Kathy Fowler<br>P.O. Box 264<br>Warrenton, MO 63383<br>(314) 456-3105  | 6. Lynn Lecuyer<br>1822 Queens Avenue<br>Comox, British Columbia<br>V9H 4H1 Canada                                  |
| 7. Barbara & John Miller<br>5309 Norma Road<br>McFarland, WI 53558<br>(608) 838-8775  | 8. Norma & Dr. Giovanni Pagano<br>Istituto Nazionale Tumori<br>v. M. Semmola, 12<br>I - 80131 Naples Italy          |
| 9. Phyllis & Lester Resh, Jr.<br>3 Mesler Road<br>Morris Plains, NJ 07950<br>(201) 539-8755                                 | 10. Jan & Leonard Riley<br>1119 Stillmeadow<br>Longview, TX 75604<br>(214) 753-0324 - Work                          |
| 11. Andrea & Bob Sachs<br>9317 Afternoon Lane<br>Silver Springs, MD 21045<br>(301) 622-3300                                 | 12. Diane & Matt Senatore<br>36 Eakman Drive<br>Garnerville, NY 10923<br>(914) 947-1493                             |
| 13. Wayne Shattuck &<br>Patty Cartwright<br>98 B Williams Lake Road<br>Halifax, Nova Scotia<br>B3P 1T3 Canada               | 14. Olga & Felix Tsimmerman<br>25 Mahan Street<br>Tenafly, NJ 07670<br>(201) 894-8194                               |
| 15. Nancy & Reese Williams<br>1341 Star Crest Drive<br>Harrisonburg, VA 22801<br>(703) 433-1133                             | 16. Kathi & Bill Wingo<br>937 Russ Street<br>Eureka, CA 95501<br>(707) 444-0173                                     |

PLEASE NOTE THE FOLLOWING ADDRESS CHANGES

- |                                       |  |
|---------------------------------------|--|
| Molra & Charles MacLellan             | 30 Barnstead Court<br>Brampton, Ontario L6Y 2K5 Canada |
| Dejuana Simon<br>(916) 771-0688       | 3095 PFE Road<br>Roseville, CA 95678                   |
| Sandy & Marc Weiner<br>(914) 232-0385 | 21-16 Croton Lake Road<br>Katonah, NY 10536            |

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We are pleased to include here the latest communication from  
**ARLEEN AUERBACH, Ph.D.**

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**THE ROCKEFELLER UNIVERSITY**  
1230 YORK AVENUE • NEW YORK, NEW YORK 10021-6399

November 17, 1988

Dear FA Families:

I welcome this opportunity to give you an update on the International Fanconi Anemia Registry (IFAR), and on our studies that are attempting to find the Fanconi anemia (FA) gene. Currently, over 300 patients with symptoms resembling those seen in Fanconi anemia have been referred to the IFAR. Over 200 of these have tested positively in the DEB test and are considered to be affected with FA. We have collected clinical data on these individuals, and are presently updating this information in order to better answer some of the questions relating to the clinical aspects of the disease. Our studies so far show that the clinical manifestations of the FA patients are highly variable and that the presence or absence of eight selected clinical markers including low platelet count, short stature, and skin pigmentation abnormalities best discriminate between positive and negative cases in the DEB test. Details of these studies will be published in the February, 1989 issue of the medical journal BLOOD.

The major research effort of my laboratory is now devoted to an attempt to locate the FA gene by linkage analysis using DNA markers. We have three scientists working full time on this project, as well as additional part-time help. Salary support for one of these individuals comes from funds raised by FA families as previously noted in this Newsletter. These funds also help enormously with our need for supplies and equipment for this project. In addition, we have support from the NIH and from the March of Dimes Birth Defects Foundation for this work.

RFLP (restriction-fragment length polymorphism) studies are currently straightforward to perform, provided DNA is available from enough informative families for the disease being mapped. The chromosomal locations for a number of genetic diseases have been found recently, using this method. For recessive diseases like FA, two types of families are informative: those with two or more affected family members, or those in which the parents of the affected child are related to each other. We currently have DNA from blood specimens from 25 such families with FA, enough to make this study feasible. DNA probes spanning the entire human genome are now available to us, and by studying the inheritance in these FA families of 100 carefully chosen markers distributed throughout the chromosomes, it is highly likely that a linked marker will be found. We are testing several probes a week at this point, and have already ruled out areas of the genome as a possible location for FA. We expect that it will take 6 months to one year to find the chromosomal location for the FA gene, although there is an element of luck in these studies, and one really can't accurately predict the time involved. One has to test random DNA markers throughout the genome until one finds the right one, and this

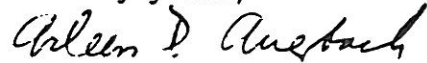
could happen by chance early in the study or not until many markers have been tested. After the location of the FA gene is found, other techniques can be used to find the gene itself.

