

TECH'S TALK

DIVISION OF MEDICAL TECHNOLOGY
UNIVERSITY OF MINNESOTA

Medical Technology 75th Anniversary Celebration

The Division of Medical Technology, University of Minnesota, marked its 75th anniversary with a day-long celebration on May 11, 1998. The event, which was attended by more than 200 people, was held at the Radisson Hotel Metrodome on the University's Minneapolis campus.

The morning program began with recollections from faculty members and representatives from the 50th anniversary (Sr. Roland Davey, 1948), 25th anniversary (Ruth Golberg Viste, 1973), and most recent (Steve Mattson, 1997) graduating classes. The event continued with a luncheon at which 48 former and present medical technology teachers were honored. For the afternoon, attendees had their choice of participating in four different tours: the Fairview-University Health Center; the Weisman Art Museum; the Raptor Center on the St. Paul campus; and the Minneapolis campus.

The celebration concluded with the annual medical technology alumni banquet. During the preceding social hour, guests were invited to view "Then and Now" exhibits of laboratory memorabilia, and "Do You Remember" photographs from the medical technology archives. The 17 members of the 50th anniversary class attending the banquet gave brief reminiscences following dinner.



Jan Schultz, Gerald Mulcahy, Dick Seelye

We wish to thank the many alumni, faculty, students, and friends who combined their efforts to make the 75th anniversary a successful and meaningful celebration. General chairs of the event were Helen Hallgren and Karen Lofsness. Committees were chaired by Claire Bjorklund, Ruth Cardinal, Salli Clysdale, Nancy Coley, Stella Cook, Kay Draves, Nancy Geier, Jayne Gillen, Lillian Sarkinen, Pat Solberg, Ella Spanjers, Barbara Streifel, Cheryl Swinehart, and Mary Weimer.

The theme of the 75th anniversary program, "Reflecting our Pride," was recently echoed by the University of Minnesota Alumni Association when it recognized the event as a "Program Extraordinaire" for 1998. Our event was one of only five to win this award, out of hundreds sponsored by the U of M Alumni Association last year.



Joanna George, Michelle Holm, Steve Mattson

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Director's Message

"Each thing is of like form from everlasting
and comes round again in its cycle."

~Marcus Aurelius~



Life itself often works in cycles. In our profession, cycles of personnel shortages have occurred, almost by decade. In the 1989 edition of *Tech's Talk*, we wrote about vacancies in Minnesota's laboratories. Today, despite the influence of managed care, government regulations and hospital mergers/closures, there is a

serious shortage, once again, of laboratory personnel. In November of 1998, one health care system in the Twin Cities offered the first \$1,000 sign-on bonus for a new laboratory hire.

One of the reasons for the current personnel shortage has been the closure of nine hospital-based medical technology programs in the state since 1982. Currently there are just three NAACLS-accredited (National Accrediting Agency for Clinical Laboratory Sciences) medical technology programs in Minnesota—the University of Minnesota, The College of St. Scholastica in Duluth, and Hennepin County Medical Center in Minneapolis—with only 38 graduates from these programs in 1998.

We anticipated this situation earlier. In 1996, we applied for an allied health special projects grant to the Bureau of Health Professions of the Department of Health and Human Services. Our objectives were to assist graduates of our state's medical laboratory technician programs and science baccalaureate graduates to obtain the medical technology degree. The grant was funded: one of only 12 out of 47 national proposals.

Now in the second year of this grant, we are currently working with the University of North Dakota and several Minnesota community/technical colleges. We will be offering an articulated program that will allow MLT graduates to transfer approximately 50 semester credits to the medical technology programs of either UND or UM, and complete course work to earn the baccalaureate degree. Science graduates can also complete our 15-month senior year program for a second degree.

In addition, we are cooperating with St. Cloud State University and Minnesota State University at Mankato to provide their senior students with two semesters of professional medical technology education, followed by clinical rotations in their respective geographic areas.

In the past, SCSU and MSU offered pre-medical technology programs of three or four years' duration, following which students received clinical training at local hospitals. Because many hospital-based programs have closed, students from those universities may not find accredited internship sites. Starting in the fall of 1999, we will be providing our senior year medical technology classes to a total of 10 MSU and SCSU students. This arrangement will help our "bottom line" through receipt of their tuition. More importantly, it will help add to the numbers of technologists in the state.

Another collaborative effort is the joint provision of classes in molecular laboratory diagnostics in association with Michigan State University. Currently, 11 practitioners and graduate students from Minnesota are completing classes, emanating from Michigan State University and offered via interactive television at the Rarig Center on the Minneapolis campus. Graduates will be eligible for a certificate from MSU and will hold partial fulfillment of the NCA (National Credentialing Agency) requirements to sit for its Molecular Biology Certification Examination.

For the past several years, Minnesota's legislators have asked for such cooperative endeavors. We believe we are responding to a legislative intent, as well as to needs of the state. We are helping MLTs as well as science graduates find avenues to complete a B.S. degree and join an excellent job market, and assisting practitioners in expanded job arenas.

The next years will tell whether we are successful. Once again, we will need to "dig deeper" within the Division to provide opportunities for more students. This, too, has been a tradition of the program—an extraordinary work ethic by faculty, excellence in teaching and scholarship, and the highest standards—for ourselves, students, and graduates. In the year 2000, we will let you know of preliminary outcomes!

A handwritten signature in black ink that reads "Karen R. Karni".

Karen R. Karni, Director

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	Helen Hallgren Karen Lofsness
Contributors:	
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Alumni News

Margaret Tufty Refsdal (1932) of Minneapolis was employed as a medical technologist for 30 years. She is retired and enjoys classical music. She wrote, "I will remember Gleva Erskine, first medical technology program director, and William A. O'Brien, second medical director."

Jane Roedell Bayliss (1938), San Antonio, TX worked for seven years as a technologist. She married Milward Bayliss, a physician, and raised three children. Her husband retired as chief of pathology at Brooke General Hospital. Her interests include Ikebana flower arranging.

Anna Nelson Jensen (1939), Brigham City, UT first had a career as a medical technologist and then was the education coordinator of the St. Benedict's Hospital School of Medical Technology (Ogden, UT) from 1963 to 1978. She now has an interest in restoring old houses.

Dolores Gullickson Harvey (1945) of Lake Elmo, MN taught urinalysis and clinical chemistry in our program from 1964 to 1985 and is well remembered by many graduates. Currently Dolores volunteers at the Raptor Center in St. Paul and also enjoys playing bridge.

Beverly Robinson Peterson (1945) of Edina, MN worked in C. J. Watson's laboratory for three years, then 14 years at Northwestern Hospital, and finally at Minneapolis Internists, PA. She is one of our mother-daughter duos; her daughter Laura Peterson Hastings graduated in 1971.

Jacqueline Callies Rayman (1947) of Ely, MN is a volunteer for the Red Cross bloodmobile. She is retired and enjoys canoeing, traveling, genealogy and history.

Bernice Theissen Elert (1948) of Roseville, MN had a rewarding laboratory career that included the publication of seven award-winning papers in clinical chemistry. She was active in ASMT and MSMT for many years. Currently she is a horticultural designer for the Minnesota State Fair and an officer in the Minnesota Porcelain Art Guild.

Ruth French Ingersoll (1948) of Langhorne, PA worked in special hematology at the U of M, did research in sickle cell anemia at the University of Pittsburgh, and taught hematology for 15 years at Temple University. She and her husband Lew are retired and enjoy traveling.

Ruth Stenstrom Lawless (1949) of Eden Prairie, MN earned an M.S. in Health Care Management in 1980. She has worked since graduation and currently is employed at an OB/GYN clinic.

Kathryn Hammer Glen (1953), Vero Beach, FL worked for 35 years, teaching both at the University of Minnesota and the University of Illinois. She and her husband now spend much of their time sailing in the Bahamas.

Mary Dahlstrom Piper (1955), of Ridgecrest, CA received a second degree in computer science. She retired in 1998, after 24 years with the Department of Defense.

Following 41 years of laboratory employment, **Gerald Mulcahy** (1955), of St. Paul, retired in June 1996 as an administrative laboratory technologist at United Hospital. Jerry and his wife, Carol, are busy with family activities including parents and grandchildren.

