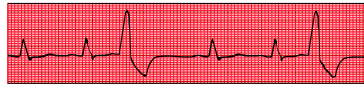




ALUMNI PULSE



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**Department of Physical
Medicine and Rehabilitation
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Newark, NJ 07101-1709**

**UMDNJ-New Jersey Medical School
Department of Physical Medicine
and Rehabilitation
August 2008**



Chair's Corner

I am 66 years old and must start looking at retirement and succession. This involves both portions of my job/position: PM&R Department Chairman at UMDNJ-New Jersey Medical School and the Kessler Rehabilitation Research and Education Center (KMRREC).

KMRREC and the Henry H. Kessler Foundation have merged. The Foundation has a very large endowment due to the sale of the Kessler Institute for Rehabilitation and its other entities to Select Medical (for profit). The Foundation has a new President and CEO, Rodger DeRose. My contract has been extended until June 30, 2010. However, I am a consultant. My main obligation will be to help select the site for the new Foundation/KMRREC building, and to start/complete the construction. KMRREC currently has 76 employees, including 3 physicians and 16 PhD full-time researchers. It has a 10 million dollar annual budget with over 4 million dollars in external grants. Once this building is completed, it will guarantee the future of this medical rehabilitation research organization.

My external stewardship review as a chairman was completed in November 2007. It was very positive and complimentary. I have been reappointed as PM&R Chair. These appointments are usually for five to seven years, but all chairs serve at the pleasure of the Dean. The Department is still active in the medical school and we continue to have our mandatory two-week medical student clerkship (mainly in the fourth year), and we teach in all four years of the medical student curriculum. The NJMS has 16 senior medical students who have expressed interest in pursuing careers in Physical Medicine and Rehabilitation.

The University Hospital is a problem. It continues to lose money and took \$320,000 away from the Department in the academic year 2007-2008. Despite this, the Hospital claims to have lost 40+ million dollars. As you know, it is a Level

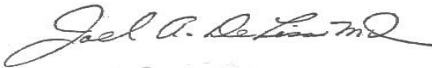
I Trauma Center with a huge charity care load in the middle of Newark. Apparently, the UMDNJ Board has dictated that the hospital must at least break even, as these deficits put the University at risk. If the hospital cuts more money from the Department, it will put the Department at risk with respect to the Hospital.

The residency, fellowship, and postdoctoral programs are of American Medical Colleges (AAMC), Chair of the Council of Academic Societies, which is supposed to represent faculty leadership and I am a member of the AAMC executive council and executive committee. I am also the President of the International Society of Physical and Rehabilitation Medicine (ISPRM), a two-year term. These activities keep me very busy. The visibility is good for me, but also for our specialty.

I have been traveling for fun and vacations (not connected to meetings) these last few years, traveling to Peru, Antartica, Egypt, and Jordan (Petra). The world is an amazing place with amazing sites to view. I hope you all get the opportunity to do this.

I hope you are doing well in your professional and private lives.

Best regards,



Joel A. DeLisa, M.D., M.S.
Professor and Chair

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*f*rom the residency director...

Greetings! Hope all of you are well.

My third year here as Program Director is drawing to an end, and this year's graduation marks another landmark for me; this year's graduates started the same day that I did, and now are ready to go into independent practice three years later. Of the eight seniors graduating this June, four will be going into private practice, and the other four will be doing fellowships (one here at UMDNJ/Kessler). Our graduates once again have accepted some of the most competitive fellowships in the country. This year's incoming class is also outstanding, including several NJMS students and several who are AOA. I have memories of these residents during their time in medical school, and I look forward to watching them progress through the residency.

doing well. We are up for reaccreditation in Spring 2009. The trainee graduation and research presentations on June 11, 2008 went well.

I am very involved in national and international organized medicine activities such as the American Board of Medical Specialties (ABMS) Chair (two-year term), the Association

This year has been relatively stable, compared to recent years. We have had no significant changes in rotations; probably the most significant scheduling issues were related to several babies born while their mothers were in our residency. ☺ We have increased the outpatient clinics at the VA, and added weekly musculoskeletal ultrasound clinics; this experience is one example of the quality of our training that keeps our residency on the cutting edge nationally.

UMDNJ-New Jersey Medical School underwent a site visit as an institution, and I'm happy to share that we got a five-year accreditation! (The best that is awarded, thanks in part to our residents and fellows who helped during the site visit.) This was confirmation that the institution has done well under the leadership of Dr. Baker (our Associate Dean for Graduate Medical Education); in addition we have no programs on probation and several programs have received individual five-year accreditations with commendations. We hope to keep up this trend as our PM&R program heads into an accreditation site visit year in Spring 2009.

