



IDSCLS FOCUS

July 2003

An Idaho Society for Clinical Laboratory Science Publication

IDSCLS Member of the Year

IDSCLS has named Cheryl Newbold as our 2003 Member of the Year. Cheryl has been an active member of IDSCLS since 1986, holding several Board positions. She was the Chairperson for the 2002 Intermountain States Seminar in Jackson Hole, Wyoming. She led the team to produce the most successful convention in its 39 year history!

Cheryl is currently the Transfusion Services Senior Medical Technologist at St. Alphonsus Regional Medical Center in Boise.

Cheryl is known throughout IDSCLS and the laboratory for her expertise in blood banking, as well as her dedication to her profession. She is very deserving of this year's IDSCLS Member of the Year.



Congratulations Cheryl!!

2	Key Contacts
2	Region VIII Director's Message
3	President's Message
4	ISU Students Employed!
5	Scientific Assembly
6	Myelodysplastic Syndromes
7	Convention Pictures
8	Calendar of Events

Utah hosts the 40th Annual Intermountain States Seminar
 Everything Old is New Again
 September 10-13, 2003
 Jackson Hole, Wyoming

Workshops include:
 TRALI, Toxicology/Poison Control,
 Malaria and DNA for Dummies!



Contact cummingsck@yahoo.com for a registration packet or visit the website www.imss.8m.com for more information.

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Region VIII Directors Message



Susie Zanto



A young man was driving down a country road, and instead of watching the road, he was gawking at the scenery, and drove his car into a muddy ditch. He couldn't drive the car out, so he walked to the nearest farmhouse for help. The farmer told him that Dan, his mule, would be able to pull the car out of the ditch. Farmer Brown hitched Dan to the bumper of the car, and then yelled, "Let's go Buck, C'mon Smokey, Hey there Jack". Then he yelled "Let's pull Dan", and Dan proceeded to pull the car out of the ditch. The young man was thankful, but asked the farmer why he yelled all those other names before yelling for Dan. Farmer Brown replied that Dan was getting old and blind, and as long as he thought he was pulling as part of a team, he could pull more weight.

This is the time of the year when ASCLS state chapters turn the reins of their presidency over to a new incoming leader. This new leader has prepared for this big step during their year as President-Elect, but still approaches the challenge with some trepidation, no matter how involved, dedicated and accomplished they are. Do we, as grass root members, let our President pull all the weight, without giving her or him the support and input they need as part of the team? When the call goes out to contact your Congressmen about the laboratory co-pay present in the Senate version of the Medicare Prescription Drug Benefit bill, do you jump at the chance to lobby for our laboratory issues? When the position paper on the *Role of the Laboratory in Geriatric Medicine* comes before the ASCLS House of Delegates in Philadelphia, have you provided feedback on the position you feel ASCLS should take? Have you thought about what the laboratory of the future will look like, and discussed with your ASCLS leadership what educational requirements our students must have to be successful?

We, as members of ASCLS, have to ensure that we don't let our new Presidents be like Dan, the mule. Don't let them shoulder all the responsibility, with only the illusion of teamwork. Let's all take a pledge to help our leadership at every opportunity; our strength is in our numbers and our diversity. If we all pull as part of the team, no one will feel the effort is too much.

Congratulations to all our newly installed leaders in Region VIII. I feel confident that the success of ASCLS will continue in the year(s) to come, thanks to their dedication and commitment.



President's Message

Well here it is the end of June already and time is flying fast, I'm excited for the upcoming year-we have a great board and I think it's going to be great. We have some big goals for the upcoming year-First of all, I'd like to see the scientific assembly project come to life. Barb Frankovich has agreed to take the position of scientific assembly chair, and she would appreciate greatly any help and suggestions. We have a lot of new members, and we need to mentor and encourage them to become active. We had many new students join at the convention. They need to be made aware, not only of the opportunities available for them to become active in the society but also of the scholarship opportunities available to them. When someone is a member of this organization, especially an active member, it means to me that they are concerned about the professionalism of their job. I'd like to see that brand apply to everyone who considers this organization, and it's up to every member of this organization to make that happen. We all need to take part in both applying that to ourselves and in encouraging others to believe that. Hope you all have a great summer

Christy



President's Farewell

I can't believe my year as President is coming to a close. First of all, I would like to thank everyone in IDSCLS for their help and support over the last year. My involvement in the leadership of IDSCLS has been a great experience. I have gotten to know many more people around the state and made some great friends. I can't encourage members enough to become involved. Being a part of this organization has not only allowed me to develop more contacts, it has helped me in my professional development by teaching me leadership skills. The mentoring given to me by other leaders in IDSCLS has been invaluable. Even if you are not interested in being a leader, just getting involved can make a difference in how you feel about yourself and your profession. The members of IDSCLS make it a great organization and I would like to thank everyone again for a great year!