There has been much progress lately in research to isolate bone marrow stem cells and to develop techniques needed to perform gene therapy. Studies have shown that it is possible to insert genes into cells by somatic recombination, so that these genes can be regulated. It seems likely that gene therapy will become possible in the next few years. FA is clearly a genetic disorder that is an ideal model for attempting gene therapy using bone marrow stem cells. Therefore, isolating and cloning the FA gene may eventually lead to an approach to the treatment of FA.

These studies attempting to map the FA gene would be greatly aided by the participation of additional families. We have been trying to identify all informative FA families as described above. If any FA family would like to participate in this study and would like further information, please feel free to contact me.

Best regards.

Sincerely yours,



Arleen D. Auerbach, Ph.D.  
(212) 570-7533

**SPECIAL RESEARCH NEED:**

**FA PATIENT BLOOD SAMPLES**

Dr. N.T. Shahidi, whose research progress was reported earlier in this issue, is in need of small blood samples - approximately 10 ml - from FA victims. These samples are particularly important to test the effect of various potential therapies for FA.

The next time your child has an appointment for a CBC or other blood testing, please consider Dr. Shahidi's request. You can make arrangements in advance of the blood drawing by having your lab or physician call Dr. Shahidi at (608) 263-6202. Progress depends on cooperation from all of us.

**PLEASE HELP.**

\* \* \* \* \*

Hal and Bobbie Porter of our group lost their son, Phil, to FA at age 25, in 1984. Their letters to us are eloquent, and their grief is profound. They have exhibited and shared great courage and healing. We include here excerpts from their several letters. As Hal recently wrote, "writing helps me because it is a form of sharing. If I help you, then that helps me." Other thoughts follow:

In 1978 when Phil was diagnosed as having FA, how hard we tried to learn about it. From that time until Phil's death in 1984, we thought we were the only members of the FA family - no one to talk to - all alone with a disease most doctors had never heard of. We recently learned that Lynn and Dave Frohnmayer of Eugene, Oregon have organized some 100 families in the U.S. and around the world - families directly affected by this rare disease - into a support group. Through a newsletter, the group provides information to its members - information on new developments in research - establishes contacts between members for support and finances research efforts. This service is invaluable to those unfortunate enough to be members - it removes some of the loneliness and uncertainty - and its ultimate goal is finding a cure for FA.

The FA Newsletter is very helpful to parents, even those of us who have fought and lost. It helps those parents who are desperately searching for guidance - second-guessing each important decision - finding the right doctor, hospital or treatment. To these people the Newsletter provides essential communication, knowledge and some assurance that they are doing everything that can be done. It forces us all to recognize and accept that there is not now a cure for FA - not for everyone - and that, no matter how hard one may try or how much money one may spend, there is no easy solution. How I wish we had the benefit of the FA Family in 1984!

Phil fought - we all did. And, in defeat we are comforted by the certain knowledge that we fought the good fight - defeat without guilt but with honor! This is called valor. And so we learn to cope.

The end of life is a loss to all who survive, and we weep and hurt and cry out for help. It is especially so for a parent because his responsibility is to provide for and protect his young - to see them mature, develop and succeed - the proper progression - and, when this natural order is interrupted, not only does he feel the loss, but there is always the guilt of not having successfully completed the natural cycle. All these things combine to cause the chronic grief that we must share.

If it is possible to look at life, not as its beginning and its end, but as to its existence and its substance, then what is important is not its longevity but its quality. By that I mean how the life affects other people, brings them happiness and fulfills them, brings others together, makes others more compassionate and understanding, creates new and better friendships, and, in general, makes the world a better place.

I think of how much Phil affected so many people. How much joy, happiness and pride he brought to Bobbie and me when we  
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adopted him. We never thought of Phil (or Clay, either) as adopted - they were and are our children. I think of the pride in watching and helping him grow up. Little league football, baseball, Boy Scouts, floating the Green River, now I taught him to fly and land a Cessna 175 at age 10, how he was the best baseball player on his team, how he scored his team's only touchdown one season - and as a defensive guard! He brought great happiness to a young couple, his little brother and many others whom I do not know.....

Bobbie and I recognize that our world has been forever changed, our values have been rearranged, our grief is intense and continual. The bitter sweet memories are always with us, nurtured and caressed.

Religion is a tremendous source of solace for those who sorrow and suffer anxiety and loss. I am, personally, very religious but subscribe to no organized religion. It is a source of strength in times when one's own strength seems to be insufficient.