Remember, we have a website both for the department, and the residency has its own website at http://njms.umdj.edu/departments/physical_medicine_rhabilitation/residency/index.cfm. Please feel free to browse this site, and send me your comments. I remain the webmaster, and am always looking for content, so if you want more information on the website or have ideas for developing the alumni section, please let me know.

To those of you in practice, I would greatly appreciate your input on what we DIDN'T teach you that you really needed to know. Please feel free to contact me by phone (973) 972-4478 or email garstasv@umdj.edu to give me your suggestions on how we can ensure that this residency program remains the best in the country!

Best wishes,

Susan V. Garstang, M.D.
Residency Program Director

Note: For those of you alumni out there who may be seeking a career change, please be aware that I keep every job offer that comes into this office (several per month), from all over the country. I'd be happy to share these with you at your request. Just e-mail or call me with preferred location or job type, and I'll send you the information.

Name of Award	Name
Scott F. Nadler, D.O. Award (formerly the Procter & Gamble Excellence in Clinical Practice Award)	<i>Not given</i>
PM&R Medical Student Award	<i>SuAnn Chen</i>
Resident as Teacher Award	<i>Maya C. Evans, M.D.</i>
Mitchell Rosenthal, Ph.D., Resident Research Award (formerly the Resident Research Award)	<i>Jessica Bloomgarden, M.D.</i>
Mitchell Rosenthal, Ph.D., Post-Doctoral Fellow Research Award	<i>Margaret Schmitt, Ph.D.</i>
National Teaching Award	<i>John C. Whyte, M.D.</i>
Annual Teaching Award	<i>Peter P. Yonclas, M.D.</i>
Alumni Award	<i>Gerard Francisco, M.D.</i>
Mentor Award	<i>Anna Barrett, M.D.</i>
James P. McLean Award for Resident Teaching Residents	<i>Christopher J. Visco, M.D.</i>

2008 Board Review Course

This year marked the 20th Annual Physical Medicine & Rehabilitation Review Course. The Course was held from April 24th to May 2nd at The Westminster Hotel in Livingston, New Jersey. More than 200 residents and practicing physicians attended the nine-day course, some coming from as far away as Canada and Puerto Rico. Due to an overwhelmingly favorable response in past years, prescription writing sessions were incorporated in the core curriculum rather than run as extra sessions. This year, more than 80 individuals signed to participate in mock oral exam sessions which took place from 6:00 p.m. to 10:00 p.m. on the evenings of Monday, April 28th and Wednesday, April 30th

Dr. John Whyte Receives

2008 NJMS Teacher of the Year Award in PM&R

On June 10th and 11th, 2008, John Whyte, M.D. Ph. D., presented several lectures to our trainees and received our department's Teacher of the Year Award. Dr. Whyte serves as Professor of Rehabilitation Medicine at Thomas Jefferson University in Philadelphia, and Director of the Moss Rehabilitation Research Institute. His research focuses on recovery from prolonged unconsciousness and attention and executive deficits that result from TBI. In addition, he has a longstanding interest in the special methodological challenges presented by rehabilitation research topics, including the definition of rehabilitation treatments and the measurement of treatment effects. His research has been funded by the NIH, NIDRR, the Department of the Army, and a number of private foundations. He is the past president of the AAP, former chair of the National Center for Medical Rehabilitation Research's Advisory Board, and PI and Program Director for the Rehabilitation Medicine Scientist Training Program.

Dr. Whyte's lectures at the Kessler Institute in West Orange, NJ during research day were as follows:

Tuesday, June 10, 2007

- **Drugs to Enhance Cognitive Function**
- **Models of Rehabilitation Research**

Wednesday, June 11, 2007

- **Advances in Research on Disorders of Consciousness**
- **Disorders of Attention after Traumatic Brain Injury**



The following awards were presented in 2008 by the PM&R Department.

Chief Residents Are Selected for 2008-2009

The following residents are congratulated for their selection as chief residents for AY 2008-09. (Note that our chief residents are nominated by vote of both residents and faculty with equal weighting.) The Administrative Chief is responsible for call schedules, vacation schedules, and other administrative issues. The Academic Chief Resident is responsible for the didactic curriculum, including coordination and scheduling of lectures, and administering the quarterly exams.

- **Jennifer Epperlein, D.O.**, Administrative Chief Resident
- **Jonathan Kirschner, M.D.**, Academic Chief Resident

AAP Accepts Resident Posters and Abstracts

At the annual meeting of the Association of Academic Physiatrists at Disneyland in Anaheim, CA February 2008, 14 posters were accepted from our PM&R residents. Under our school's GME policy, these residents were entitled to receive reimbursement for their airfare, course registration and two nights' accommodation, subject to UMDNJ's usual restrictions on travel reimbursement. The following residents are congratulated for this accomplishment (some residents presented multiple posters).

