A new clinical trial of a red wine derivative
By Judith Neugroschl, M.D.

The Mount Sinai ADRC is excited to announce our participation in a new nationwide study examining the effect of resveratrol in patients with mild to moderate Alzheimer's disease (AD). What makes this trial unique is that in addition to the traditional paper and pencil tests, the effects of this medication will be evaluated using MRIs (to assess the size of various areas of the brain), as well as biological markers found in the cerebrospinal fluid (CSF) that are thought to correlate with AD. CSF is a fluid that surrounds the brain and spinal cord; one function of the CSF is to protect these areas from injury. CSF is collected using a procedure called a lumbar puncture (or "spinal tap") — in which a needle is inserted into the lower back and a small amount of the fluid is removed for testing. CSF collection is quickly becoming a standard part of research, as it is the most reliable source for measuring brain metabolism and function.

Resveratrol is derived from plants and is found in high levels in certain red wines and the skin of red grapes. You may have heard that drinking one glass of red wine a day is beneficial for your memory. There is some evidence to suggest that resveratrol is the reason for this potential benefit.

It appears that resveratrol may have several mechanisms of action related to the development of AD. In the lab, resveratrol protects cells against Abeta/amyloid-induced injury to brain cells. Abeta is a peptide that can clump together to form amyloid plaques in the brain, which is one of the hallmarks of AD. Furthermore, in the lab, resveratrol lowers the levels of Abeta produced from different types of cells. It also appears to help in the breakdown of Abeta. In mice, resveratrol decreased the amount of amyloid plaque in the brain. Resveratrol is also involved in genetic regulation of the aging process, such that it mimics a protein that is known to prolong the lifespan of an organism. Together, these results are promising; however, a large scale clinical trial examining resveratrol's potential benefits in people with AD is critically important.

The drug has been tested in healthy men using a single oral dose of up to 1000mg. It is commercially available in doses up to 700mg, although the actual amount of resveratrol in commercial formulations is unknown, as it is not regulated. In general, it is categorized as "generally recognized as safe" by the U.S. FDA and the FDA is currently reviewing the study protocol to evaluate the proposed doses.

There was a pilot study examining the effects of resveratrol at Mount Sinai. However, the pilot study used a much lower dose of resveratrol than what is planned for the new study. Results of the pilot study are almost ready to be analyzed.

The upcoming Resveratrol study will take place over one year, and will require 10 visits, including two lumbar punctures and three MRIs. This study will evaluate resveratrol’s effect on biomarkers of AD, as well as resveratrol’s effect on brain atrophy. We are excited to be taking part in this study. For more information, please contact Helene Geramian at 212-659-8885.

For more information about lumbar punctures, please visit page 6 of this newsletter.
Caregiver’s Corner

Support Groups

- **Early-stage-dementia support group**— This is a bimonthly support group for caregivers of individuals with early stage dementia. The group meets on Wednesdays at the Martha Stewart Center for Living at Mount Sinai and is lead by Elizabeth Fine, M.S.W. For more information, please call 212-659-9230.
- **The Memory Tree by DOROT**— This is a unique program that offers programs for individuals with mild Alzheimer's disease, as well as their family and caregivers. For more information, please visit http://www.thememorytree.org or contact Elizabeth Fine, M.S.W at 917-656-0558.

Resources for Patients and Caregivers

- **Safe Return Bracelet** — The MedicAlert + Safe Return program work in tandem to ensure that lost or separated individuals are reunited with their families. To register a loved one call 800-272-3900.
- **Jitterbug cell phone**— This is a simple and affordable cell phone especially made for seniors. For more information call 888-824-1895.
- **This Caring Home** — An interactive website with information and tips to make the home safer for individuals with Alzheimer’s disease. http://www.thiscaringhome.org/
- **Medical Alert Service** — Lifeline is a service that with the push of a button can alert appropriate individuals in case of a medical emergency. Some models automatically call for help when it detects that the person has fallen. To register for their services or obtain more information, call 800-566-6218.
- **Meals on Wheels** — An organization comprised of local and community-based nutritional programs which provides meals to seniors. There are several participating centers in the NYC area. To find a local program, visit http://www.mowaa.org.
- **Alzheimer’s Disease Education and Referral (ADEAR)** — A comprehensive website with AD information and resources from the National Institute on Aging. http://www.nia.nih.gov/Alzheimers/
- **Mount Sinai ADRC** — Our website is an all encompassing tool containing information about AD, our research programs, as well as resources for caregivers. You can also find previous editions of our newsletter here. www.mssm.edu/adrc

Memory Enhancement Tip...