Marilyn Reinke Torgrimson (1957) of Bemidji, MN and Sun City West, AZ worked as a laboratorian until 1979. She then took up rosemaking and Bauernmalerei, studying in Europe. She has demonstrated her award-winning rosemaking on television in New York City.

Linda Mack Schloff (1960) of St. Paul earned a Ph.D. in history in 1998. She is the director of the Jewish Historical Society of the Upper Midwest, and in 1997 was curator for a historical exhibit, "Unpacking on the Prairie: Jewish Women in the Upper Midwest," at the Minnesota Historical Society.

Kay Rolfe Young (1968) of Bloomington, MN was a staff technologist at Fairview Southdale Hospital for 22 years. Since 1988 she has been a financial analyst for US Bank. Kay also is the editor of "COSEN" (the Class of '68 Newsletter), published annually to update classmates.

Nancy Kochevar (1973), of Oak View, CA recently took a new administrative position at Amgen, Inc., in the GMP Raw Material Purchasing Dept. She wrote, "My education has really provided me with the tools to be able to try different positions—clinical and industrial."

Mary Beth Elander Johnson (1973) of Woodbury, MN practiced medical technology for a number of years and then taught biology and chemistry in grades 7-12. She is now a product responsibility chemist for 3M in St. Paul.

Fran Press Lebahn (1974) of St. Paul is a study coordinator for two physicians at the Veterans Affairs Medical Center. In 1997 she was credentialed as a "Certified Clinical Research Coordinator." Fran also has a part-time business as a certified massage therapist.

Terese Sandkamp Shearer (1981) of Burnsville, MN graduated with an M.D. degree in 1987 and is now a family practice physician in urgent care for Health East. She and her husband John have four children.

Beverly Ness (1985) of New Berlin, WI graduated from the University of Wisconsin-Madison with an M.D. degree in May 1998 and now is in an internal medicine residency at the Medical College of WI in Milwaukee.

Marta Shahsavand (1986) of Blaine, MN is the technical lead in the Drugs/Biochemical Genetics Laboratory of Fairview-University Medical Center. She and her husband Fathollah have two children.

Tony Wells (1996) worked at the Mayo Clinic following graduation and is now enrolled in the physician assistant program at Western Michigan University, Kalamazoo, MI.

Student Profiles

The diversity of our student population is represented by the following senior class members who agreed to be interviewed for *Tech's Talk*.



Enrique Iturbe is from Carrizo Springs, TX, which in Spanish means Cottontail Springs. He is an MLT and currently works in hematology at Abbott Northwestern Hospital as well as at the Minnesota Department of Health. He is married and has four children, ages twelve to five.

Enrique is considering medical school after graduating from our program.



Schauntell Green, from northeast Minneapolis, already has an undergraduate degree in biology. She was on active duty with the army for three years and then joined the National Guard. She has lived in Japan with her husband, who is still in the military. Schauntell loves to run and

exercise and is training for the Twin Cities Marathon. She also enjoys history and reading. Currently employed as a pharmacy tech at the Veterans Affairs Medical Center, she has a wide variety of career options upon graduation.



A St. Paul native, **Ian Gamble**, came to the University from Grinnell University in Iowa. He enjoys backpacking, canoeing, and kayaking. He also is an accomplished guitar and banjo player and currently plays with a band called *The Moss Piglets* in various coffee houses. Ian has been a

laboratory technician at Ecolab in the pest elimination research division. He and his wife would like to move to Alaska after graduation, because Ian worked for the park system there and loved it.



Ricky Chan keeps busy practicing judo in his spare time. He is president of the University Judo Club and currently holds a brown belt. He also enjoys computers and has developed a Web page in microbiology for his classmates. Ricky works part time at Abbott Northwestern Hospital as a phle-

botomist and is a student attendant at the Rogers research lab. Originally from Hong Kong, he has lived in the United States for over six years. His ultimate goal is to attend medical school.



Sara Barnes is the first student to participate in our partnership program with Minnesota State University, Mankato. Born and raised in Waseca, MN, Sara is enrolled in the MSU CLS program. After entering her senior year at Mankato, she learned that she could complete her professional

education and training at the U of M; within a week she was in our program. Her hobbies include all kinds of crafts and quilting. When she graduates, she is contemplating forensic science, with an interest in pathology as well.

Student Council Activities

Throughout the year, the Medical Technology Student Council provides opportunities to assist others and enjoy social activities. This year began with a pizza luncheon to give students, faculty and staff a chance to meet one another. The student council also sponsored a fall get-acquainted breakfast for junior students. During the winter, seniors hosted a luncheon for the juniors, allowing juniors to meet the faculty and to talk about the upcoming year. Students also sold medical technology sweatshirts during the 1998 Clinical Laboratory Educators' Conference. Many students also participated in the 75th anniversary celebration and annual alumni dinner last May.

The 1998 National Medical Laboratory Week gave the students a chance to display their culinary skills. The student council sponsored a bake sale which raised \$175 for the Children's Miracle Network. They plan to hold another bake sale during this year's Laboratory Week.

During the year many of the council members are active in CHIP (Council for Health Interdisciplinary Participation), an organization composed of students from all health related disciplines. In the fall, CHIP sponsored an evening event, which included a river trolley ride (tour of Minneapolis hot spots) and dinner at the "Mystery Cafe" where they solved a murder mystery acted out by the waiters and waitresses. CHIP includes committees on bioethics, international health, wilderness health, holistic health, CompuCHIP and team health. Medical technology students have the opportunity to participate on all of these committees and in the programs they sponsor. CHIP also sponsors commemorations of holidays, weekend retreats and community service projects.

Student council membership is open to all junior and senior medical technology students. This year's officers are: co-presidents **Kathy Gronfield** and **Enrique Iturbe**; vice president **Melissa Fossum**; and secretary/treasurer **Polly Olson**. Our CHIP representative is **Shauna Romain**.

1998 Graduation Ceremony

The 76th graduating class of the Division of Medical Technology held its commencement exercise at the Student Union on the St. Paul campus on September 26, 1998. **Jason Boonstra**, president of the Medical Technology Student Council, delivered the welcome on behalf of the class. He also narrated the senior presentation, a slide show that provided insight into the lives of the class members both in and out of the classroom.

Harry McCoy, president of Medtox Laboratories, Inc., delivered the commencement address. **Robert Jechorek**, scientist, presented the special awards, recognizing stu-

dents who received scholarship funds, or graduated *with distinction* or *high distinction*. **Xiaozheng (Jane) Meng** was presented with a special gift in recognition of achieving the highest grade point average in the professional program. **Helen Hallgren**, associate professor, led the Medical Technology Oath and then introduced each class member as they signed their oath. **Karen Karni**, professor and the director of the Division of Medical Technology, conferred the degrees. **Barbara Streifel**, president of the Medical Technology Alumni Society, welcomed the new graduates as alumni of the University of Minnesota. A reception followed on the Student Union terrace.



Medical Technology Class of 1998

Front row (left to right):

Diane Rappe, Richfield, MN
with distinction
Kimberly Wold, Plymouth, MN
with distinction
Rhonda Lind-Patzoldt, Rush City, MN
Susan Bins, Edina, MN
Cynthia Martin, Bloomington, MN
with high distinction
Tuyetlan Trinh, Vietnam
with distinction
Xiaozheng (Jane) Meng, P. R. China
with high distinction
Molly Ricci, White Bear Lake, MN
Michelle Holm, Blaine, MN
Carlo Lit, Hong Kong
Yoseph Dalu, Minneapolis, MN

Back row (left to right):

Jason Boonstra, New London, MN
Daniel Peterson, Rochester, MN
with distinction
Narad Jokhulall, Berbice, Guyana
with distinction
Todd Strand, Cadott, WI
with high distinction
Gobind Tarchand, Georgetown, Guyana
with high distinction
Mustafa Mohamed, Minneapolis, MN
Janice Peterson, Woodbury, MN
Paul Vincent, DePere, WI
Lisa Ditlefsen, Centuria, WI
with distinction
Not pictured: **Luan Nguyen**, Blaine, MN
Photograph by **Anita Sime Jader** (Class of 1977)

1998 Major Contributors

The following contributed \$100 or more to the Division of Medical Technology in 1998:

\$5,000

Anonymous Donor

\$500 - \$999

Lorna Henderson Canfield
Marilyn M. Klein

\$300 - \$499

AETNA Life and Casualty Foundation
Ruth A. Cardinal
CIGNA Foundation
General Mills Foundation
Kathryn Hammer Glen
Todd and Mary Lunzer Jacobson
Karen and Wayne Lofsness
Verne and Phyllis Hanson Weiss
Lila Wicklund Wengler

\$100 - \$299

AMOCO Foundation Inc.
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Robert A. Dahl
Phyllis McCoy Davis
Carolyn Collins Donovan
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Mary Jane Eaves-Raich
Sally Scherven Economon
Grace Mary Ederer
Beverly Fiorella
Linda L. Fredrickson
Glaxo Wellcome Inc.
Noel H. Goss

Christina Fox Gramlich
Becky L. Green
Mary Johnson Grewe
Marilyn Postier Haglund
Jacqueline Hallaway
Helen Nordine Hallgren
Jean Hansen Halvorson
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Charlotte Hansen
Carol Luck Harris
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Hormel Foods
Karen Kloss Huff
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Billie Anne Herranen Juni
Karen Soderberg Karni
Patricia Maser Koors
Dorothea Poppenberger Kryewinske
Karin Rittgers Libby
Jeanne Jorgenson Linne
Catherine Gladson Manlove
Barbara Goldbarg Melamed
Donna Messerli Meyer
Diane Olson Michalik
Shirley Lindquist Michel
Gerald Mulcahy

Raymond Newman
Toni Okada
Kay Nelson Olson
Margaret E. Perryman
Mary Beth Piscator
Kathryn Rantala
Ethel Koster Rodriguez
John L. Roesler
Eileen Leipus Rogers
Shelly Lepisto Russ
Marlys J. St. Cyr
Melicent Hane Schmidt
Paul Schreckenberger
Mary T. Skupa
J. R. and Harriet Broman Snoga
Ella M. Spanjers
Clarice (Phyllis) Foley Stapel
3M Foundation Inc.
Thomas M. Vesley
Aija Kancitis Vikmanis
Grace Haagenson Wagnild
Bethany Young Walters
Nettie Conser Warwood
Joyce Clarke Wian
Mary K. Wiemer
Joan Zittleman Yasmineh

Medical Technology Scholarships

Medical technology students enrolled in the professional program have the opportunity to apply for five scholarships administered through the Division of Medical Technology. The criteria used for selection include scholastic standing, financial need, and professional potential.

The five scholarships available are the:

- ◆ Hovde-O'Brien Scholarship Fund
- ◆ Yvonne C. Cooke Scholarship Fund
- ◆ Gonyea-Stewart Scholarship Fund and Gonyea-Stewart Loan Fund
- ◆ Betty Rae Kramer McConnell Scholarship Fund
- ◆ Medical Technology Alumni Scholarship Fund

In the fall of 1998, a total of \$27,000 in scholarships was awarded to 18 students. The awards ranged from \$1000 to \$2000, and the recipients were: **Van Bui, Melissa Fossum, Schauntell Green, Kathy Gronfield, Michelle Holm, Linsha Le, Yanli Liu, Mustafa Mohamed, Iris Ng, Cuc Nguyen, Jill Peternell, Colette Riedel, Molly Ricci, Shauna Romain, Tuyetlan Trinh, Susan Wiessner, Jennifer Wozniak, and Carol Zhang.**

Recipients have expressed appreciation to the individuals who have contributed to our scholarship funds. Due to rising costs, our students have more financial needs than in the past, and many of them work more than 20 hours a week to be able to continue in school. With your help, the scholarship funds will continue to grow. Contributions may be sent to the Division of Medical Technology, University of Minnesota, Box 609 Mayo Building, 420 Delaware Street S.E., Minneapolis, MN 55455-0374.

Elizabeth Stone Bequest

The Division of Medical Technology has received a generous bequest of \$60,000 from the will of Elizabeth Stone. Liz, who died in June 1997, was a 1958 graduate of our program. She served as a supervisor in the University Hospitals hematology laboratory for more than 30 years. During that time, she instructed many of our students in their clinical rotations.

The Elizabeth Stone Medical Technology Student Teaching Fund has been established to honor her memory. In her bequest, Liz stipulated that the fund be used to enhance student teaching.

Those of us who learned our hematology skills from Liz recall her dedication and high professional standards. Her contributions to medical technology are greatly appreciated and will long be remembered.

HEMATOGRAPHY Scholarship Established

A new scholarship for medical technology students will be awarded for the first time this spring. Established by **Karen Lofsness**, the scholarship will be funded by a portion of the royalties from her instructional CD-ROM, **HEMATOGRAPHY II**. The scholarship will be awarded to a senior student who has successfully completed the academic course work and is ready to begin clinical rotations. The recipient will be selected on the basis of financial need, scholastic performance, and potential in hematology.

How Are Your Contributions Used?

University of Minnesota Medical Technology alumni are very loyal to our program. In 1994 our unit had the best alumni percentage of giving in the entire university. This past year, 320 gifts, averaging \$54 each, were received with gratitude by the Division.

What do we do with these contributions? First, we use them to purchase needed equipment for our teaching laboratories. In order to provide students with essential knowledge and skills in analytic testing, we offer 33 weeks of preclinical professional courses in the major areas of clinical practice, before they enter 23 weeks of clinical rotations in various laboratories in the Twin Cities and Rochester. By offering these preclinical courses in student laboratories, we provide uniform teaching on instruments not used by a busy operating laboratory. These instruments are not necessarily new—basic concepts can still be learned on early models of cell counters or chemistry analyzers.

Next, we use alumni contributions to purchase texts and education materials for use by medical technology students in the Biomedical Library. They are kept "on reserve" so that all students have access to them. By the way, Henry's *Clinical Diagnosis*, 19th Edition, formerly authored by Todd and Sanford, now costs \$89.95.

A third use is for faculty and student development: to help fund special projects—research and educational. Some of the scholarly activities of faculty and students have been supported by alumni contributions and have resulted in abstracts, posters, and journal articles.

The greatest proportion of your donations, however, goes to student scholarships. We believe that the most worthy use of your monies is to help students complete the program. Currently, tuition, fees and books cost Minnesota resident students about \$6,000/year; for non-residents, costs are \$15,000 each year. We believe we are good and faithful stewards of your contributions, and they do make a difference!

Clinical Laboratory Science Master's Program

The Clinical Laboratory Science master's degree program continues to successfully prepare students for positions in research, teaching or industry. The program is multidisciplinary; it is designed to offer medical technologists or basic science students advanced education in one of five major areas of laboratory medicine. Clinical chemistry, hematology, immunology, molecular genetics and microbiology are current areas of specialization. Twenty students are enrolled in the program, and the following four students earned their degrees this year:

Karen Kinneberg, advised by Dr. Carol Wells, completed her research on "Use of genetic mutants to study pathogenesis of *Candida albicans* in mice."

Debra Maurer successfully defended her thesis, "Re-innervation of burn wounds: In vitro modeling of neurotoxic effects of the topical antibiotic, mafendie acetate." Her adviser was Dr. Robert Nelson.

Sheryl Sahr presented her research, "Transcriptionally 'silent' copies of a virulence-associated gene in *Borrelia burgdorferi*," at her final oral examination. Sheryl's adviser was Dr. Russ Johnson.

Sumiko Yoneji's research project, "Resistance to murine malignant histiocytosis," completed the requirements for the master's degree. Her adviser was Dr. Angela Mortari.

Our CLS students also continue to publish and present their work at national and international meetings. Presentations and articles published during the past year include:

Ravyn M, Lamb L, Jemmerson R, Goodman J and Johnson R: Characterization of monoclonal antibodies reactive with the etiologic agent of human granulocytic ehrlichiosis. Amer J Trop Med Hyg (submitted).

Lamb L, Ravyn M, Jemmerson R, Goodman J and Johnson R: Antigen capture assay for the detection of the etiologic agent of human granulocytic ehrlichiosis. Midwest Conference of the American Society for Microbiology, Vermillion, SD, October 1998.