- Andrew Ankamah
- Ariz Mizrachi
- Gina Benaquista
- Joshua Reimer
- Roseanna Jackson-Parekh
- Chris Visco
- Lucy Liang
- Brian White

Resident Awards

Congratulations to James Wyss, MD, PT on his nomination to the AAMC ORR as the resident representative from the

field of PM&R. He is one of two PM&R residents nationally nominated to the AAMC ORR.

At February 2008 AAP meeting, PM&R residents were appointed as follows:

- Dr. Lucy Liang - Resident liaison to Advancement Committee
- Dr. James Wyss - Vice-chair of Resident and Fellows Council (then becomes Chair next year)

At the 2007 AAPM&R meeting we also did well in the elections as the following were elected:

- Steve Aydin, MD: AAPM&R Resident Physician Council; Liaison to the Professional and Public Awareness (PPA) Committee 2007-2008
- Brett Gerstman, MD: AAPM&R Resident Physician Council Liaison to the Quality Practice and Policy Committee 2007-2008

We are also well represented on the housestaff union (Committee on Interns and Residents) with these positions:

- CIR/SEIU Delegate: Jen Epperlein, MD
- CIR/SEIU Department Representative: Lisa Varghese-Kroll, MD

PM&R Fares Well on 2008 National Match

The PM&R Department did well overall on the 2008 Match, filling ten positions by going down to #30 on our Match list. The new incoming class includes four New Jersey Medical School students, three osteopathic students, and students from New York, Puerto Rico, and the Philippines. They include five men and five women, with many varied backgrounds (a professional basketball player, a massage therapist, and several physical therapists, just to name a few). We look forward to their arrival next year!

PM&R Department Welcomes Incoming Residents...

The faculty and trainees welcome the following members of the PM&R residency class of 2011, who entered our program on July 1, 2008:

Kate Bentley, MD

Med Sch: UMDNJ-New Jersey Medical School, NJ
PGY-1: Morristown Memorial Hospital, NJ

Jose Campos, MD

Med Sch: UMDNJ-New Jersey Medical School, NJ
PGY-1: St. Vincent's Catholic Medical Center, NY

Anupama Ganga, MD

Med Sch: Christian Medical College, India
PGY-1: Jersey Shore Medical College, NJ

Kelly Scollon-Grieve, MD

Med Sch: University of Miami School of Medicine, FL
PGY-1: St. Vincent's Catholic Medical Center - NY

Benjamin Levy, MD

Med Sch: UMDNJ-New Jersey Medical School, NJ
PGY-1: Internal Medicine, UMDNJ-New Jersey Medical School, NJ

Bethany Lipa, MD

Med Sch: University of Buffalo School of Medicine, NY
PGY-1: Internal Medicine, UMDNJ-New Jersey Medical School, NJ

Amrish Patel, MD

Med Sch: St. George's University, Granada
PGY-1: Long Island College Hospital, NY

...and Bids Farewell to the Class of 2008!

Graduating Residents

Andrew Ankamah, MD – Private Practice, Central NJ

Jessica Bloomgarden, MD – SCI Fellowship, UMDNJ-NJMS/Kessler, NJ

Richard Dentico, MD – Musculoskeletal/Sports Fellowship, Atlantic Health System, NJ

Krishna Hicks, MD – Mountainside Hospital, Montclair, NJ, and Instructor, UMDNJ-NJMS Dept of PM&R

Roseanna Jackson-Parekh, MD – Group Practice, HealthSouth, Austin, TX

Stacey Miller-Smith, MD – Group Private Practice, Princeton Orthopedic Associates, NJ

Christopher Visco, MD – Spine/sports Fellowship, RIC, Chicago, IL

Brian White, DO – EMG/Spine/Sports Fellowship, University of Massachusetts, MA and Instructor, Dept of Orthopedics, Division of PM&R

Graduating Clinical Fellows

Michal Eisenberg, MD (TBI) – Attending, Traumatic Brain Injury, New York, NY

Kimberly Heckert, MD (Stroke) – Private Practice, New York, NY

Neil Jasey, MD (TBI) – Academic Position, Mt. Sinai Medical School, Department of PM&R, NY

Jerry Nieves, MD (SCI) – Attending, Inpatient Rehab, Kessler Welkind, Chester, NJ

Jacob Strong, MD (MSK/Pain) – Private Practice, Atlanta, GA

Jonas Sokolof, MD (MSK/Pain) – Academic, Cornell/Memorial Sloan Kettering Hospital, NY