By Margaret Sewell, Ph.D.

Although it may seem simple, a major memory culprit in healthy elders is a failure to pay attention. As individuals living in the 21st century, we are continuously bombarded by a slew of information—what some may call information overload. However, there are simple techniques that can be employed in order to best attend to (and remember) the details of our daily lives. Some suggestions:

- **Slow Down:** By slowing down, the mind has more time to process what you are experiencing, which makes for a better “memory imprint”.
- **Focus:** Concentration is key to memory enhancement.
- **Rehearse the information out loud:** By vocalizing what you wish to remember, you allow yourself another opportunity to encode information.

So next time you need to remember a book club book, try summarizing a chapter out loud. Need to remember where you parked your car? Take a moment to repeat the level or number to yourself. Learn the name of a new friend? Pause and match the name to the face. You’d be surprised what a difference focus can make!
ADRC Studies Currently Enrolling

Alzheimer's Disease Neuroimaging Initiative-2 (ADNI-2) In this study, we hope to determine whether imaging of the brain through MRI, PET and amyloid imaging scans can help predict and monitor the onset and progression of Alzheimer's disease. In addition to neuroimaging, the study will collect and test blood and cerebral spinal fluid to determine if biomarkers can predict and monitor the disease. This study is sponsored by the National Institutes of Health and will take place at about 50 major universities across the US and Canada. No study drug is used in this research. Participants cannot be involved in other clinical trials while in this study. This is a longitudinal study which will span several years. We are looking for volunteers who can participate for the full duration. The study needs volunteers who are between 55 and 90 years of age, fluent in English or Spanish, are willing and able to undergo the test procedures, and have a study partner - a friend or relative who can accompany the volunteer to all clinic visits. Participants with and without cognitive or memory complaints are welcome. Participants' health will be closely monitored by a team of doctors and nurses. Participants will receive compensation for their time and costs incurred for travel, parking and meals. For more information, please contact Aliza Romirovsky at (212) 241-1514. MSSM #1F12455344; Principal Investigator: Hillel Grossman, M.D. MSSM approved through 10/31/2012.

Trial of NIC5-15, a natural product in subjects with Alzheimer’s disease We are seeking Veterans and non-Veterans with Alzheimer’s disease to participate in a research study of a natural product, NIC5-15 at the Bronx James J. Peters Veterans Medical Center. NIC5-15 is a natural product found in legumes and soybeans. In laboratory studies it interferes with the accumulation of a protein in the brain that is involved in the development of Alzheimer’s disease. Researchers hypothesize that this may slow down the progression of the disease. Some study participants will receive NIC5-15 and some will receive a placebo (sugar pill). Participation in the study includes physical exams, neurological exams, blood tests and tests of memory and thinking skills. Participation of 8 months is necessary. For more information please contact Riana Moring-Parris at (718) 584-9000 ext 5179, or email at Riana.moring-parris@mssm.edu. Principal Investigator: Hillel Grossman, M.D. VA GRO#10-029 approved 06/17/11-6/8/2012.

Nerve Growth Factor Study This study will examine an experimental gene therapy technique to see if a study drug injected directly into brain cells improves the function of nerve cells involved in memory. Participation in this study will include a medical exam, cognitive testing, and neurosurgery. It is open to anyone who has mild Alzheimer’s disease. If you would like information about this study, please call Judy Creighton, M.A. at 212-241-1844. Principal Investigator: Judith Neugroschl, M.D. GCO #09-0367 approved through 4/13/2012.