Panoskaltis-Mortari A, Egeler R, Yaeger T, Yoneji S, Schmitz L, Lilly F, Nesbit M and Blazar B: Genetic and immunological parameters governing in vivo susceptibility/resistance to murine retrovirally-induced malignant histiocytosis. J Leukoc Biol 64: 441-450, 1998.

Baker A, Carter S, Dixon M, Evans R and Roopenian D: Serum antibody response to oral infection precedes but does not protect *Prophyromonas gingivalis* induced alveolar bone loss in mice. Oral Microbiology and Immunology (in press).

Wells C, Jechorek R, Kinneberg K, Debol S and Erlandsen S: The isoflavone genistein inhibits internalization of enteric bacteria by cultured Caco-2 and HT-29 enterocytes. J Nutr (in press).

Kinneberg K, Bendel C, Jechorek R, Gale C, Hostetter M and Wells C: INT1 gene deletion is associated with decreased intestinal colonization of *Candida albicans* in mice. 98th General Meeting of the American Society of Microbiology, Atlanta, GA, May 1998.

May B, Fetrow J, Tune K and Kapur V: The use of TaqMan as a technique to detect *Mycobacterium paratuberculosis*. 98th General Meeting of the American Society of Microbiology, Atlanta, GA, May 1998.

May B, Fetrow J, Tune K and Kapur V: The use of TaqMan for detection of *Mycobacterium* subspecies *paratuberculosis* in bovine milk and fecal samples. 79th Annual Meeting of Conference of Research Workers of Animal Disease, Chicago, IL, November 1998.

Carmella S, Ye M, Upadhyaya P and Hecht S: Analysis of 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanol (NNAL) enantiomers and NNAL-glucuronide (NNAL-Gluc) diastereomers in smokers' urine. American Association for Cancer Research Annual Meeting, Philadelphia, PA, April 1999.

Graduate Student Awarded Alpha Mu Tau Scholarship

Elizabeth Thonen-Kerr, CLS graduate student, recently received a \$1000 scholarship from the Alpha Mu Tau Fraternity, associated with the American Society for Clinical Laboratory Science. Elizabeth graduated from the University of Nebraska's medical technology program, and works part time in the FUMC acute care laboratory. The Alpha Mu Tau award will help fund her research project with Dr. Scott Burger, her adviser.

Karen Lofsness Wins Innovative Technology Award

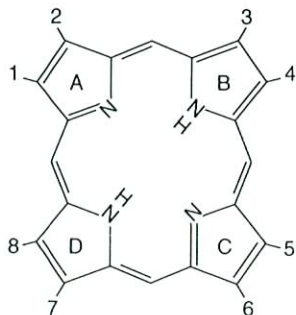
An award for innovation in technology enhanced learning was presented by President Mark Yudof to Karen Lofsness at the Technology Enhanced Learning Conference and Exhibit on May 20, 1998. This award was established to recognize University of Minnesota faculty who are using new media technologies to enhance learning. The criteria for the award included using new media technology in innovative ways to enhance learning, incorporating human-computer interface concepts, and expanding access to learning opportunities.

Karen's successful application described the development of HEMATOGRAPHY I and II: Interactive CD-ROM Tutorials for Blood Cell Identification. HEMATOGRAPHY I covers normal blood cell morphology and guides the learner through the steps of routine blood smear examination. HEMATOGRAPHY II teaches users to identify the abnormal and immature cells most often seen on patients' blood smears. Both programs are presently being used for hematology instruction at the University of Minnesota and at more than 300 other institutions.

We congratulate Karen on winning this prestigious award, and thank her for her dedication to teaching and learning at the University of Minnesota.

C. J. Watson Laboratory Re-opens

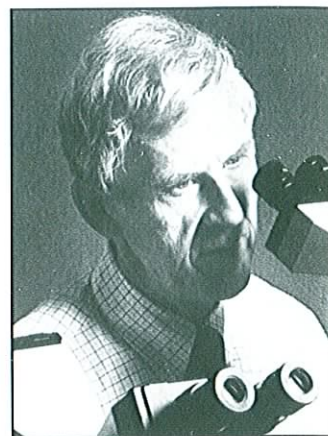
Porphyria testing may not sound new to many of you, but Fairview-University Medical Center recently announced the re-establishment of the C.J. Watson Laboratory for porphyria testing, supported in part by the Cecil J. Watson Laboratory Fund of the Minnesota Medical Foundation. As many of you may know, a quick and reliable porphyria test on a spot urine sample was developed more than 50 years ago by Drs. Watson and Schwartz at the University of Minnesota. Tests provided in the new Watson Laboratory include quantitative urine porphobilinogen, delta-aminolevulinic acid, and total urine porphyrins.



Porphyrin

Dr. Richard Brunning Retires

Dr. Richard Brunning, laboratory medicine and pathology faculty member since 1965, retired in December 1998 after a highly distinguished career as a hematopathologist at the University of Minnesota. Throughout his life he has mentored many individuals who now lead departments of hematopathology, hematology, oncology and laboratory medicine throughout the United States.



Dr. Brunning earned his undergraduate degree in medicine from the University of North Dakota and his M.D. at McGill University in Montreal, Canada. He has published more than 100 papers and is widely known for co-authoring *Tumors of the Bone Marrow: Atlas of Tumor Pathology* with Dr. Robert McKenna. In addition to that landmark publication, Dr. Brunning has written 21 book chapters. He has been active in many professional societies including the American Society of Hematology, of which he is a former president.

Teaching has been an important part of Dr. Brunning's career, and he has always been generous with his knowledge. In addition to providing hematology instruction for residents, fellows, and medical students, he has lectured and consulted in our medical technology hematology courses for many years.

Dr. Brunning is one in a succession of University of Minnesota teachers who have left their mark in the field of hematology, starting with Dr. Hal Downey, and including Dr. R. Dorothy Sundberg and Professor Karen Lofsness. These individuals have spanned nearly 100 years of teaching, research, and service to the University. Dr. Phuong Nguyen succeeds Dr. Brunning in carrying on the hematology legacy within the Medical School.

This past November, the 23rd Bell Pathology Symposium was held in honor of Dr. Brunning. The event was co-chaired by Dr. McKenna and Dr. Loann Peterson—both trained here at the University by Dr. Brunning. Almost 200 attendees (a virtual "who's who" in hematology) came to pay tribute to him. Dr. Sundberg was recognized as a special guest of honor.

The Hughes Institute of St. Paul has established the Brunning Endowed Lectureship to honor his contributions to medicine and hematopathology. We join in recognizing Dr. Brunning for his accomplishments, dedication, and high standards, and we wish him the best in his retirement.

UMAA Annual Meeting

Best-selling presidential biographer and political commentator Doris Kearns Goodwin will make history come alive at the 1999 University of Minnesota Alumni Association (UMAA) Annual Meeting and Celebration on Wednesday, June 2, 1999, in Northrop Auditorium.



Her message, "Shared Memories: The Lessons of History," will relate her experiences writing biographies of presidents Lyndon Johnson, John F. Kennedy, and Franklin Roosevelt as well as the process of writing her own memoir on growing up in the 1950s and her love of the Brooklyn Dodgers. Her insights bring alive the past, allowing listeners to learn from the talents,

skills, and human failings of some of our most fascinating leaders. "I think what the audience likes to hear are stories that reveal the character and human traits of some of [the presidents] who might otherwise seem distant to them," she says. "The great thing is that as you accumulate more and more subjects, there are more and more great stories to share [and] all the stories have some echo in the present day...." Goodwin is author of four best-selling books, including *No Ordinary Time*, *Franklin and Eleanor Roosevelt*, and *The Homefront in World War II*, that won the 1995 Pulitzer Prize in history. Her most recent book is *Wait Till Next Year*, a memoir.

To receive an invitation for the 1999 UMAA Annual Meeting, call the University Alumni Association at 612/624-2323 or 1-800-UM-ALUMS or send an e-mail to <umalumni@tc.umn.edu>. **Note:** this event is separate from our Medical Technology Spring Banquet. The UMAA Annual Meeting usually brings together about 1500 alumni from the entire University community.

Can You Help Us?

Last year the following individuals' *Tech's Talks* were returned. If you can help us with their addresses, please call or write to Lillian Sarkinen (see page 2).

