2007 Annual Report

The University of Utah Center for Alzheimer’s Care, Imaging and Research

proud to be part of the

Department of Neurology
School of Medicine

and

University Health Care
In this, our 3rd year, we have achieved our goal of truly becoming a nationally recognized program for Alzheimer’s care and research. Over the past year, we were invited to join the Alzheimer’s Disease Cooperative Study, a consortium of academic investigators funded by the National Institutes of Health (NIH) to evaluate promising new treatments for Alzheimer’s disease and develop new clinical trials methods. We now are participating in several of their research studies. Under the leadership of Edward Zamrini, MD, our clinical trials program is rapidly expanding. Our first patient was enrolled in a drug trial at the start of 2007 and now pharmaceutical companies routinely contact us to help conduct studies of their most important new drugs. We continue our brain imaging research and have analyzed more than 900 FDG-PET scans for the NIH-funded Alzheimer’s Disease Neuroimaging Initiative. In addition, we published important evidence demonstrating the usefulness of FDG-PET scans in clinical practice. This work is changing how FDG-PET is used in Alzheimer’s care and in brain research.

These are exciting times filled with opportunities. The essential elements of our innovative clinical program now are in place and were recognized with a Health Care Heroes Innovation Award from Utah Business Magazine. We continue to expand to meet the challenges we face. Our education and community outreach efforts ensure that we have the broadest possible impact on improving care for patients with dementing diseases and their families.

We appreciate strong continuing support and encouragement we receive from our colleagues in the Department of Neurology, the Brain Institute, the University and the community. We gratefully acknowledge financial donations received this year, including another generous gift from the anonymous donor who helped establish the Center. Our accomplishments are possible only because of this support and the commitment of our patients and their families.

We are pleased to share our achievements of the past year and plans for 2008. We invite you to join us in meeting the new opportunities the coming year offers.

Norman L. Foster, MD

Director, Center for Alzheimer’s Care, Imaging and Research (CACIR)
The Center grew tremendously in 2007. With the steady expansion of our programs, we have added several outstanding new staff members. We joined in welcoming Stefan M. Pulst, MD as the new Chair of the Department of Neurology. We acknowledge the contributions of our continuing staff and those who have left for other positions.

Continuing Faculty and Staff

Norman L. Foster, MD, Director
Edward Zamrini, MD, Director of Clinical Trials
Gordon J. Chelune, PhD, ABPP(CN), Senior Neuropsychologist
James A. Levy, PhD, Neuropsychologist
Karen Mara, Administrative Manager
Tandy Jensen, Administrative Program Coordinator
Carolyn Knudsen, Medical Secretary
Stephanie Card, Lead Neuropsychology Technician
Kathy Moran, MBA, Dementia Health Educator
Troy C. Andersen, LCSW, Dementia-Specialist Social Worker
Rebecca Mesley, Clinical Research Coordinator
Angela Y. Wang, PhD, Image Analyst

Additions and Transitions in 2007

• Sommer Thorgusen joined CACIR in July as Research Assistant. She supports our neuropsychologists, administers neuropsychological tests for clinical trials, and helps provide Health Education services. Originally from Thousand Oaks, Sommer graduated in 2003 from the University of California, Santa Barbara. Now at the University of Utah, she is preparing for doctoral coursework in clinical neuropsychology.

• Marie T. Kay joined CACIR in September as Clinical Study Coordinator, to help manage our growing research program. She graduated in 2004 from the University of Madison-Wisconsin in Anthropology and Psychology. Marie has been involved in numerous research projects, including the “Lomas Barbudal Monkey Project” in Costa Rica.

• Emilie I. Franchow joined CACIR in November as Neuropsychology Technician. In 2007, she graduated from the University of Utah with honors in Psychology and Political Science. She has been involved in aging and MRI research with the Department of Psychology, and has worked with the Center for Disability Services and the Brain Injury Association of Utah.