Neuroimaging in head injury and cognitive decline This is a study investigating brain and memory and thinking problems associated with having a history of concussion or mild traumatic brain injury (TBI) in a sample of individuals between the ages of 50 and 80. The Department of Psychiatry is investigating whether having a history of concussion or mild TBI with and without mild cognitive impairment (MCI) is distinct by using MRI and tests of memory and thinking. The Department of Psychiatry is looking for participants with either a history of concussion/mild TBI and MCI or a history of TBI without MCI. Participants must be English speakers. Participants will receive compensation for their time. For more information, contact Elisheva Bellin at (212) 241-5290, or via email at Elisheva.Bellin@mssm.edu. Principal Investigator: Effie Mitsis, Ph.D. GCO #10-0954 approved through 10/11/2012.

Results: Home-Based Assessment Study

By Mary Sano, Ph.D.

The Mount Sinai ADRC community, under the leadership of Jane Martin, Ph.D., is a strong participant in the Home-Based Assessment (HBA) Study, in which healthy seniors complete evaluations in their home. This is the first study of its kind, comparing traditional testing with automated telephone testing or computerized testing. It is also unique in that it will continue for four years. The results of the initial participant selection and evaluation were presented at the Alzheimer Association International Congress by Mary Sano, Ph.D., which was held in Paris this past June. Dr. Sano is the national director for the study. Several interesting results were reported. Overall, individuals were generally willing to participate in all arms (i.e., telephone, traditional, or computerized testing) regardless of age, education or general health. This suggests that many people are open to trying new technologies. However, there seems to be a preference for less frequent assessment and for technologies that used more traditional equipment, such as telephones. We want to thank all of our volunteers and ask them to "stay the course" to finish this important four year project.
A DAY WITH A SCIENTIST

As part of Center for Excellence in Youth Education's day with a scientist, Judith Neugroschl, M.D. and Judy Creighton, M.A. met with high school students from the East Harlem area. The purpose of the day was to expose the students to a variety of settings to learn about biomedical science and explore health careers. Dr. Neugroschl and Judy discussed memory and Alzheimer's disease and also demonstrated cognitive testing with the students. In addition, the students toured Dr. Gandy's research lab in an effort to explore the basic science side of Alzheimer's research.

Delved into the benefits of participating in research. Information about our current clinical research trials was presented by Hillel Grossman, M.D., and Judith Neugroschl, M.D. In addition, Laurel Humble, from the Museum of Modern Art (MoMA), joined us for a presentation about the Art and Dementia Program at the MoMA. She also conducted a break-out session where participants created personal masterpieces from paper cut-outs. Meanwhile, Elizabeth Fine, MSW, informed caregivers on various sources of support.

Did you know?

Many of our participants are involved in community-based programs, such as senior centers, athletic groups, nonprofits, etc. Our staff members are available to come to your organization for a memory talk and screens in English or Spanish. For those that are interested, we can offer comprehensive cognitive testing in the home.

To schedule a talk, please contact Angelica De La Fuente at 212-241-8329.

Participant Appreciation Day

The Alzheimer's Disease Research Center (ADRC) hosted its fourth annual Participant Appreciation Day on May 11, 2011. Our staff was joined by 58 participants and caregivers. Following a warm welcome by Margaret Sewell, Ph.D., presentations included information about genetics, new treatment approaches, and the experience of participating in a clinical research trial. Sam Gandy, M.D., Ph.D., the Associate Director of the ADRC, discussed the process of developing new medications. Gregory Elder, M.D., reviewed what genetic studies have told us about Alzheimer's disease. Mary Sano, Ph.D., the Director of the ADRC,
Does moderate drinking help prevent Alzheimer's disease? A recent review of research regarding alcohol consumption and dementia indicates that drinking moderate amounts of alcohol, especially wine, may lower the risk of dementia. The review of 143 studies demonstrated that individuals who drank moderately were in fact 23% less likely to develop dementia, including Alzheimer's disease and other forms of cognitive impairment; wine may be slightly more beneficial than beer. On the other hand, heavy drinking, which constitutes more than three to five drinks per day, was found to be associated with an increased risk of cognitive impairment and dementia. Although there are several reports of the beneficial effects of alcohol, Sam Gandy, M.D., Ph.D., associate director of the ADRC, cautions against individuals using alcohol as an approach to prevent cognitive decline, as there have been no clinical trials examining the relationship between moderate alcohol consumption and cognitive health.