Hulda Nyland Palmer, 1934
Margaret Zalesky, 1937
Linneus Idstrom, 1939
Dorothy Longfellow, 1940
Margaret Moulton Green, 1944
Mary Anderson Bandelin, 1947
Katherine Spear, 1979
Hannah Lee, 1989

If you have changed your address, please let us know so that we can continue to keep in touch. Thank you!

Join the UMAA!

You are enthusiastically invited to join the Medical Technology Alumni Society and the University of Minnesota Alumni Association (UMAA). Your alumni membership supports the medical technology program, helps to strengthen your degree, and provides you with some direct benefits, too. Our own alumni society is described on this page.

The UMAA recently reached the 40,000-member mark on its way to 50,000 in the year 2000! Your membership in the UMAA will help it become a stronger association—one that has more clout at the legislature, helps support excellent programs, and enhances the student experience. Plus, as a member, you can take advantage of many programs and services that save you money and connect you to the U of M.

To join, simply complete and return the attached membership application to the UMAA. You will receive a membership card and a full listing of membership advantages, as well as the award-winning magazine, *Minnesota*.

Remember: join now! Help support Medical Technology and the University of Minnesota.

Medical Technology Alumni Society

The Medical Technology Alumni Society sponsored a cookie sale in December to raise money for student scholarships. Alumni, students, faculty and staff baked 150 dozen cookies, which provided over \$400 for the medical technology scholarship fund. Plans are now in progress for the annual spring banquet, which will be held Tuesday, May 18, at Jax Cafe. Please see page 19 for complete details and the registration form. We hope you will be able to join us.



The Medical Technology Alumni Society Board for 1999 includes **Clareyse Nelson**, president; **Marba Pogue**, secretary/treasurer; and **Nancy Coley**, **Salli Clysdale**, **Karin Libby**, **Mary Scupa**, **Barb Streifel**, and **Diane Rappe**. For additional information on joining the Alumni Society, please contact the University of Minnesota Alumni Association, 501 Coffman Memorial Union, 300 Washington Avenue SE, Minneapolis, MN 55455-0396 or call 800-UM-ALUMS.

Gold and Silver Classes Honored

Each year we continue our tradition of honoring the 50th and 25th anniversary classes. This year they include the following:

Class of 1949 (50th Anniversary)

*Frances D. Acko	*Phyllis Barke Gilbert	*Doreen Neiland
Lois Rennecke Agather	Virginia E. Greenwell	Alice Estes Pierce
Marilyn McCurdy Ambjor	*Janice Glauner Hoversten	Ruth M. Rosendahl
Frances Simon Bernat	Betty Harvey Jackson	Ann Kemp Ryan
Joseph Primo Bocchi	*Elizabeth Mutschler Jerucha	*Colleen Rehder Salem
Marlys Hawkinso Campbell	Gail Janicke Kassiss	Clarice Jenkins Seim
Mary Enger Carlson	*Lois Kent	Harriette Broman Snoga
Arlis Wilson Coleman	Arline Volkert Krave	Reiko Taguchi Sumada
*Muriel Koed Dolan	*Betty Nelson Landrus	Mary Jean Surprenant
Carol Vogel Dvorak	Ruth Stenstrom Lawless	Lenore Nelson Swanick
**Dorothy Faber	Dorothy Tan Leksens	Betty Carlson Swenson
Marion Handke Gaffey	Marjorie M. Lychik	Marilyn Dahl Wing
**Mary W. George	Marilynn Ring Martin	

Class of 1974 (25th Anniversary)

Mary Ann Amerslav	Patricia B. Huttner	Mary Peterson Nelson
Robin Bernardy-Palin	Daniel W. Iverson	Ferdinanda L. Otness
Cynthia Burman Bigham	*Valerie Lindblade Johnson	Candace Pillen Peterson
Karen Gunnerson Bowman	Cheryl Gruntner Kajdan	Barbara Pobig Titus
Kathleen Quast Carlsen	*Karen M. Kawabata	Katherine Znameroski Porisch
Steven Carlson	Barbara Hurwitz Kocur	Joan Kingsbury Rymer
*Claire McDermid Chase	Kathy Kurtz Kollker	Christine M. Saffert
Patricia M. Cook	Susan Bollman Kost	Carol J. Shanholtzer
Irene D. Coran	Barry C. Langton	Claire J. Stolee
Carol Trapp Davich	*Marcia Baker Larson	Cynthia L. Stratton
Andrea Haley Devine	Vickie Christensen Larson	Naomi M. Thompson
Rita Garvick Dvorak	Francene Press Lebahn	Joy Yep Tkachuck
Mindy E. Einarson	Lynn M. Litchy	Elizabeth Van der Hagen
Susan Kooda Feist	Jeanne Elsen Loeffler	*Linda Schauer Verstraete
Rita Zubizycki Hafeman	Constance Buhl Lundmark	**Theresa Bajda Vlaisavljevich
*Diane Dittman Hanson	Rita Bettenburg Meyers	Nancy Gisvold Ward
Anne Marie Haugen	Patricia Merritt Miles	Margaret Charlton Welsch
Susan Jones Henke	Jill Degeest Nelson	Sandra Peterson Williams

*Address unknown

**Deceased

If you are a member of either class, please make a special effort to attend the annual alumni banquet. The reservation form is on page 19. Classmates from 1949 and 1974 will be seated together, so you will have the opportunity to renew friendships.

We appreciate having the correct addresses of alumni. You can help by sending us any addresses of those graduates with whom we have lost contact. Thanks!

Children's Miracle Network

As part of National Medical Laboratory Week in 1998, the American Society for Clinical Laboratory Science (ASCLS) encouraged laboratorians to give something back to their local communities by organizing fund-raisers for the Children's Miracle Network (CMN). The goal of CMN is to help children with disabilities achieve greater independence and enjoyment of life.



The Medical Technology Student Council responded to the challenge and sponsored a bake sale. Students baked and sold various items, resulting in a donation of \$175 to CMN.

Nationally, CMN provided \$2.5 billion to charity in 1997. All funds raised in the area for CMN stay in the community in which they were obtained. In the Twin Cities area, donations to CMN are dedicated to the Gillette Children's Specialty Healthcare. This year contributions paid for a custom-designed truck that allowed staff and equipment to travel around Minnesota and western Wisconsin as part of the Mobile Outreach Program. The program conducts approximately 80 outreach clinics per year.

You, too, can help with this worthwhile fund-raiser. Don't throw those baby food labels away. For every Heinz baby food label, the hospital receives a 6-cent donation from CMN. Send labels to: Gillette Children's Specialty Healthcare, CMN Dept., 200 East University Avenue, St. Paul, MN 55101.

On the Lighter Side.....

Occasionally, airline attendants make an effort to make the flight a bit more entertaining. Here are some real examples from the Internet that have been heard or reported:

- ◆ "There may be 50 ways to leave your lover, but there are only 4 ways out of this airplane..."
- ◆ As the plane landed and was coming to a stop at Washington National, a lone voice came over the loudspeaker: "Whoa, big fella..WHOA..!"
- ◆ "We do feature a smoking section on this flight; if you must smoke, contact a member of the flight crew and we will escort you to the wing of the airplane."
- ◆ "As you exit the plane, please make sure to gather all of your belongings. Anything left behind will be distributed evenly among the flight attendants. Please do not leave children or spouses. The last one off the plane must clean it."
- ◆ After an extremely hard landing, the pilot stood at the door while passengers exited. An elderly lady asked him, "Sonny, do you mind if I ask you a question?" "Why no, Ma'am," said the pilot, "What is it?" The lady said, "Did we land or were we shot down?"

Items from Previous Issues of *Tech's Talk* (quoted verbatim)

1949 - The techs are now becoming more educated! They are now spending 5 weeks in Bact. instead of 3. The rotations begin at Heme, and then on to Urines, Bact., Blood Bank and Serology. Then a weeks vacation and back to Chemistry, Tissues, BMR-ECG. The 3rd rotation includes Parasitology, Dispensary, Nights and Floats.

1959 - The Graduate School announces a new program leading to a master's degree with a major in medical technology. The purpose of the program is to provide the opportunity for advanced study to prepare medical technologists for positions in educational programs in medical technology and supervisory positions in clinical laboratories.