• DeeLayne Hutton joined CACIR in June as Cognitive Disorders Clinic Coordinator. Born in Chicago but raised in California’s Walnut Creek, DeeLayne studied Elementary Education at the
In 2007, we added one new University investigator to our three existing adjunct faculty. These adjunct appointments, renewed annually, formally recognize our ongoing collaborations. Our adjunct faculty members are:

**Continuing Appointments**

John M. Hoffman, MD, Professor of Radiology and Neurology, Director of Nuclear Medicine

Steven S. Chin, MD, Associate Professor of Pathology, Director of Neuropathology, Adjunct Associate Professor of Neurology

Tolga Tasdizen, PhD, Assistant Research Professor of Computer Science, Adjunct Assistant Professor of Neurology

**Added in 2007**

Jason M. Watson, PhD, is Assistant Professor in the Department of Psychology and an Investigator for The Brain Institute. He joined the University of Utah faculty in 2005 after completing his doctorate at Washington University and quickly became a valuable member of our multidisciplinary team of researchers. Dr. Watson was appointed in late 2007 as an Adjunct Assistant Professor of Neurology. His research interests include cognition in aging and dementia as studied with functional magnetic resonance imaging (fMRI).

One of the Center’s major goals is training the next generation of health care providers and researchers. We strive to educate the broadest possible audience about Alzheimer’s and related diseases.

In 2007, we were able to increase the time 2nd year medical students at the University of Utah spend learning about dementia. We began a new one-hour patient conference, for the first time allowing students to talk to a patient with Alzheimer’s disease and meet family members who could explain what dementia truly means for those affected.

We also are providing in-depth training to individuals with specific interest in dementing diseases. In the past year, we developed and received hospital approval for a “mini-fellowship” in cognitive disorders and expect our first fellow in 2008. We developed a new semester “capstone” course for senior nursing students and had our first trainee. We provided research training for a graduate student in computer science. We developed a three-year, 30 hour seminar series for neurology residents and continue to offer an elective rotation in cognitive disorders for neurology residents and geriatric medicine fellows.

Our faculty provides practicing physicians and health care professionals education about dementia and related topics. Of particular note in 2007 were a course on imaging and dementia at the annual meeting of the American Academy of Neurology, the Intermountain Cognitive Health Conference in Jackson, Wyoming, and several Neurology and Geriatric Medicine Grand Rounds presentations at the University of Utah.

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Matthew Nye joined CACIR in July as Work Study Office Assistant. Originally from Indiana, Matthew graduated in 2005 from Dartmouth College in English and Philosophy. He now is working towards a Master of Architecture degree at the University of Utah. When not immersed in his studies, Matthew’s interests include American fiction, creative writing, running, and hiking the Wasatch Front.

Camille Gleave joined CACIR as Neuropsychology Technician in July 2006 and helped initiate our clinical neuropsychology program. She decided to pursue other career interests in October. We appreciate her many contributions and wish her well in future endeavors.

Deelayne has worked in numerous health care environments, including hospice. A devoted mother of four sons, Deelayne has enjoyed PTA, youth sports, cub scouting, and quilting.

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Social Work Consultation:
Helping Families Plan for the Future

Our social work program has evolved tremendously since its inception in early 2007. Our dementia-specialist medical social worker, Troy C. Andersen, LCSW, saw his first patient in January and by year’s end had seen 120 patients and their families.

Throughout the past year, the Center has worked diligently to create an innovative social work consult service, designed to safeguard the welfare of our patients and their families through preventive planning. This planning is individualized and incorporates the medical diagnosis to address disease progression, safety, financial demands and caregiver support. We continue to enhance the financial viability of our consult service model and advocate for coverage of insurance providers for this essential service.

Health Education: Empowering Change through Knowledge

In the last year, our health education service has continued to play an essential role in our Clinic. Our health educator, Kathy Moran, met with more than 250 of our patients and their caregivers during 2007. We have continued to advocate for individualized health education and have met with others who share similar objectives, including The Johnson & Johnson Caregiver Initiative.

Throughout 2007, our Health Educator and Social Worker played an active role in the community. In conjunction with the Alzheimer’s Association Utah Chapter, Kathy Moran has continued hosting a free, bimonthly workshop on the basics of Alzheimer’s. She also helped form a progressive supranuclear palsy (PSP) support group, and was a regular presenter at awareness-raising events. Troy Andersen spoke at numerous local and regional conferences, including Senator Orrin Hatch’s Annual Seniors Conference, the Utah Dementia Care Conference, and the Geriatrics Society of America (GSA) annual meeting.

Neuropsychology: A Window to the Brain in Action

Our Neuropsychology service expanded significantly during 2007. The service, including our two Neuropsychologists and two Neuropsychology Technicians, saw 328 patients for evaluation in 2007—double the number of evaluations conducted the previous year. Our program continued to expand and we began accepting referrals from other neurologists within the Department of Neurology and Geriatric Medicine, and from primary health providers both within and outside of University Health Care.
Our clinical research program is evolving and expanding, allowing us to respond to new opportunities. Our major research objectives always have been to improve early and accurate detection of Alzheimer’s disease (AD) and develop more effective treatments. By collaborating with other academic institutions and joining pharmaceutical companies in testing new compounds, we are getting closer right here in Utah to realizing new diagnostic and treatment strategies for this devastating disease.