Doctors Debate Effectiveness of Alzheimer’s “Milkshake”. Axona is a controversial new alternative treatment for Alzheimer’s disease. Axona is considered to be “medical food,” not a drug, that supplies the brain with fats and ketones, which are to be used as fuel. Although some people are hopeful about alternative treatments, such as Axona, many researchers, including Sam Gandy, M.D., Ph.D, are less optimistic about these products. "It’s fairly outrageous that little can be done to impede the exploitative marketing of unproven and unlikely substances to vulnerable Alzheimer’s patients and their desperate caregivers," says Dr. Gandy. A major concern among critics is the lack of data showing that the “medical food” is beneficial.

Alzheimer’s Disease Research Center News

Mary Sano, Ph.D. received a prestigious Merit Award for a longitudinal study which will focus on aging veterans to determine if certain cognitive tests and biomarkers can predict who will develop Alzheimer’s disease. In addition, she aims to study the rate of cognitive, functional and global decline in this population. This study is critical as the aging veteran population has an increasing need for health care. In addition, such work will be instrumental for treatment and disease management. Results will hopefully shed light on which diagnostic approaches are the most effective predictors of Alzheimer’s disease.

We are pleased to announce that our own Gregory Elder, M.D. was named the 2011 Distinguished Scientist of the Year. Dr. Elder is a physician and researcher at the James J. Peters Veterans Affairs in Bronx, NY. His pioneering work has been instrumental in the development of a process which identifies and marks a particular group of cells with red and green fluorescent proteins. This dynamic approach has the potential for a multitude of uses. For instance, such groundbreaking research may allow for the selection of specific cell types for transplantation, as well as permit the production of cell maps which can be utilized in imaging.

In May, Joseph Buxbaum, Ph.D. was awarded the 2011 Mount Sinai Dean’s Award for Excellence in Translational Science. Dr. Buxbaum explores psychiatric and neurological diseases using the novel research methods of genetics, genomics, cell and molecular biology, as well as animal models. Through the use of translational research, which is a method of “translating” basic research findings into medical practice, Dr. Buxbaum has been able to develop unique therapies for a variety of neurodevelopmental disorders. Currently, Dr. Buxbaum’s research encompasses autism, schizophrenia and Alzheimer’s disease.

Mount Sinai’s Tasos Georgakopoulos, Ph.D. earned an esteemed Alzheimer’s Association Investigator Initiated Research Grant for his project “Mechanisms of neuroprotection by Presenilin-1.” Presenilin-1 is a protein that is often found to be mutated in most cases of familial Alzheimer’s disease. The goal of his crucial study is to examine the mechanisms by which Presenilin-1 protects neurons (brain cells) from excitotoxicity, or abnormal excessive stimulation. More specifically, he hopes to see how Presenilin-1 protects neurons against toxic death by affecting special RNAs in the cell that are called microRNAs.
FAQ: Lumbar punctures (LP)

- How long does it take? The LP takes approximately 20 to 30 minutes, with an additional 30 minutes to rest after the procedure.
- Does it hurt? You can expect pressure when the needle is inserted and may experience brief leg pain while the needle is positioned.
- Can I be paralyzed if the needle hits the spinal cord? No. The needle is inserted below the spinal cord. There is no risk of paralysis.
- What are the side effects of a LP? During the procedure, you may have temporary back pain and/or discomfort. After the procedure, you may have a headache. There are other side-effects that are uncommon, which our physician can discuss with you.
- How is the lumbar puncture performed? You will either lie on your side, with your knees drawn up or you will sit on the edge of the exam table. A local anesthetic may be given at the puncture site. A needle is inserted into your back to collect the spinal fluid.

For more information about lumbar punctures, please contact us at 212-241-8329. We can arrange an appointment with one of our physicians. We also have informational videos about the procedure that you may borrow or you can visit http://www.adcs.org/Research/LPVideo.aspx.