1969 - Two bills regarding licensure in Minnesota were drafted and submitted to legislators for sponsorship. The purpose of one bill was to license laboratories and blood banks; the purpose of the other was to license personnel. Neither bill received sufficient support, and consequently were not introduced in the legislative session.

1979 - The newest of the buildings in the Health Sciences complex is now in operation. Unit B/C, Hospitals Outpatient Clinic/Phillips-Wangensteen Building, opened in February. Outpatient services of the hospital moved to the new building. This move includes the expanded outpatient laboratory.

1989 - Ruth Hovde, professor emeritus, former director of the Division of Medical Technology, and a national leader in medical technology education, died February 9, 1989. Dr. Ellis Benson, head of the Department of Laboratory Medicine and Pathology for more than 20 years, retired as department chair effective July 1, 1989.

Faculty and Staff News

Faculty and staff members in the Division of Medical Technology continue to be recognized for their outstanding contributions to the combined missions of teaching, research and service.

Nancy Brunzel is working on the second edition of *Fundamentals of Urine and Body Fluid Analysis*, a popular and well-received text in the field.

Joanna George recently was selected to serve on a national task force work group formed through the Environmental Protection Agency and the American Hospital Association. The purpose of the work group is to recommend and implement plans for eliminating mercury-containing waste from hospitals' waste streams and reducing the overall volume of waste by 50 percent. Joanna has been assigned to the Environmental Accounting Workgroup, focusing on ways to help hospitals identify and manage environmental costs.

Helen Hallgren is listed as an endowed professor on a Minnesota Medical Foundation display located on the second floor of the Phillips-Wangensteen Building. It honors "those who have improved the quality of life for the people of Minnesota, the Nation, and the World." The gold and black commemorative exhibit lists significant donors and endowed chairs/professorships. Medical technology is the only undergraduate program within the Academic Health Center with an endowed professorship.

Karen Karni completed a successful term as president of the American Society for Clinical Laboratory Science. During her tenure, she promoted clinical laboratory science, bringing recognition and honor to our profession and the University. She is continuing to devote her energy and talents to the Society as a member of the Board of Directors. In October of 1998, she was invited by the Association of Medical Laboratory Technologists in Finland to speak at

their annual meeting in Helsinki and to assist them in the development of a master's program there.

Karen Lofsness is developing her third instructional CD-ROM, entitled HEMATOGRAPHY PLUS™. The program will be a comprehensive hematology atlas, covering normal, abnormal and malignant morphology, and will include interactive self-tests and differential exams. Karen also maintains a HEMATOGRAPHY Web site and adds a new interactive case study each month. The site has been accessed from 40 different countries and is currently receiving more than 1100 "visits" per month. Check it out (www.umn.edu/hema).

Pat Solberg was awarded a Board of Directors Certificate of Recognition at the August 1998 Annual Meeting of the American Society for Clinical Laboratory Science in Chicago. She was honored for her leadership role as chair of last year's Clinical Laboratory Educators' Conference in Minneapolis—the largest ever in the history of the meeting.

Michael Tsai received a third-year continuation grant from the American Heart Association for his studies on genetic predisposition to hyperhomocysteinemia. He has also received funding from the National Heart and Lung Blood Institute (NHLBI) as the principal investigator for the Minnesota site of a 10-year study on subclinical cardiovascular diseases in multiple ethnic groups. **Naomi Hanson** is working with Dr. Tsai to investigate and develop new testing to be used in this study.

Carol Wells is on the editorial boards of four major journals: *Shock*, *Journal of Parenteral and Enteral Nutrition*, *Critical Care Medicine*, and *Applied and Environment Microbiology*. In February she reviewed grants for the Surgery, Anesthesiology and Trauma Study Section of the National Institutes of Health in Washington, DC.

Selected recent publications of our faculty are listed below:

Jackola DR and **Hallgren HM**: Dynamic phenotypic restructuring of the CD4 and CD8 T-cell subsets with age in healthy humans: a compartmental model analysis. *Mech Age Dev* 1998, 105:241-264.

Gallagher PM, Naughten E, **Hanson NQ**, Schwichtenberg K, Bignell M, Yuan M, Ward P, Yap S, Whitehead AS, **Tsai MY**: Characterization of mutations in the cystathionine b-synthase gene in Irish patients with homocystinuria. *Molecular Genetics and Metabolism* 1998, 65:298-302.

Waller KV, Wyatt D, **Karni KR**: Scholarly activities among clinical laboratory science faculty. *Clin Lab Sci* 1999, 12:1-9.

Waller KV, **Karni KR**, Wilson SL: Scholarship and research of allied health deans and directors. *J Allied Health* 1999, 28:1-7.

Folsom AR, Nieto FJ, McGovern PG, **Tsai MY**, Malinow MR, Eckfeldt JH, Hess DL, Davis CE: Prospective study of coronary heart disease incidence in relation to fasting total homocysteine, related genetic polymorphisms, and B vitamins: the Atherosclerosis Risk in Communities (ARIC) study. *Circulation* 1998, 204-10.

Tsai MY, Welge BC, **Hanson NQ**, Bignell MK, Schwichtenberg K, Yang F, Bullemer FE, Rasmussen R, and Graham KJ: Genetic causes of mild hyperhomocysteinemia in patients with premature occlusive coronary artery diseases. *Atherosclerosis* 1999, 143:163-170.

Wells CL, **Jechorek RP**, Kinneberg KM, Debol SM, Erlandsen SL: The isoflavone genistein inhibits internalization of enteric bacteria by cultured Caco-2 and HT-29 enterocytes. *J Nutr* 1999. In press.

New Laboratory Tests from Fairview-University Medical Center

The clinical laboratories at Fairview-University Medical Center (FUMC) are continually developing new tests and implementing new techniques to meet the demands of advancing medicine.



◆ **Stem cell assay.** The immunophenotyping flow cytometry laboratory is the only one in the Twin Cities to perform a stem cell assay for patients undergoing bone marrow transplantation. Stem cells obtained from autologous or allogeneic bone marrow or blood are prepared by a special "elutriation" procedure and levels are evaluated. In order to preserve optimal quality of the stem cells, a turn-around time of less than one hour is provided. These tests provide better clinical services to patients with leukemias, lymphomas and immunodeficiency diseases.

◆ **DNA isolation.** A new technique for DNA isolation is making molecular testing easier and more rapid. Blood is spotted on a specially coated filter paper, cells are lysed, and the DNA from the nuclei of white cells is immobilized within the matrix of the paper. A small disk is punched out and washed to remove proteins and other contaminants. During washing, the DNA remains bound to the disk and can be amplified directly by polymerase chain reaction (PCR).

◆ **New genetic tests** that have been developed using this simplified method of DNA purification include Factor V Leiden and Prothrombin 20210A mutation analysis, and genotyping for hereditary hemochromatosis. The Factor V Leiden mutation is the most common cause of inherited thrombophilia, and this mutation and the prothrombin gene mutation are both associated with an increased risk of venous thrombosis. Hemochromatosis, an autosomal recessive disorder of iron metabolism in which the body accumulates excess iron, can be detected before symptoms occur by testing for a newly discovered mutation in the hemochromatosis gene.

In addition to the identification of genetic disorders, the speed and increased sensitivity of molecular testing makes it useful in other laboratory areas. For example, *Chlamydia* and *Neisseria gonorrhoeae* are now detected using lipase chain reaction amplification technology.

◆ ***Helicobacter pylori* breath test.** A novel test that has been recently introduced is the *Helicobacter pylori* breath test. *H. pylori*, a gram-negative bacteria found in the

human stomach, is the most important cause of upper gastrointestinal diseases. A tablet containing urea labelled with ^{14}C swallowed by the patient. If gastric urease from *H. pylori* is present, urea is split to form CO_2 and NH_3 . The labelled CO_2 is absorbed into the blood and exhaled in the breath. Breath samples are obtained from the patient in a mylar balloon. The sample is pumped through breath collection fluid, scintillation cocktail is added, and the amount of radioactivity in the sample is determined. This simple test can replace endoscopy and biopsy to identify active *H. pylori* infection.