Stephanie

Many awards were bestowed during the Spring Convention

5 Year

Robert Archibald
Mary Cherry
Phillip Ciancia
Stephanie Combs
Carolyn Hamman
Kim Maag
Julia Markham
Carol Slater
Carey Stanton
Stephanie Thompson
Jason Tilby
Jennifer LaChance

10 Year

Charlotte Aspengren
Lowell Compton
Kent Evensen
Cheryl Kachner
Ann Lee Owens
Judith Schmand
Ray Tanner
Steven Williams

15 Year

Patricia Jones
Evelyn Lund

20 Year

Sandra Lange

25 Year

Kathleen Higgins
Toni Phillips

30 Year

Sue Curtis
Twylia McIlvanie
Sandra Perotto

35 Year

Joyce Wisinger



Sandy Perotto

Omicron Sigma

Brian Anderson
Barbara Frankovich
Mary Lay
Kim Maag
Brenda Miranda
Christy Posio
Ray Tanner
Holly Weinberg

Key to the Future

Holly Weinberg

Delegates to the National Convention

Sonja Nehr-Kanet
(unable to attend)
Sandy Perotto

Alternates: Susan
Morris (attending),
Terri Colvill, and
Debbie Shell

100% of Clinical Laboratory Science Grads Employed



(Article from the ISU May/June Newsletter)

From left to right: David White (CLS BS), Sonja Nehr-Kanet (CLS Boise Faculty), Jenny Lee (CLS BS), Dr. James R. "Dick" Pratt (Dean of College of Arts and Sciences), Sean Page (CLS BS), Lorena Bobinski (CLS MS), Amy Noble (CLS BS), Darin Harrold (CLS BS), Dr. Kathleen Spiegel (CLS program director), Vicki McGrane (CLS BS) and Lana Leake (CLS MS).

All clinical laboratory science BS Boise students are employed or have offers of employment.

"This has been a satisfying year for me, and I am very pleased for the success of the CLS students and thankful for the dedication and hard work of all involved in making this all happen," said Sonja Nehr-Kanet, Boise Center program director.

Jenny Lee, Sean Page, David White, and Darin Harrold are completing their internships at St. Luke's Regional Medical Center. They all have offers of employment at SLRMC after they complete their internship requirements.

Amy Noble is doing her internship at St. Alphonsus Regional Medical Center. She is also employed by SARMC and will start full-time night shift by mid-July.

Philip Cowmey completed his abbreviated internships at Walter Knox Memorial Hospital, in Emmett and in the microbiology department at SARMC. He is off to medical school in Moscow in mid-July.

Vicki McGrane will start her internship at SARMC in August, and Lorena Bobinski will be the first CLS MS graduate (she defends in July)



And now a word from your Editor

This has been a very rewarding year as part of IDSCLS. I came into this office without a lot of computer experience or confidence. I not only increased my computer skills but gained more knowledge about ASCLS/IDSCLS and made connections with many members of IDSCLS. In June I attended my first leadership retreat in Hagerman. I have to say a special thanks to Susan Morris for arranging and conducting a very uplifting and inspiring seminar. I returned to work ready to "bring joy to my workplace" and choose my attitude each day. I thank everyone for their patience as we moved forward with the electronic newsletter. I have great faith that Kent Evensen will refine the process with his expert computer knowledge (no pressure!). Hopefully we can connect more frequently through the Focus and also through Scientific Assemblies. That is our next challenge, so look for more email messages from me as we try to set up a network for those interested.



Barb

IDSCLS Scientific Assembly

By Anne Moss Williams

The American Society for Clinical Laboratory Science (ASCLS) web page describes the Scientific Assembly (SA) portion of the organization. One of the goals of the IDSCLS leadership is to strengthen the organization by putting more emphasis on the Scientific Assembly and encouraging support on the grassroots level. This article will discuss Scientific Assembly as well as some of the workings of the SA in Idaho.

The SA is made up of individual scientific assemblies for each of the following disciplines in the field of clinical laboratory science:

- a. Laboratory Administration
- b. Biochemistry/Ligand Immunoassay/Urinalysis
- c. Consultant's Forum
- d. Cytotechnology, Histology, Phlebotomy
- e. Education
- f. Hematology/Hemostasis
- g. Immunology/Immunohematology
- h. Inspector/Surveyor's Forum
- i. Microbiology



The purpose of the SA is to draw members from each discipline or specialty together to solve problems, share information, discuss trends, and to learn new methods and technology. The ASCLS Scientific Assembly has established goals by which members may experience professional, scientific and personal growth through participation. These goals apply to our SA organization, as well, and include:

- a. Providing expertise within a technical area of clinical laboratory science or area of special interest,
- b. Providing opportunities for continuing education in the various scientific disciplines or areas of special interest,
- c. Serving as a resource for basic education in the clinical laboratory sciences,
- d. Identifying specific needs for professional and scientific advancement,
- e. Providing input as requested for the development of laboratory standards in the scientific disciplines, the educational and administrative areas, and other areas of special interest,
- f. Establishing a communication system that will effectively coordinate the Scientific Assembly's endeavors, and
- g. Identifying talent for scientific and professional needs.