In response to our research program’s growth, we developed and implemented several new recruitment strategies. In June, we organized a group of community physicians to help us reach underserved individuals who might not know about research opportunities, and our faculty and staff have continued to reach out to area clinics and community centers. We also launched an online registry for research volunteers. This registry allows people to tell us they are interested in participating in research studies. We hope this will be a way to involve more people in research and more quickly advance knowledge and develop more effective treatments. The registry is open to both those with memory problems and those with normal thinking abilities. To indicate their interest in learning more about research and determine whether they might qualify for our studies, individuals can visit www.utahmemory.org and click on “Join Our Research.” After registering, a member of our research team will call and provide information about studies for which that person qualifies. We sincerely thank all those who have given their time to participate in our research. Your assistance makes it possible to reach our goal of conquering Alzheimer’s.

We began studying two novel drug treatments in 2007, with Merck Pharmaceuticals and Myriad Genetics. Rather than simply treating symptoms like current treatments, these drugs hope to slow disease progression and aid in short term memory recall. Along with testing the safety and efficacy of these new drugs, we are conducting related neuropsychological analyses that may aid in the validation of new testing techniques for Alzheimer’s studies.

Evaluating Promising New Treatments

Expanding Our Research Capacity

Collaborations to Advance Research

With funds from the Brain Institute, our Center opened the Aging Brain Cognitive (ABC) Laboratory in late 2007 in newly renovated space at the CAMT Building. We will use the ABC lab for computerized memory and cognitive testing of research volunteers in the study of several important areas, including memory, attention, language processing, and executive functions such as judgment, reasoning, cognitive control, and mental flexibility. We then will study the models tested in the ABC lab with powerful imaging techniques that can reveal the brain’s metabolism while thought processes are occurring. We will utilize a new, research-dedicated 3T MRI machine, located adjacent to the ABC lab, as well as MEG and ERP, other powerful technologies for peering into the brain at work.

The Center has established many collaborations within the University, the state and throughout the country. We also have continued to develop research collaborations with academic colleagues across the country and with numerous pharmaceutical companies.

The ABC lab will unite Neurology faculty members from CACIR and elsewhere in the University of Utah Medical School with researchers from the Departments of Psychology and Educational Psychology on the University’s main campus. Through this multi-disciplinary effort, we hope to better understand the biological underpinnings of cognition, both in healthy aging and in neurological disorders. Eventually, we hope to gain knowledge that will better the lives of all aging Utahns.

Historically, brain scans have been interpreted by visual inspection, making it difficult to distinguish among different neurodegenerative diseases with confidence. In 2007, we worked with Professor Tolga Tasdizen and his student Neda Sadeghi at the Scientific Computing and Imaging (SCI) Institute to develop an automated approach to distinguish between AD and FTD in PET scans. This method holds promise as an unbiased method for differentiating between causes of dementia.

Professor Thomas Fletcher of SCI has quantified metabolic asymmetry of glucose hypometabolism. Dr. Fletcher’s method identifies the statistical significance of asymmetry as compared to a normal control population using a method based on large deformation diffeomorphic metric mapping derived from anatomical atlas construction.

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Sommer Thorgusen in the new ABC Laboratory.

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In the past year, our colleagues have become intrigued by Neurostat analysis. We have developed collaborations with the University of Pennsylvania Alzheimer’s Disease Center and Arizona’s Banner Good Samaritan Medical Center to analyze PET scans with Neurostat and discuss the resulting images.

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Collaborations to Advance Research

Improving Care Through Research

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This past year, much of our imaging research has been focused on quantifying and formulating an objective measure for diagnosing AD.

Our Center uses a novel process called Neurostat Stereotactic Surface Projection (SSP) to analyze all the PET brain scans our patients receive. SSP analysis creates a statistical, visual map of metabolic activity in the cerebral cortex, allowing our neurologists to identify patterns typical in AD and distinguish AD from similar dementing diseases. Dr. Foster authored a major research article in the highly respected British journal Brain in 2007, reporting the value of PET imaging and this analysis method. In 2007, 98 clinic patients had PET scans on which we performed Neurostat SSP analysis. In addition, we performed SSP analysis on 901 research scans.