◆ **Osteoporosis.** Measurements of serum osteocalcin and urine N-telopeptide levels are new tests to improve diagnosis and frequent monitoring of osteoporosis. Levels of osteocalcin, a protein measured by radioimmunoassay, are likely to rise by 37-52 percent in postmenopausal osteoporosis, while those of N-telopeptide, measured by an enzyme immunoassay, rise 79-97 percent.

◆ **Point-of-care testing.** Through active collaboration with clinical colleagues, some laboratory testing is now done directly at the patient's bedside or within an outpatient setting, referred to as point-of-care testing. The primary responsibilities of clinical laboratory practitioners are to train nursing staff who routinely perform these tests, to oversee quality control and regulatory requirements of all tests performed, and to check out new instrumentation and new tests as they become available. Current point-of-care tests include blood glucose, urine strip testing, beta-hCG in urine (pregnancy test), whole blood oxygen saturation, activated clotting time, hemoglobin, hematocrit, and occult blood in gastric fluid and feces.

◆ **Parathyroid hormone assay.** In addition to working with our clinical colleagues in point-of-care testing, laboratorians will be carrying out a new parathyroid hormone assay in the operating room to assist surgeons performing parathyroidectomies. This assay is a chemiluminescence method which takes only seven minutes to perform, allowing it to be completed during surgery. The assay can help localize hard-to-find glands by demonstrating an increased hormone level near the hypersecreting gland. Normal values provide quantitative assurance that all hypersecreting parathyroid tissue has been excised. This exciting new test reduces operating room time by providing prompt results, ensures removal of the entire tumor during surgery, and virtually eliminates the need for second surgeries.

We continue to be proud of our clinical laboratories, not only at the Fairview-University Medical Center but also at affiliated hospitals and institutions. Moreover, we salute all the well qualified and dedicated laboratorians who are committed to excellence and keep abreast of changing technology to meet the challenges of tomorrow.

What a Price to Pay

In the all too familiar world of price increases, it is not surprising that laboratory costs seem to be escalating out of sight. However, after reviewing the costs of laboratory supplies used in the medical technology teaching program for the last 10 years, we have found that these costs have increased only 2.2 percent each year.

Data were analyzed in two ways: by comparing the prices of 12 commonly used lab items for the last 10 years (1988-1998), and by comparing the total cost per student for lab supplies purchased during the school terms 1988-89, 1992-93 and 1997-98.

Annual costs were compared for the following items: test tubes, blood dilution vials, transfer pipettes, gloves, biohazard bags, hemoglobin Unopettes, gauze, plastic backed towels, specimen cups, glass slides, safranin and pregnancy kits. For a single order of each of these items, the total cost rose from \$331.05 in 1988-89 to \$401.93 in 1997-98—a rise of 21 percent over the 10-year period, or an average of 2.1 percent per year.

In the second analysis, the average cost per student for all lab supplies used in one year (shown below) increased by 24 percent over the same 10-year period, almost identical to the results of the lab item analysis.

Year	1988-89	1992-93	1997-98
Total cost per student	\$680.30	\$678.87	\$843.44

These data seem to show a dichotomy between the “perception” and the “reality” of lab supply costs. A 2.4 percent annual rise is certainly not out of line with inflation. Overall, it appears that faculty and staff are doing an excellent job in controlling expenditures.

There are a number of reasons why costs have been kept down in Medical Technology. Several manufacturers continue to be generous, either by donating supplies or providing them at a low price, in exchange for the exposure their products receive. Faculty and staff are also adept at requesting and obtaining free or low-cost items. Hospital and research labs continue to remember our program before discarding unused or outdated reagents suitable for use in teaching. The University also uses volume buying power to obtain the best prices possible on many commonly used laboratory items and then either stocks those items in the University Stores for distribution, or provides shipment directly from the manufacturer without processing a purchase order. Finally, constant effort is put into finding cheaper but acceptable alternatives when some individual items skyrocket in price. Occasionally teaching methodologies are altered to reduce costs as well.

The Division of Medical Technology thanks all of those organizations, companies, and individuals who continue to support the program with their donations, and hopes that their generosity will continue in the future.

Did You Know.....??

The University of Minnesota Hospital, now Fairview-University Medical Center, has achieved a number of medical milestones, including:

- 1952 World's first successful open-heart surgery.
- 1955 Development of first heart-lung machine.
- 1966 World's first pancreas transplant performed.
- 1968 World's first successful human bone marrow transplant performed.
- 1972 New technique developed for long-term preservation of human cornea prior to transplant.
- 1975 Development of first implantable drug pump.
- 1977 World-renowned multiple sclerosis program launched.
- 1977 Development of first total-body CT scanner.
- 1978 First use of new technique for adult kidney transplant in infants.
- 1980 First use of cyclosporine to prevent rejection of transplanted organs.
- 1984 Introduction of The Birthplace, the first labor, delivery, recovery, postpartum, single-room maternity care offered in the Twin Cities.
- 1990 Minnesota's first pediatric cochlear ear implant performed.

Nancy Coley Wins Distinguished Alumni Award



The fifth annual Medical Technology Distinguished Alumni Award was presented to Nancy Coley in May 1998. She graduated from the University with a B.S. in medical technology in 1964, and works as a clinical laboratory scientist in the blood bank at Fairview-University Medical Center. She is also a teaching specialist for the laboratory medicine course taught to medical students and the immunohematology course for medical technology students.

Nancy is one of our most active medical technology alumni, especially in fund-raising activities. She has organized the annual bake sales and also helped arrange a quilt raffle. Her illustrations grace the alumni cookbook. The proceeds from these endeavors go directly into the scholarship fund. Nancy is especially fond of this project; having four children of her own who are working their way through college, she knows how much financial help is needed and appreciated. In her spare time, Nancy volunteers with the Charis program at the Shakopee Women's Prison.

Nancy has been a dedicated and energetic member of the Medical Technology Alumni Board for many years. She has contributed her time and talents with good cheer and enthusiasm. We congratulate her on this richly deserved award.

U of M Faculty and Staff Participate in CLEC '99

Ten University of Minnesota faculty and staff participated in the 15th Annual Clinical Laboratory Educators' Conference, held March 4-6 in San Juan, Puerto Rico. Challenged by their program director to write an abstract and have it accepted, all were successful. Of 32 poster presentations at the meeting, 6 came from the Division of Medical Technology. Writing, creating the poster, and answering questions about their work represented a new professional experience for several of our staff. Authors and their abstracts follow:

◆ **Mary Jane Yue, Stella Cook and Karen Lofsness:** A Learner-Directed Approach to Hematology Case Studies.

◆ **Karen Karni** (with Kathy Waller of The Ohio State University): Comparison of Scholarly Productivity and the Research Environment between Clinical Laboratory Science Faculty and Allied Health Deans/Directors.

◆ **Cheryl Swinehart:** Cooperative Learning: A Practical Experience in Hematology/Hemostasis.

◆ **Lynn King and Sarah Clysdale:** Modification of Teaching Techniques to Increase Success Among English as Second Language Students in a Clinical Laboratory Science Program.

◆ **Nancy Brunzel and Pat Solberg:** Native English Speaking and Non-Native English Speaking Student Success on Certification Examinations: The Experience of One Clinical Laboratory Science Program.

◆ **Jeanne Krumpelmann:** Perceived Barriers to Articulation—With a Focus on Clinical Laboratory Science Programs.

In addition, two U of M alumni, **Robbi Montgomery** (1975) of the Hennepin County Medical Center, Minneapolis, and **Joan Aldrich** (1960) from the University of Texas Southwestern Medical Center in Dallas also presented posters at

the conference. The Minnesota influence in Puerto Rico was certainly evident.

The theme of CLEC '99 was "Celebrate Diversity." The meeting was held in a lovely setting at the Caribe Hilton Hotel. Minnesota's attendees also participated in scientific/educational sessions and moderated several roundtable discussions. All brought back creative ideas to modify curriculum, help in the student selection process, and better utilize our teaching laboratories and clinical affiliations. Our personnel also enjoyed the sun, surf, and beaches following Minnesota's usual winter cold and snow.

Many of our faculty and staff look forward to attending next year's Educators' Meeting which will be held March 2-4 in Salt Lake City, Utah.