Good-bye & Good Luck

Angelica De La Fuente started the doctoral program in School-Clinical Psychology at Yeshiva University in September. We are happy that she continues to work part-time with our community-based programs. We wish her the best of luck in her studies and look forward to her future achievements.

Priyanka Ghosh started medical school at the University of Connecticut in August. Priyanka was a great asset to the ADRC; we thank her for all of her hard work. We are positive she will make a fantastic doctor and will continue to contribute to the medical field.

Future Staff Members

We are excited to announce that two of members of the ADRC family welcomed new additions to their family this past year. Sophia Wang, M.D. gave birth to the beautiful Elinor Yi Lin in February. In May, Andrew Vigario, a former coordinator, and his wife welcomed the handsome little Wesley Jude Vigario into their family. We are hopeful that someday Elinor and Wesley will formally join our staff!

Welcome!!

Gloria Benson and Helene Geramian graduated from Barnard College of Columbia University in May. Gloria is currently the coordinator for our longitudinal study of age-related memory changes. Helene is the coordinator for the Home Based Assessment Study and the upcoming Resveratrol study. We would like to take this opportunity to welcome them to the team!

On June 6, 2011, the NYC Chapter of the Alzheimer's Association hosted the annual "Forget-Me-Not" Gala, An Evening to End Alzheimer's at The Pierre, in NYC. David Hyde Pierce, the Tony Award winning actor, was the emcee for the event. Guests included members of NYC's philanthropic, business, health care and Alzheimer's communities who are invested in raising Alzheimer's awareness, as well as funds for research. The evening offered a cocktail reception, auctions, and dinner and dancing to Valerie Romanoff's Starlight Orchestra. Several guests were honored for their efforts.
HAVE YOU CONSIDERED BRAIN DONATION?

Brain donation is a priceless contribution to knowledge that leads to the development of more effective treatment for Alzheimer’s disease. It is also critically important to be able to study brain tissue of individuals with no memory or other cognitive problems. This allows scientists to compare normal and abnormal brain tissue, which will lead to a greater understanding of factors that may protect the brain from disease in aging. To update your brain donation registration information, or to learn about becoming a donor, contact Karen Dahlman Ph.D. at 212-241-2968, or email her at Karen.dahlman@mssm.edu. You can also learn more about our Brain Tissue Donation Program at www.mssm.edu/adrc.

Mount Sinai Clinical Research Day

On Wednesday September 21st, members of the ADRC participated in “Clinical Research Day”, hosted by the Mount Sinai School of Medicine. Situated in the bustling first floor of the hospital, investigators and coordinators from various departments of Mount Sinai had the opportunity to showcase their research projects, engage with potential participants and meet other members of the Mount Sinai research community. The ADRC proudly displayed results from closed clinical trials as well as information related to new programs. The event provided a unique opportunity to share a love of science with peers and passerbys alike.

The ADRC wishes Jeff Mann a fast recovery. Jeff Mann has been an ADRC donor for many years. In 2004, he and his family founded The Mann Foundation, which honors the memory of Irving and Marion Mann. The Mann Foundation aims to provide funds for Alzheimer’s research. We thank him for his ongoing support and hope he gets well soon!

SAVE THE DATE!

The 5th Annual Participants Appreciation Day will be held on May 9, 2012.

Full details to follow.

We look forward to seeing you there!

Mount Sinai joined forces with other ADRCs in NYC as part of NYCARE for the 23rd Annual Memory Walk on Sunday, October 23, 2011 Riverside Park

Through generous donations from our family, friends, and supporters, we were able to reach our fundraising goal! So far, we have raised over $10,000!!

Haven’t made a contribution? It’s never too late!

Visit our team page at: http://walktoendalz.kintera.org/nyc/mountsinai

We hope you join our team next year.
Nuevo proyecto de investigación evalúa un derivado del vino tinto para combatir la Enfermedad de Alzheimer

By Judith Neugroschl, M.D.