**ADNI Project**

Our Center participates in the PET Imaging Core of the Alzheimer’s Disease Neuroimaging Initiative (ADNI), an NIA, foundation and pharmaceutical company funded collaborative project. In this project, research subjects are studied and receive periodic brain scans at more than 50 academic centers throughout the United States. ADNI seeks to identify and compare sensitive biomarkers of AD progression in the blood, urine, cerebrospinal fluid and brain scans. Identifying such biomarkers can permit earlier diagnosis and allow us to track both the course of Alzheimer’s and of normal cognitive aging. ADNI investigators have collected serial clinical, neuropsychological, biological and imaging data on 800 people and make this data available on their website as a public domain research resource. Our Center has committed to analyze and share our processed SSP data with the ADNI community.

We believe that Neurostat SSP analysis—with its statistically derived indicator summarizing the extent of degeneration in the brain—is a strong contender as an AD neuroimaging marker. We have submitted our data to the ADNI Biostatistics Core, who will make a critical examination of all the candidate markers. May the best “bio-marker” win.

**Magnetencephalography (MEG)**

In 2007, we began studying magnetencephalography or MEG as a new kind of imaging for Alzheimer’s. Widely used in epilepsy, MEG measures the electromagnetic potential of the brain and can measure cognitive processing speed at the level of milliseconds, faster than any other modality. This can help us recognize patients with Alzheimer’s, who show slowed cognitive processing speed on MEG scans. We have been developing a pilot study to demonstrate how MEG can distinguish between AD patients and normal controls. Once we collect pilot data, we plan to submit grant proposals to study Mild Cognitive Impairment (MCI), which often precedes AD.

**11C PIB PET**

AD biomarkers have become extremely important for a number of reasons: to improve diagnosis, to measure severity of disease, progression of disease and effects of novel disease-modifying drugs, and to speed development of experimental drugs. One such biomarker is Pittsburgh Compound B (11C-PIB), a radioactive carbon-tagged benzothiazole analog with kinetic affinities for the amyloid beta (Aβ) deposited in neuritic plaques—one of the neuropathological hallmarks of AD.

In October, the University of Utah became one of the few institutions across the United States capable of producing this compound. We wish to test 11C-PIB imaging in patients with AD, frontotemporal dementia (FTD), and normal controls. We hope to detect a difference in neuritic plaques between these groups on a PIB PET scan. If successful, this will give us an additional diagnostic tool for use in our Clinic and new research studies.
Alzheimer’s Association and Community Alliances
In 2007, the Center has continued to collaborate with the Alzheimer’s Association Utah Chapter. Karen Mara was appointed to the Board of Directors for the Utah Chapter, and Kathy Moran has continued to work closely with them to provide health education at the Utah Chapter offices and community outreach through free bi-monthly workshops on the basics of dementia. Kathy also helped organize the Utah Chapter’s Annual Memory Walk.

Our Center sponsored a Memory Walk team of 15 faculty and staff members, who raised $1,900 for the Alzheimer’s Association. In addition, several of our faculty and staff participated in the Utah Chapter’s 1st Annual Pillars of Dementia Care Conference, which included a keynote address by Dr. Norman Foster and various session presentations and panel discussions by Dr. Edward Zamrini, Kathy Moran, and Troy Andersen.

Leadership and Outreach
Center faculty and staff have continued to provide their expertise and leadership to professional organizations nationwide and the local community. Dr. Foster accepted an invitation to serve on the Clinical Neuroscience and Disease Study Section, an NIH Federal Advisory Committee. He also continued to serve on the External Advisory Committee for the Alzheimer’s Disease Research Center at the University of Alabama at Birmingham and was a grant reviewer for the Canada Foundation for Innovation. Dr. Zamrini served as an NIH ad hoc reviewer and was invited to participate in the ADCS steering committee. Dr. Chelune began a 2-year term as secretary of the International Neuropsychological Association, and Dr. Levy worked with the Scientific Advisory Board of the Lewy Body Dementia Association.

We have continued to reach out to the community. Dr. Foster serves on two advisory committees for the Utah Commission on Aging. We have begun to meet regularly with physicians and staff at the University Health Care Redwood and Greenwood Community Clinics to provide information about dementia, updates about our programs and facilitate communication. We also presented a course on Memory and Aging in association with the University’s Osher Life-Long Learning Institute, and for the second year presented at the annual Senator Hatch Conference for Seniors and the Generations Conference. Our faculty made several presentations throughout the state in collaboration with AARP, and contributed to numerous media publications about Alzheimer’s disease and our research.