PM&R Department Welcomes Incoming Clinical Fellows

Omar Gomez-Medina, MD (TBI)

PGY-1: University of Puerto Rico School of Medicine, PR

Residency: University of Puerto Rico School of Medicine, PR

Jessica Bloomgarden, MD (SCI)

PGY-1: Montefiore, Hospital, NY

Residency: UMDNJ-New Jersey Medical School, NJ

Stacey Franz, DO, PT (MSK/Pain)

PGY-1: Union Hospital, NJ

Residency: NY-Presbyterian Hospital, NY

Priti Vohra, DO (MSK/Pain) 9/1/07

PGY-1: NY United Hospital/Union Hospital, NY

Residency: Nassau University Medical Center, NY



Valerie Trupp, MBA, is the new Department Administrator in PM&R. She comes to us after spending three years as a Grants and Contracts Administrator in the Office of Research and Sponsored Programs. She has been at the UMDNJ for sixteen years and has worked in Grants and Contracts, the School of Nursing's FXB Center, and NJDS Department of Orthodontic. She started her career at UMDNJ in Affirmative Action/EEO. Valerie received her BFA in theatre from the University of Utah and her MBA from Keller Graduate School of Management in New York. Valerie is a single mom of a 16-year old son (who has mentioned he may want to attend medical school), and is an avid animal lover. She currently has six pets: two cats, two dogs and two rabbits and buys lint rollers in bulk. Currently, Valerie is training for the Susan G. Komen 3-day walk for the cure being held in Philadelphia in October.

Doreen Muhammad-Banks has worked in the Department of PM&R as Secretary to Dr. Joel A. DeLisa since coming to the UMDNJ-NJMS in 1999. Throughout her years in the department, she has worked with many of the faculty on processing their faculty appointments and promotions, as well as assisted in the Residency Training program on various tasks and special projects. In June 2008, Doreen was promoted to the position of Residency Training Coordinator.



When Doreen is not spending time at home with her husband and managing seven children (most of whom have been "emancipated"), she is enjoying time on roller skates, dancing, reading, listening to music and sewing. Doreen also takes time out to enjoy one of her favorite television program – *Law and Order*.

Doreen is enjoying her new role as residency coordinator and looks forward to her continued work with the faculty

and developing new relationships with the residents, clinical fellows and postdocs.

Doreen is also excited about a new section that will be included in the Alumni Pulse called *The Coordinator's Corner*. Look for exciting news, information, tips, etc. relating to PM&R residency in upcoming issues.



Medical Student Update Patrick Foye, M.D., Director of Medical Student Education

The PM&R department at UMDNJ-New Jersey Medical School continues to be actively involved teaching within all four years of the medical school curriculum. This includes teaching musculoskeletal physical exam skills to first and second year medical students, as well as clinical rotations for third and fourth year medical students. During the 2008-2009 academic year, the number of mandatory PM&R rotations for fourth year students increased to being scheduled 12 times per year.

Meanwhile, the elective rotations (both clinical and research) also remain quite popular and sought after by students from NJMS and other medical schools. New electives created over the past two years have included "Musculoskeletal/Sports Medicine: Clinical Rotation" and "Musculoskeletal/Sports Medicine: Research Rotation", both under the direction of Drs. Foye and Stitik at NJMS.

The "PM&R Interest Group" for medical students at NJMS had an active year in 2007-2008, including multiple informational sessions, educational activities, and a movie night (Murderball).

In May 2008, the PM&R Student of the Year award was presented to SuAnn Chen, who was head of the PM&R Interest Group during her senior year at NJMS, and who we are happy to say has matched to join our residency program in July 2009.

The PM&R department recently learned that as many as 15 of this year's senior medical students at NJMS are currently planning to apply for residency programs within PM&R. The "Resident as Teacher Award," recognizing the role of our resident physicians in teaching our medical students, was awarded this year to Maya Evans, M.D.

Peter Yonclas, M.D., completed his service as co-director of the PM&R mandatory clerkship. We gratefully acknowledge his contributions in this role and wish him great success in his new endeavors here at NJMS.

KMRREC Receives Re-Accreditation

The Accreditation Council for Continuing Medical Education (ACCME) has re-accredited the Kessler Medical Rehabilitation Research and Education Center (KMRREC) CME program. This re-accreditation was based on review of written materials which provided evidence to demonstrate compliance with the ACCME's Essential Areas, Elements and Policies, in addition to a teleconference interview that was conducted by ACCME surveyors.

KMRREC has been accredited by the ACCME to award Continuing Medical Education Category I physician credit for education programs that are sponsored or jointly sponsored by KMRREC since 1998. After an initial two-year accreditation period, KMRREC received a four-year re-accreditation in 2000, then accreditation which expires in 2012.