Scientific Assembly preferences are specified at the time of application for membership. Students and new members of ASCLS may indicate up to two SA Sections in which they would like to participate. These options may be changed at the time of yearly membership renewal.

The Idaho SA Coordinator is appointed by the President. A Chair and Vice-chair for each Section may also be appointed. By understanding the responsibilities of the SA Coordinator, individual members will come to know how important they are to the workings of the SA and how the SA can benefit them. Duties and responsibilities of the State SA Coordinator include:

- a. Coordinates activities of the SA on the State level as defined by the State Society.
- b. Encourages the formation of SA Sections at the State and local levels.
- c. Coordinates activities at the State and local levels to provide effective interrelationships.

This past year, IDSCLS leadership began the HUGE task of gathering information on SA membership within the state organization. As members, each of us can help by supplying information on section membership and email contact information, if applicable. Let us utilize available technology to strengthen the IDSCLS as we work with one another and get to know others within our areas of expertise. Broaden our horizons by exposing ourselves to something new. Don't re-invent the wheel; learn from someone who passed through those ruts before. As we allow ourselves to be connected through the Scientific Assembly, we will have the comfort of knowing there is someone at the end of the phone line or computer screen who is willing to help. We may be stuck when writing a procedure or need an opinion when changing specimen delivery methods. Nothing is too small or too great to be addressed by IDSCLS members throughout the state.

Put your foot in your hand and contact IDSCLS leadership with your email address and Scientific Assembly preference. Please contact Christy Posio (2003-04 IDSCLS President) chrizteaze@aol.com or Barb Frankovich (2003-04 SA Coordinator) barbmtascp@msn.com with this information. Let us look forward to a great adventure together as we participate in Scientific Assembly.

Myelodysplastic Syndromes

By Sharon Shoemaker, MT(ASCP)

Rather than discuss each Myelodysplastic Syndromes (MDS) with their separate features, this paper will discuss MDS in general, the types of morphologic cellular changes observed, and some of the treatment options available.

MDS are a group of acquired clonal hematologic disorders characterized by progressive cytopenias in the peripheral blood reflecting defects in bone marrow maturation (or ineffective hematopoiesis) of up to three cell lines: erythrocytic, myelocytic, and/or megakaryocytic.

The syndromes occur most frequently in the older population, usually in patients over fifty. All MDS are the result of proliferation of abnormal stem cells. The abnormal stem cell appears to be the result of the cumulative effects of environmental exposure in susceptible individuals. The abnormal stem cells produce clones of abnormal cells that then mature. There is no maturation block like there is in the acute leukemia, but the maturation is abnormal (or dysplastic) and the cell function appears to be somewhat impaired.

Chromosome abnormalities are present at diagnosis in more than 50% of patients. Mutations in the RAS proto-oncogene and mutations in tumor suppressor genes are among many of the abnormalities.

However diverse the expression of MDS, there are two morphological findings common to all MDS – the presence of progressive cytopenias despite cellular bone marrow and dyspoiesis in one or more cell lines resulting in apoptosis. The myelodysplastic hematopoiesis resulting from any gene disruption is characterized by a high degree of intramedullary death, or apoptosis, which in turn causes the peripheral cytopenias. Later in MDS when progression toward leukemia is apparent, apoptosis has been shown to be decreased, thereby allowing the neoplastic cell survival and expansion of the abnormal clone. Perhaps cell suicide can control the few mutations causing MDS, but the apoptotic system becomes overwhelmed when enough mutations occur to cause a frank maturation block resulting in leukemia.

Patients with MDS usually present with fatigue and weakness related to the anemia that is refractory to treatment. Hemorrhagic symptoms resulting from thrombocytopenia may also occur as well as infection resulting from the neutropenia.