Awards and Recognition
In 2007, several of our faculty members and collaborators were honored for their contributions in the field of Alzheimer’s and dementia, bringing further recognition to our Center.

Dr. Foster received the Utah Health Care Hero Award from Utah Business Magazine for his innovative clinical program, and was named one of the Best Doctors in America for the ninth time in his career.

In March, Weber State University awarded our Center the Exemplary Collaboration Award for our work with Erik Stern on Demolition Derby: When a Mind Loses Its License to Drive, his multimedia dance production on the challenges and hidden rewards of being a caregiver for aging parents. This program was presented in Utah and New York City, and now is being produced on DVD.

Who Receives Care in Our Clinic?
90% of our patients were from Utah, 2% were from Idaho, and 6% of our patients were from other parts of the country. 67 patients were diagnosed with probable Alzheimer’s disease, 14 with frontotemporal dementia, 10 with diffuse Lewy body disease, 3 with progressive supranuclear palsy, 22 with mild cognitive impairment, and 124 with other causes of memory disturbance.

Regional & National Collaborations and Recognition
The Cognitive Disorders Clinic now has a nationwide draw. In the past year, we have seen patients from across the country—from Alaska to Alabama.

In 2007, we evaluated 322 patients for memory disturbances and dementia. There were 184 women and 138 men, and their average age was 70. The oldest patient seen was 95 and the youngest was 35.
Improving Access for Patients and Families

In 2007, we improved the efficiency and quality of services in our Cognitive Disorders Clinic.

We centralized all responsibilities for clinic coordination into a single position, making the clinic experience easier for our patients and their families. Now one individual manages patient referrals, scheduling, and clinic records.

We worked with University Health Care to improve handling of calls from our patients and families. In addition, we developed educational brochures to guide new patients through their first visit and to help referring physicians understand how best to utilize our clinic.

Advocating for Appropriate Coverage

In the last year, our Center has worked closely with several regional insurance companies to enhance the availability and affordability of specialty tests and services that are essential for dementia diagnosis and care.

Our Appeals Advocate, Carolyn Knudsen, continues to help families and patients with the difficult task of contesting insurance company denials of necessary services. Such services follow current professional guidelines and are routine in other parts of the country, but still are unfamiliar to many Intermountain West providers.

By meeting with and explaining our specialty services to insurance companies, we successfully appealed 10 denials of coverage for our patients and their families—gaining approval and more routine acceptance of services such as neuropsychological testing and PET scans for distinguishing between different causes of dementia.

Remarkably, we witnessed nearly a 50% reduction in the number of appeals since 2006, indicating that local insurance companies have begun to recognize the importance of covering these specialized diagnostic services. In fact, we have learned that some insurance companies are adjusting and broadening their coverage for dementia care. Insurance companies have welcomed our faculty’s collaborative and professional approach to the often contentious process of evaluating new technologies and services.

Gift to Life Autopsy Programs

We continue to encourage our patients and their families to invest in the health of future generations through enrollment in our Gift to Life Autopsy Programs, which are designed to facilitate access to postmortem examinations. All patients and their families, including those in the University Health Care system and in other regional health systems, are eligible.

In 2007, our Center enrolled 44 patients in the Gift to Life autopsy programs, including three families outside of Utah. Since beginning these programs in late 2006, eleven postmortem examinations have been completed—providing family members with definitive diagnosis and the comfort of contributing new knowledge that will help researchers in their efforts to better understand Alzheimer’s and related disorders.

Our Center owes a debt of gratitude to families who participated in these programs during the past year and for their contributions to the program’s success. We also thank the University of Utah’s team of pathologists under Dr. Steven Chin for their invaluable expertise.
Through scholarly publications, our faculty can discuss or challenge existing knowledge in their academic discipline, or introduce new ideas and research to their peers. Such publications are crucial to the advancement of science.

Peer-Reviewed Articles

Original Articles


Abstracts

• Andersen T. (2007). Master’s level social worker’s interest in working with aging. The Gerontologist, 47(S1), 717.