Quotes and Quoteables

If you have the time, you won't have the money. If you have the money, you won't have the time.

All political parties die at the last of swallowing their own lies.

George W. Bush once quipped that "my political philosophy is based on the premise that you can fool some of the people all the time – and I intend to concentrate on those people."

A politician is an animal which can sit on a fence and yet keep both ears to the ground.

A politician is an acrobat. He keeps his balance by saying the opposite of what he does.

I want you to know I am a man of principle. And my first principle is total flexibility.

Charles de Gaulle once remarked, with some justice, that "since a politician never believes what he says, he is surprised when others believe him."

President Harry Truman once defined leadership as "getting people to do what they don't want to do and getting them to like it."



FACULTY & ALUMNI NEWS

PM&R Faculty Promotions

Please join us in congratulating the following faculty members whose promotions became effective on July 1, 2008.

- Gautam Malhotra, M.D. – Clinical Assistant Professor

Faculty Awards/Appointments

Eric Altschuler, M.D., Ph.D., selected for the Association of Academic Physiatrist's Program for Academic Leadership, 2006-2009. Invited participant and speaker, NSF conference on mirror neurons in autism, 7/23 – 4/08, Arlington, VA.

Eric Altschuler, M.D., Ph.D., The 1918 flu paper has been in the media: National Public Radio, CBS Evening News, ABC Radio Australia, The Associated Press, New Hours Online, Time.Com.

Joel A. DeLisa, M.D., M.S., Faculty of the Year Award – Clinical Sciences; UMDNJ-New Jersey Medical School.

Joel A. DeLisa, M.D., Edward J. Ill Excellence in Medicine Award; Outstanding Medical Educator Award, May 7, 2008.

Joel A. DeLisa, M.D., A. Estin COMARR Memorial Award for Distinguished Service; American Paraplegic Society, August 12, 2008.

Patrick Foye, M.D., Associate Professor of PM&R at NJMS, was elected President of the New Jersey Society of PM&R.

Patrick Foye, M.D., Associate Professor of PM&R at NJMS, was elected Chair of the Medical Student Clerkship Directors Council, Association of Academic Physiatrists.

Other Faculty Activities

Eric L Altschuler, M.D., Ph.D. Course director and speaker, 2007 Annual Assembly of the American Academy of Physical Medicine & Rehabilitation: Brain Imaging and Pain: Novel Principles for the Diagnosis and Treatment of Chronic Pain Conditions in the Rehabilitation Setting.

John Bach, M.D., Jornadas Neuromusculares Neuro – Neuro 2008, "Los principales problemas respiratorios de

los pacientes con Enfermedad Neuromuscular, Objetivos del Tratamiento Respiratorio,” “Traqueostomizar o no traqueostomizar? Sobrevida y Calidad de Vida en Pacientes tecnológicamente dependientes,” July 4-5, 2008, Buenos Aires, Argentina.

Patrick Foye, M.D., Associate Professor of PM&R at NJMS, gave a lecture titled, “Teaching Musculoskeletal Medicine in Medical Education”, at the Association of Academic Physiatriests national meeting, Anaheim, CA, 2-23-08.

Patrick Foye, M.D., Associate Professor of PM&R at NJMS, was the Conference moderator and panelist on the topic of “Myotubular Myopathy and Centronuclear Myopathies” at the Annual Meeting of the Joshua Frase Foundation for Congenital Myopathies, in conjunction with Harvard University Medical School, Department of Genetics. Boston. 4-1-08.

Magazine interview: Patrick Foye, M.D., Director of the Coccyx Pain Service at NJMS, Department of PM&R, was quoted in New Scientist magazine, May 2008, on the topic of coccyx function, coccyx variability and tailbone pain.

New Faculty Grants Since Our Last Issue

Pomeranz, B., “Progenics MNTX 2102 Study,” Progenics, 1/1/08 – 1/1/10, \$202,690.

Barrett, A., “Consultancy to O’Brien Technologies,” O’Brien Technologies, 1/1/08 – 11/1/09, \$55,393.

Elovic, E., “Neutronics WalkAide Study,” Innovative Neurotronics, Inc., 2/1/08, \$27,629.

Brooks, M., “A Four-Week, Prospective, Randomized, Double-Blind, Placebo-Controlled Trial to Assess the Safety, Tolerability, Pharmacokinetics and Preliminary Efficacy of AV650 in Patients with Spasticity due to SCI,” Avigen, 3/1/08, \$64,200.