U of M faculty and staff at CLEC '99 in Puerto Rico

Fairview-University Medical Center—An Update

Due to the merger of the University Hospital and Clinics with Fairview-Riverside Medical Center on January 1, 1997, Fairview-University Medical Center is now a part of Fairview Health Services, a network of 7 hospitals, 96 clinics, home care and hospice services, and long-term care facilities. This entity provides a state-wide comprehensive medical care system covering the spectrum from wellness and preventive medicine to complex and advanced tertiary and quaternary care procedures.

Fairview-University Medical Center is one of the largest hospitals in the state with 1,868 licensed beds and bassinets, 6,403 employees and 1,749 physicians. In 1997, services included:

- ◆ Total admissions: 42,968
- ◆ Patient days: 213,380
- ◆ Total outpatient encounters: 356,727
- ◆ Surgical cases performed: 19,781
- ◆ Organ transplants performed: 386
- ◆ Emergency room and urgent care visits: 43,640

In every area of medicine, from heart transplant surgery to cancer treatment, Fairview-University continues to rank among the nation's most respected research and teaching institutions. Areas in which our expertise is recognized are:

Transplantation: The Fairview-University Medical Center partners with the internationally respected University of Minnesota organ transplant and blood and marrow transplant research programs to provide clinical services to patients in pancreas, liver, intestinal, pancreatic islet, heart, lung, and heart/lung transplant programs. We have the

largest kidney and pancreas transplant programs in the world, and the world's oldest and second largest blood and marrow transplant program.

Behavioral Services: Fairview-University has the largest hospital-based chemical dependency and mental health treatment program in Minnesota and one of the best known recovery programs in the United States.

Cystic Fibrosis: Fairview-University has one of the nation's largest and most esteemed cystic fibrosis programs, with more than 400 patients being treated annually.

Neurosciences: The multiple sclerosis program is one of the oldest in the country and is world respected. The neurosciences department has attracted national attention because of innovative research of Parkinson's disease and other neurologic problems.

Because of these and other excellent programs, the Fairview-University Medical



Center continues to be one of Minnesota's finest medical institutions. By incorporating the best practices in patient care and clinical research, the list of medical milestones for which the University of Minnesota Hospital has been recognized continues to grow.

Dr. Jeff McCullough Heads New Center for Molecular and Cellular Therapy

The University's Academic Health Center (AHC) recently established the Molecular and Cellular Therapeutic Center. Director of the Center is Dr. Jeffrey McCullough, professor of laboratory medicine and pathology. Dr. McCullough has extensive experience in transfusion medicine, having served as director of the University Hospital blood bank and the Red Cross Blood Center in St. Paul.



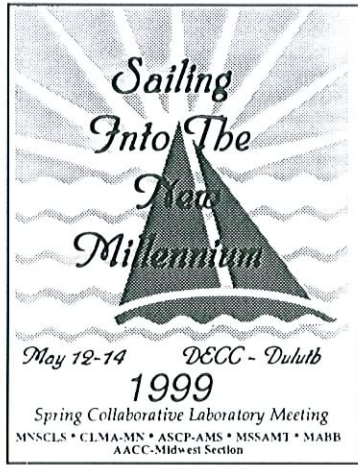
The purpose of the new Center is to help identify new

biotherapies, and to facilitate and provide resources and support for the translation of basic research into clinical applications. The Center's activities will encompass basic research, development and "scale-up," production of experimental materials and initial clinical trials. In addition, the Molecular and Cellular Therapy facility can produce clinical trial materials under Good Manufacturing Practice (GMP) requirements.

In his new role, Dr. McCullough will draw on his extensive experience in developing therapeutic blood products to help other University researchers produce promising biological treatments such as immunotherapy, stem cell and gene therapy, and therapeutic use of neural, pancreatic islet, corneal, and cartilage cells.

Sailing into the New Millennium

The theme for this year's Minnesota Collaborative Laboratory Spring Meeting, May 12-14, 1999, is appropriate because it will be held in Duluth, MN at the Duluth Entertainment and Convention Center, located adjacent to the harbor of Lake Superior. The meeting promises to be an excellent opportunity for learning and networking with other laboratory professionals.



The sessions will appeal to a wide variety of laboratory professionals from all kinds of settings—hospitals, clinics, physician office labs, industry and research—with current and relevant topics. Featured keynote speakers are:

◆ Donald Connelly: "The Virtual Clinical Laboratory: How Computers and Internet Technology May Affect Your Laboratory, Your Job and Your Life;"

◆ Paul Landauer: "In a World of Managed Care—What is the Value of Laboratory Services;"

◆ Christopher Young: "Legislative Compliance."

There will be sessions on biological warfare, yoga and meditation, and forensic tattoos, as well as professional writing for publication, presented by **Karen Karni**. **Cheryl Swinehart** and **Nancy Brunzel**, also of our faculty, will present talks on hemostasis and urinalysis, respectively. Other scientific sessions include: Hepatitis C, E and G, antimicrobial resistance in bacterial pathogens, hematology case studies, and lead poisoning in Minnesota.

A number of vendors/exhibitors will be present, with the usual scheduled prize drawings and refreshments in the exhibit hall. Social events include a Lake Superior cruise on Thursday evening.

For complete information or a registration brochure for this memorable event, contact:

Karen Utick
SMDC Laboratory
407 East Third Street, Duluth, MN 55805
e-mail: kutick@smdc.org

Let's Keep in Touch

Once again we are asking you to send us an update on what you've been doing--personally and professionally. We plan to display all contributions—including letters and pictures—at the alumni banquet. We will return pictures if you wish. Thanks for keeping in touch.

Name: _____ [_____] Year of Graduation: _____
Name while in school (if it has changed)

Address: _____
Phone Number: _____

Career Information: _____

Family Information: _____

Special Interests: _____

Please mail to the address on page 19

Annual Banquet News

for Alumni and Friends

Join us at Jax Cafe for this year's annual banquet. Friends and spouses are welcome! Jax Cafe is located about three miles from the University, and there is ample free off-street parking.

Date: **Tuesday, May 18, 1999**
5:30 p.m. Social hour with cash bar
6:30 p.m. Dinner, with program to follow

Place: **Jax Cafe**
1928 University Avenue N.E.
Minneapolis, MN (612) 789-7297

Menu: **Jax Barbeque Ribs**
Full rack of backloin pork ribs, baked Idaho potato
or
Honey Dijon Chicken
Grilled chicken breast, honey glazed, rice pilaf
or
Baked Filet of Salmon
Pineapple relish, new potatoes, chef's vegetables

Salad: Jax House Salad
Dessert: Baileys Irish Cream Torte

Note: Tables are reserved for the honored classes: 1949, 1974, and 1999. For others who wish to sit together, we suggest you arrive a little early to meet your dinner mates.

Cost: Alumni Association members-----\$25.00
Nonmembers-----\$26.00
Seniors (age 60 and over) -----\$23.00

Program: To be announced

Special recognition will be given to the classes of 1949 (50 years), 1974 (25 years), and to the 77th graduating class of 1999.

Deadline for reservations: May 10, 1999. Send your reservations in early because seating is limited.

This is the only mailing that you will receive for the Medical Technology Alumni Society Annual Banquet. Please mark your calendar, and return the reservation form below.

Please reserve _____ places for me at the Medical Technology Alumni Dinner.

I enclose \$_____ as payment. Barbeque Ribs _____ Honey Dijon Chicken _____ Baked Salmon _____

Please reserve _____ seats for me at the 1949 table.

Please reserve _____ seats for me at the 1974 table. M.A.A. Member: Yes ___ No ___

Name (please print) _____ Class _____ M.A.A. # _____

Address _____

Make check payable to Medical Technology Alumni Society. Reservation should be received by May 10, 1999.

Mail to: Division of Medical Technology
Box 609 Mayo Building
420 Delaware Street S.E.
Minneapolis, MN 55455-0374

Photos from the 75th Anniversary Celebration



50th Anniversary Class of 1948 ▲



Class of 1998 ▼

▲ Earlier graduates who attended



Division of Medical Technology
Dept. of Laboratory Medicine & Pathology
University of Minnesota
Box 609 Mayo Building
420 Delaware St. S.E
Minneapolis, MN 55455-0374

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