Other Publications


We have set ambitious goals for the coming year. With our broad institutional and growing community and donor support, we hope to continue our work and accomplish the following:

**Faculty & Staff**
- Recruit a third neurologist specializing in Alzheimer’s disease and related disorders to the Center faculty
- Recruit a third study coordinator to expand our clinical trials program

**Patient Care**
- Further develop our educational and social work services as financially viable models that others can adopt
- Train additional personnel to increase availability of health education services
- Formalize plans for completion of the Memory Loss and Caregiving Education Center
- Continue to streamline procedures for referring physicians and monitor the efficiency of our evaluations
- Increase awareness of the Gift to Life program and facilitate family enrollment
- Advocate for Medicare reimbursement of proactive medical social work services and health education for dementia
- Evaluate and streamline our battery of neuropsychological tests

**Research**
- Initiate human studies of $^{11}$C-PiB, an amyloid PET agent
- Develop and evaluate novel imaging techniques such as brainwave analysis with magnetoencephalography
- Continue and expand research collaborations with the Alzheimer’s Disease Cooperative Study, the Cache County Study of Memory, Health, and Aging and other research teams
- Enhance research collaborations with University Health Care’s primary care network
- Establish a DNA repository for dementing diseases
- Enhance minority awareness of and participation in dementia research
- Collaborate on the development of a multi-center project to measure neuropsychological outcomes in dementia
- Develop plans to obtain funding for a comprehensive, multidisciplinary dementia research center
- Expand cognitive studies in the ABC Laboratory with faculty and resources from across the University of Utah
- Promote awareness of our web registry and develop other methods to expand our research base
- Host leaders of NIH-funded Alzheimer Centers during their 2008 annual meeting in Salt Lake City
- Facilitate development of new neuropsychological testing procedures

**Education**
- Increase professional education on dementia care among primary care providers in Utah and the Intermountain West
- Continue to present public education programs in collaboration with other groups
- Continue our clinical dementia elective for residents and fellows
- Host our inaugural mini-fellowship in Cognitive Disorders
- Participate in Reynolds Foundation-funded and University of Utah Center on Aging education programs
- Develop a proposal for a comprehensive neuropsychology training program to begin in July 2009
- Develop a geriatric neurology fellowship program
- Continue lecture series to U of U medical students, primary care and medical specialty trainees
- Conduct a course at the American Academy of Neurology (AAN) Annual Meeting in April 2008
- Continue to present dementia topics at Neurology and Geriatric Medicine Grand Rounds
- Present our research at the 2008 International Conference on Alzheimer’s Disease (ICAD)
- Share our findings in scholarly publications to advance dementia care
Your Gifts Are Vital

The University of Utah Center for Alzheimer’s Care, Imaging and Research (CACIR) was established in 2005 through a generous gift from an anonymous, private donor. The Center’s continued operation is dependent on competitive grant funding and donations both large and small from individuals. These gifts allow us to sustain our Center’s innovative design and pursue new clinical and research goals. If you would like to help, please call (801) 585-6546 or visit our website, www.utahmemory.org.

We gratefully acknowledge the generosity of the following donors:

- Jill Hatch
- Dixie Snow & Robert P. Huefner
- Donald & Janet Stewart
- Jessie Solomon
- Laura Sipser Segel
- Kathleen Condon

In Memory of Ann Davis
Sam & Tia Korologos
John & Jennifer Davis

In Memory of Barbara Oliver
Anonymous
John & Sandra Eberhardt
Marvin Oliver
Anna Louise Pattillo
William & Nancy Wagner
Stephen & Bobbie Wilson
Joyce Wright
Carol MacFarlane
Lucille & SW Simons
Jeffrey Coleman
Julie Glusker

In Memory of Cheri Peterson
Paul & Patricia Hansen
Roberta Christensen
& Deryl Rosel
Carthil & Sharon Nielsen
Eileen Peterson
Barton T. Gleave

In Memory of Larry Riddle
Cary Siteman
Dr. Sandra Petersen

In Memory of Lee Burton
AD & Mary Jarrett, and others

In Memory of Marian Bennion Rogers
Dr. Norman Foster
The University of Utah Department of Neurology
Karen Mara
Judith K. Bush
Carol Bennion
Annette Bennion-Sisk

In Memory of Marion Gill
Jon Gill & Marilyn Nielson
Jim & Eve West

For Research
Martha Thomas & Eric Huefner

In Kind Contributions
Dr. Jana Wold
Dr. Heidi Orme
Dr. Audrey Jantzen
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The Ridgell Family
The Mayo Clinic in Jacksonville, Florida
Dr. Wallace Graham
Dr. Dennis W. Dickson
Dr. Lorissa Segal
Goff Mortuary
Larkin Mortuary
Dr. Robert Deter, SLC Coroner’s Office

And many others...