Postdoctoral Fellows’ Publications and Manuscripts

Chen, P. & Mordkoff, J.T. (2007). Contingent Capture at a very short SOA: Evidence against Rapid Disengagement. *Visual Cognition*, 15(6), 637-646.

Chen, P., Erdahl, L., & Barrett, A.M. (under review). Monocular patching may induce ipsilateral "where" spatial bias.

Chen, P., Moore, C.M., & Mordkoff, J.T. (2008). On the spatial metric of short-SOA costs of exogenous cuing. *American Journal of Psychology*, 121(2), 229-240.

Dubowsky SR, Rasmussen J, Langrana NA, Sisto SA. (in

press). Validation of a musculo-skeletal model of wheelchair propulsion and its application to minimizing shoulder joint forces. *Journal of Biomechanics*.

Genova, H. M., Sumowski, J. F., Chiaravalloti, N., **Voelbel, G. T.**, & DeLuca, J. (in press). Cognitive dysfunction in multiple sclerosis: A review of neuropsychological and functional MRI research. *Frontiers in Bioscience*.

Hwang, K., Johnston, M.V. & Smith, J.K. (2007). Romantic attachment in individuals with physical disabilities. *Rehabilitation Psychology*, 52, 184-95.

Hwang, K. (2008). Experiences of atheists with spinal cord injury: Results of an internet-based exploratory survey. *SCI Psychosocial Process*.20, 4-17.

Hwang, K., Johnston, M.V., Tulskey, D., Wood, K.D., Dyson-Hudson, T. & Komaroff, E. (2008). Access and coordination of health care service for people with disabilities. *Journal of Disability Policy Studies* July 15, 2008. *Epub. ahead of print*.

Hwang, K. (2008). Atheists with disabilities: a neglected minority in religion and rehabilitation research. *Journal of Religion, Disability and Health*, 12, 86-92.

Moore, C. M., Lanagan-Leitzel, L. K., **Chen, P.**, Halterman, R., & Fine, E. M. (2007). Nonspatial attributes of stimuli can influence spatial limitations of attentional control. *Perception & Psychophysics*, 69(3), 363-371.

Mordkoff, J.T., Halterman, R., & **Chen, P.** (in press). Why does the effect of exogenous cuing depend on the number of display locations? *Psychonomic Bulletin & Review*.

Terry, K.; Griffin L. (2008). How computational technique and spike train properties affect coherence. *J. Neuroscience Methods*, 168(1):212-23.

Residents’ Publications

Liang CW, Armento MJ. Symptomatic Spinal Intradural Arachnoid Cyst and Tarlov Cyst in a 12-yr-Old Male: Case Report and Literature Review. *Am J Phys Med Rehabil*, 2008 Mar; 87(3):S43-44.

Bach JR, Mahajan K, **Lipa B**, Saporito L, Goncalves M, Komaroff E. Insufflation Capacity in Neuromuscular Disease. *Am J Phys Med Rehabil* 2008;87:720-725.

Ishikawa Y, Bach JR, Komaroff E, Miura T, **Jackson-Parekh R**: Cough Augmentation in Duchenne Muscular Dystrophy. *Am J Phys Med Rehabil* 2008;87:726-730.



**Study Finds Antibodies in Blood of Survivors
of 1918 Flu Pandemic**
Eric L. Altschuler, M.D., Ph.D.

This has been a most exciting year in research. One slow night on call when I was a resident at Mt. Sinai covering the in patient service at Elmhurst Hospital Center I took a break from studying to watch TV. The episode of the NBC show *Medical Investigation*—since canceled—described how a team of epidemiologists from the NIH figured out that the cause of an outbreak of an epidemic in a town was being caused by the virus that caused the pandemic influenza of 1918. The 1918 flu is estimated to have killed 50 million people worldwide, and disabled at least as many (including surgeon Harvey Cushing). On the show the epidemic virus arose when radiation treatment for a town resident's brain cancer caused a regular flu the patient had to mutate into the 1918 strain. The entire town became serious ill or died from the flu except the oldest person in town who was heavily exposed being the chauffeur of the index case. This was quite surprising since typically older individuals are particularly susceptible to flu. Eventually, investigators on the show realized that the chauffeur was so old that in fact he was born before 1918 and might have immunity to the virus having survived the pandemic. The gentleman donated blood from which investigators on the show were able to derive antibodies to save many townspeople including the chauffeur's wife.