El Centro de Investigación de la Enfermedad de Alzheimer’s o ADRC, por sus siglas en inglés, del “Mount Sinai School of Medicine,” se complace en anunciar que formará parte de un estudio a nivel nacional con el objetivo de examinar el efecto de “resveratrol” en las etapas leves o moderadas de esta enfermedad. El estudio evaluará los efectos del “resveratrol” en los marcadores biológicos y en las áreas del cerebro con evidencia de atrofia. Además examinará si esta sustancia es segura y tolerable en pacientes mayores de 50 años en las etapas moderadas o leves de la EA.

El ensayo clínico se distingue de manera singular ya que además de utilizar instrumentos de investigación tradicionales, tales como exámenes en papel y lápiz, utilizará pruebas de resonancia magnética para explorar el efecto de “resveratrol” en el cerebro. A través de pruebas de resonancia magnética, o MRI, se podrá observar el tamaño de áreas en el cerebro. Pruebas adicionales se utilizarán para determinar la presencia de marcadores biológicos correlacionados con la EA en el líquido cefalorraquideo (LCR).

El LCR es el líquido que rodea y protege el cerebro y la médula espinal. El LCR se obtiene a través de una prueba conocida como “punción lumbar” que consiste en introducir una aguja en la parte baja de la espalda para extraer una pequeña cantidad de líquido. El LCR se observa y evalúa en el laboratorio y es una fuente de información confiable para medir el metabolismo y funcionamiento del cerebro. Es por esta razón que el uso del LCR en la investigación médica se ha convertido en una práctica de rutina.

El “resveratrol” es una sustancia derivada de plantas que se encuentra en algunas clases de vino tinto y en la piel o cáscara de la uva roja. Se piensa que el “resveratrol” posee varios mecanismos de acción relacionados al desarrollo de la EA y es por esto que puede que usted haya escuchado decir que el consumir una copa o un vaso de vino tinto al día es de beneficio para la memoria.

En exámenes de laboratorio se ha encontrado que el “resveratrol” protege las células cerebrales contra los daños causados por el “Abeta/amyloid.” El Abeta es un péptido que tiene la capacidad de agruparse para formar placas amiloideas en las células del cerebro, uno de los mecanismos que se piensa que puede ser la causa de la EA. En el laboratorio el “resveratrol” disminuye los niveles de Abeta producidos por diferentes tipos de células, y facilita su desintegra- ción. En pruebas de laboratorio, llevadas a cabo con ratones, el “resveratrol” también disminuye la cantidad de placas amiloideas en el cerebro. El “resveratrol” además está asociado a la regulación genética del proceso de envejecimiento, tanto así que mimetiza una proteína que se distin- guye por alargar la expectativa de vida de un organismo. En conjunto estos resultados son prometedores, pero es de gran importancia el desarrollar un ensayo clínico a gran escala para determinar el beneficio de esta sustancia en las perso- nas con EA.

El “resveratrol” está disponible comercialmente en dosis de hasta 700 mg. y se ha evaluado en hombres saludables en dosis de hasta 1000 mg. El contenido específico en las formulaciones comerciales no se conoce, pero por su función no existen políticas de control. Hasta ahora el “FDA” o Administración de Alimentos y Drogas de los EEUU, ha determinado que es una sustancia segura. Actualmente esta agencia federal lleva a cabo una evaluación con el fin de emitir recomendaciones acerca de las dosis propuestas para uso. En un estudio piloto, que se llevó a cabo en el “Mount Sinai School of Medicine” se utilizaron dosis mucho menores y los resultados están en proceso de análisis.

El proyecto de investigación que describimos actual- mente se llevará acabo durante un período de 52 semanas. Los participantes realizarán 10 visitas a la clínica y se some- terán a 2 exámenes de punción lumbar y a 3 exámenes de resonancia magnética.

El proyecto de investigación, como dijimos anterior- mente, tiene el objetivo de evaluar los efectos del “resveratrol” en los marcadores biológicos y en las áreas del cerebro con evidencia de atrofia. Además este proyecto tie- ne el objetivo de examinar con más precisión si esta sustan- cia es segura y tolerable en pacientes mayores de 50 años durante las etapas moderada o leve de la enfermedad.

Para más información sobre este estudio por favor contacte a Helene Geramian al 212-659-8885.