Grief is hard to handle alone. We had help from a group known as The Compassionate Friends. They allowed us to share our grief and led us to the realization that we were not alone, much like the FA Family. Some unknowing or insensitive people confuse grief with self-pity. They are not the same. We grieve for the loss of someone we love - through death, divorce or otherwise, and we seek, not pity for ourselves, but comfort and understanding. The Compassionate Friends teach ways to control and channel grief. You find a way to help others and, in so doing, you help yourself. From The Compassionate Friends we learned "Helping to carry someone else's load is guaranteed to lighten your own." Further, "No matter how deep your sorrow, you are not alone. Others have been there and will help share the load if you will let them."

So you cope (which is derived from the French and means "to strike a blow, to fight, to struggle"). You dedicate your mind, your body, your resources to a noble cause - to cure FA. You cope. You fight with all the strength and never give up hope.

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Bobbie and Hal Porter can be reached at

Box 17004  
Fountain Hills, AZ 85268  
(602) 837-8337

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HELPFUL HOSPITAL HINTS  
by Sandy Weiner

Our son, Avi, is two years old. He was born with many anomalies, including microcephaly, gastroesophageal reflux, left hydronephrosis, hydroureter, GU reflux, imperforate anus, undescended testicles, bilateral floating tumors and microphthalmia. Having been through twelve operations, we have gained a lot of heartache and a lot of useful knowledge we would  
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I like to share.

(1) During each hospital stay, doctors, nurses, residents, interns, medical students, etc., all ask the same questions regarding Avi's medical history. We were ready to punch out the next person with a question until we discovered a more civilized approach. We wrote a sort of biography on Avi, including his birth history, diagnosis, anomalies, and each surgery that took place, the hospitals and the surgeons. The next time anyone asked a question, we gave them this record. Not only did it shut them up, but it eased some of the tension for us and they gained instant respect for the organized and informed parents. Respect can help with any issue that may arise during a hospital stay.

(2) Drawing Avi's blood is an almost impossible feat. This has always been one of the most traumatizing experiences at the hospital. Most residents and interns are too insecure to admit they are not the most qualified to do this job. It would sometimes take hours before they would concede to the most qualified person on call. We learned the hard way that we could bring Avi to the hospital the day before as an outpatient to have the bloodwork done, usually in the neonatal nursery. The ordeal is thus over in a very short time. We were able to spend one less night in the hospital, saving our insurance company money and ourselves the grief of a sleepless night. It really meant the world to us.

(3) When it came time for Avi's hip surgery, we insisted on home traction. The hospital, Columbia Presbyterian in New York City, had never done that before and were unwilling to start with us. We were firm on this point until they not only agreed, but the doctor spent a whole day building a home traction kit for us. He even thanked us for forcing him to do it.

(4) It's been hell for our family, especially for Avi. But, taking a firm stand and insisting on our rights has helped us get through torturous times. Most of you have been through your own very real hell with the anemia part of FA. We, thank G-d, are not yet there. We thought that we were seeing the light at the end of the tunnel with Avi's surgeries coming to an end. At eighteen months of age he was diagnosed with FA. I was three months pregnant and had an amnio. Thank G-d Rebecca is a healthy beautiful girl, but unfortunately she is not an HLA match for her brother. I am finally realizing the enormity of this illness and we try to make each day count to the fullest. Avi is an extremely special, sweet almost angelic little guy. He is also the toughest kid we know. He always bounces back after each surgery, with spunk, ready to take on whatever is dished out. We treasure our little boy.

We would be interested in hearing from anyone who has a child with a similar medical history. Perhaps we can help with a list of excellent surgeons whom we have been privileged to have operate on Avi.

Sandy and Marc Weiner can be reached at

21-16 Croton Lake Road  
Katonah, NY 10536  
914 232-0385

The article cited below deals with colony-stimulating factors, or CSF's, mentioned earlier in this issue. It is not yet known whether these substances will help in FA therapy, though many believe the research holds great promise. Although it is written in highly technical terms, the article does help explain many of the concepts you have been hearing from your health care practitioners. We suggest that you obtain a copy of the complete article from your local public library.

Golde, David W. and Judith W. Gasson. "Hormones that stimulate the growth of blood cells". Scientific American. (July, 1988). pp.62-70

Until recently only a limited number of methods were known to enhance the function of blood cells - vaccines, nutrition, transfusions. With the discovery of hematopoietic proteins the potential now exists to reduce the necessity for blood transfusions, simplify and make less risky bone marrow transplants, and bolster the immune system as it contends with pathogens, tumors and AIDS. These hematopoietic proteins have been cloned and can be "manufactured" in quantity so that physicians "may soon be able to elicit production of specific types of blood cells as a routine form of therapy."

The first human phase I and phase II trials of GM-CSF have been conducted with encouraging results, in patients with AIDS. Investigations are underway in using this as a form of therapy in cancer, preleukemic conditions and aplastic anemia.

Golde and Gasson state that "the uniqueness of CSF's in medicine lies in their capacity to make the patient a more formidable defense entity".

Gene, OR 97403

7 Baker Blvd.

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sub #5, November, 1988

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