Immediately after watching the show I thought that it would be a good idea to do this in real life! I published a note in *Medical Hypotheses* describing such a plan [1]. When this note was published—at this point I was now faculty at UMDNJ—I called the NIH to suggest implementation of my idea. The flu program directed me to Professor Chris Basler from the Department of Microbiology at Mt. Sinai. Chris and I started working together to plan such a study. An article in the *Star-Ledger* [2] describing the project was most helpful in subject recruitment leading to hundreds of phone calls from potential volunteers. Professor Basler and I also recruited Professor James Crowe from the Departments of Pediatrics, Immunology and Microbiology at Vanderbilt University in Tennessee to assist in isolating anti-1918 flu monoclonal antibodies from subjects born in 1915 or earlier—many of whom lost relatives in the pandemic—that I recruited. Using a variety of novel methods and techniques were able to isolate five monoclonal antibodies from three different subjects. The antibodies *in vitro* show highly specific binding to the 1918 flu strain but not to other strains of flu. Remarkably, working with Dr. Terrance Tumpey from the Centers for Disease Control in Atlanta, Georgia, we showed that *in vivo* all five of the antibodies afforded mice infected with the 1918 flu complete protection, whereas control treated mice all died! Our work has recently been published in the most prestigious scientific journal *Nature*

[3] and has been covered extensively by the scientific and popular media including *Science News*, CBS News, National Public Radio, the Associated Press, Reuters and the *Los Angeles Times*.

The ultimate rehabilitation is prevention of disease. Indeed, compare life free of disease after a simple polio vaccine compared with life in an iron lung. Our work provides a method to treat 1918 flu and also points strongly toward the method to make a vaccine.

There have also been some most important developments in more traditional areas of rehabilitation: Approaching fifteen years ago my teacher and mentor in medical school Professor V.S. Ramachandran, MD, PhD showed [4] that when an amputee watches the reflection of her intact arm in a mirror while simultaneously try to move their phantom limb vivid kinesthetic sensations are evoked in the phantom limb. This was helpful for many amputees in relieving their phantom pain and painful spasms and other aberrant movements of the phantom arm. Working with Professor Ramachandran I was the first to show that such mirror therapy might be beneficial for patients with hemiparesis following stroke [5]. I had the privilege of giving grand rounds a couple of years ago at Walter Reed Army Medical Center where mirror therapy was being studied as a treatment for phantom pain in our heroes who had had amputations during the Iraq and Afghanistan wars. Recently, there have been two randomized controlled studies in stroke patients [6, 7] and one by the Walter Reed group in amputees [8] all of which have shown a strong and significant benefit of mirror therapy. Other studies are ongoing.

This year with occupational and hand therapist Jeong (“Jackie”) Hu from University Hospital I described a case report [9] where mirror therapy was beneficial in the treatment of patient with good passive but poor active movement following a distal radius fracture. Large studies of mirror therapy for patients following distal radius fractures, and other orthopaedic injuries, are warranted.

I have also been involved in a number of the summer student research programs at New Jersey Medical school. Recently I was asked (and I accepted) membership on the Office of Research and Structured Program Steering Committee at NJMS for summer research. Last summer I worked with Abigail Huang and Alice Hon, both NJMS class of 2010, one visual perception and basic cognitive neuroscience. We have a paper In Press at *Perception* explaining and describing a novel variant of a classic eighty year old illusion which is a classic and exemplar of Gestalt psychology. Another student, Jasmine Harris, Rutgers class of 2008, worked with me and Chris Basler and his colleagues at Mt. Sinai this summer as part of a summer research program though the NJMS Department of

Molecular and Cell Biology funded by the National Heart and Lung Institute of the National Institutes of Health. Jamsine did a fantastic job and won one of travel award prizes for her work on fluorescent influenza virus like particles! I am also pleased to note that resident Joshua Reimer, MD and myself published a Visual Vignette case report [10] in the *American Journal of Physical Medicine and Rehabilitation* describing a gentleman with ankylosing spondylitis and hip osteoarthritis and an unusual gait but one that can be understood for physiologic principles applicable also the gait of patients with Duchene's muscular dystrophy.

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The Oil Bubble and a Vote for Nuclear Power *John Bach, M.D.*

The United States reached its peak oil production in 1970. Before that we supplied our own needs. By 1973 the U.S. was in crisis because of an OPEC oil embargo and we were shocked to find out how dependent we had suddenly become on Mid-Eastern oil. A second embargo caused havoc in 1979. U.S. oil production decreased from 10 million barrels per day in 1970 to 4 million today. Total planetary oil endowment was 2000 billion barrels and now about one-half of that is gone with much of the second half costing more energy to procure than the energy that could be obtained from it. In fact, the ratio of energy expended in getting oil out of the ground to the energy produced by the oil has fallen from 28:1 to 2:1 in 2004.