Morphologic abnormalities in peripheral blood and bone marrow are described as lineage dysplasias. Dysplasia in the red cell lineage (dyserythropoiesis) is evident in peripheral blood with a dimorphic red cell population. Oval macrocytes with normal levels of B12 and folate and/or hypochromic microcytes with adequate iron stores may be seen. Reticulocytopenia is present. Qualitative abnormalities may include anisocytosis, poikilocytosis, basophilic stippling, Howell-Jolly bodies, pappenheimer bodies, dacryocytes, shistocytes and acanthocytes. In the bone marrow, erythropoiesis is megaloblastoid with giant, multinucleated erythroid precursors showing nuclear cytoplasmic asynchrony. Other nuclear abnormalities may include hyperclumped nuclear chromatin, nuclear fragmentation, abnormal nuclear shape, nuclear budding and karyorrhexis. Cytoplasmic abnormalities may show defective hemoglobinization, vacuoles, and basophilic stippling. The bone marrow is usually hypercellular with erythroid hyperplasia. Ringed sideroblasts may be present.

Dysplasia of the myeloid cell lineage (cysgranulopoiesis) in the peripheral blood shows neutropenia with abnormal granulocyte maturation. The granulocytes tend to show abnormal granulation. They may have granules larger than normal (pseudo Chediak-Higashi granules), display hypogranulation, or secondary granules may be completely absent. Nuclear abnormalities may include hyposegmentation with abnormal nuclear clumping such as bi-lobation (pseudo Pelger-Huet) or mono-lobation (pseudo Stodtmeister), or giant hyper-segmented neutrophils may be seen. Giant granulocytes, immature cells including blasts, and an absolute monocytosis may also be present. The myeloid cells in the bone marrow show the same type of dysplasia as in the peripheral blood. Depending on the type of MDS, there may be increased blasts and immature forms exhibiting asynchronous maturation. The blast count is the most important prognostic indicator of survival and progression to acute leukemia. Monocytic hyperplasia is common as well as an abnormal localization of immature precursors (ALIP).

Changes in the megakaryocytic cell lineage (dysmegakaryopoiesis) may appear in the peripheral blood as giant platelets, agranular platelets, or platelets with giant granules. Occasionally a circulating micromegakaryocyte may be observed. In the bone marrow, micromegakaryocytes are usually present. Megakaryocytes of all sizes with small multiple separated nuclei or large mononuclear megakaryocytes may be seen. The megakaryocytes usually display cytoplasmic hypogranularity. Rarely, megakaryocytes have large cytoplasmic vacuoles.

The classifications of MDS have been updated by the World Health Organization (WHO) from the former French, American and British (FAB) classifications. The major differences between the WHO and the FAB classifications are in the bone marrow blast count. The FAB system considered $\geq 30\%$ bone marrow blasts (non-erythroid) to be acute leukemia, whereas the WHO system has lowered the bone marrow blast count to $\geq 20\%$. The WHO also created a new category in which CMML falls. This is called myelodysplastic/ myeloproliferative disorders.

The only known cure for any of the myelodysplastic syndromes is bone marrow transplantation (BMT). The best results are from allogeneic BMT in patients less than 40 years old with short disease duration, less than 5% bone marrow blasts, and a human leukocyte antigen-compatible sibling donor. The great majority of patients with MDS are elderly and are therefore not eligible for BMT. Low-dose chemotherapy (cysine arabinoside) may be used in elderly patients but is of limited value as it tends to produce myelotoxicity. Aggressive or high-dose chemotherapy would be used only in younger patients with one of the more aggressive forms of MDS. Growth factors such as erythropoietin, granulocyte-monocyte/macrophage CSF, and granulocyte CSF, either alone or in combination have met with some success, but the cells produced are still dysplastic with decreased function. The same applies to drugs with anti-apoptotic activity. At present, supportive therapy with blood components to correct the anemia and thrombo-cytopenia and antibiotic therapy to fight infection appear to be the treatments of choice.

Highlights from the Spring Convention



Holly Weinberg and Brenda Miranda-
not all business!



Patty Skeie and Susie Zanto catch up.



Christy and Stephanie strike a pose.



Lorena Bobinski, Sandi Oldenberg and Barb
Frankovich enjoy the Friday night banquet.



And now a word from our sponsors!!



Dave Eisentrager and Amy Larsen
delight the crowd with door prizes.

Moving???

Be sure to let us know!

Name _____

Old Address _____

New Address _____

Home Phone _____

Work Phone _____

E-mail _____

Send to:
Brenda Miranda
6200 S. Peppertree Ave.
Boise, ID 83716

Email bshariki@msn.com

Calendar of Events

July 22-26, 2003	ASCLS Annual Meeting Philadelphia, Pa
September 10-13, 2003	IMSS Jackson Hole, Wyoming
February 26-28, 2004	CLEC Milwaukee, WI
April 2004	IDSCLS spring convention To be announced
July 27-31, 2004	ASCLS Annual Meeting Los Angeles, CA

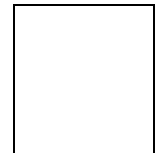
Websites of interest

WWW.IDSCLS.NET **WWW.ASCLS.ORG**
WWW.ISU.EDU/CLS



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