Worldwide discovery of oil peaked in 1964 and discovery is essentially over. Despite this, oil use is accelerating and is now over 27 billion barrels per year.(1) The recent rapid increases in the price of petroleum signal a worldwide peak production plateau since if production could be further increased, prices would not rise so rapidly. Now that the peak is reached, oil reserve depletion will be from 2 to 6% per year despite the fact that world population keeps increasing. Indeed, population is increasing by 2% per year and doubling every 38 years. Before the oil fueled industrial revolution bubble that began in 1800 world population was about 1 billion but is now approaching 7 billion. It is largely due to fertilizer produced from natural gas and pesticides produced from oil, to oil powered irrigation, and to oil-powered agricultural mechanization that the Earth supports our currently unsustainable population. Oil is also required for transportation, manufacturing, and trade, as well as agriculture.

For a while, high oil prices will bounce as higher prices temporarily decrease demand. This will result in misunderstanding and denial. Once oil prices eventually increase without relief, the financial markets that serve transportation, manufacturing, trade, and agriculture will destabilize. Even a brief disruption of natural gas distribution to the U.S. to fuel electricity in winter can result in us freezing to death in our homes. Pipes will break, making homes unlivable and virtually impossible to restore without the oil fueled industry to repair them.

Whereas Europe has built a strong system of mass transportation and a nuclear power base, the U.S. has not built a nuclear power plant in 30 years. One hundred percent of France's electricity is supplied by nuclear fission (70%) and hydroelectric (30%) energy. France has a comprehensive rail system powered by electricity. Even if we had an extensive nuclear power industry, we would still

be unable to go where we would need to. Over 50% of the U.S. population is suburban and can walk nowhere. Once gasoline powered automobiles become useless, only electrically powered cars and trolleys could maintain local mobility.

The failure to appreciate the coming disaster is due to a number of factors. First, it is impossible to conceive of a world without oil and natural gas. The paradigm of the normalcy of day to day living is all that we have ever known and its dissolution is alien to our macroscopic notions. Second, in our democracy as it is now structured, any politician who presents problems that are difficult to face is unelectable. No one wants to hear bad news.

A paradigm is a concept or structured way of thinking that solves certain problems. Paradigms facilitate the acquisition of information consistent with the paradigm. They are useful in that small changes from currently accepted norms can be relatively easily learned and absorbed. Paradigms permit one to predict the future based on their own assumptions. When information or data fall outside the paradigm, the paradigm effect or “paralysis” usually prevents the appreciation of the validity of those data. “Paradigm paralysis” has been defined as the “terminal disease of misplaced certainty”.(2) One example might be the treatment of hypertension with ACE inhibitors and beta-blockers. Shown reproducible evidence that a new ACE inhibitor works better and with fewer side-effects, a physician is likely to try it on his next patients. If, on the other hand, a researcher shows evidence that a treatment is even more efficacious and has no significant side effects at all but instead of being a medication is, say, acupuncture, it is unlikely that the physician will stop prescribing ACE inhibitors and learn to use acupuncture instead. Thus, information that agrees with a person's conventional paradigm has an easy pathway to recognition while that which does not agree, will not.

In an example closer to home, mine at least, people whose respiratory muscles become continuously weaker must eventually stop breathing entirely. They are then hospitalized and ventilated invasively. Although I demonstrated that this is avoidable in over 1000 patients for whom I have prolonged life and maintained quality of life without invasive airway tubes, despite 10 books and over 350 scientific peer-reviewed articles and book chapters, there is still only a handful of physicians in the U.S. that use these methods. One would think that a physician would be excited about new methods that save lives but, on the contrary, physicians are taught a paradigm of invasively managing ventilatory failure, a paradigm associated with high technology and greater profit. After investing so much time and effort into learning the conventional invasive paradigm, there is insufficient motivation to learn a new, less profitable one, as there would be for the acupuncture noted above.

With first hand knowledge of the deadly outcomes of “paradigm paralysis” in medicine, it is not surprising to me that paradigm paralysis as it concerns energy policy and population growth is likely to lead to the demise of America. It is time to face reality and demand that our government begin now to prepare for the coming end of the cheap-oil industrial revolution bubble. Otherwise, once it bursts, among the billions of starvation deaths in the rest of the world will be many Americans as well. Just as it is inevitable that a person whose muscles weaken incessantly must ultimately develop respiratory failure unless provided with the respiratory muscle aids that we use, so it is inevitable that the developed world will soon run out of oil and natural gas. Unless nuclear energy and an alternative electricity powered transportation system are developed before severe oil depletion, our society and life as we now know it will arrest and there will be no respiratory support. P.S.: Energy from fission will also not last more than a few generations. The next paradigm that bears scrutiny is that of the right to have as many children ad lib. An international effort is needed to diminish the population to an ecologically sustainable quantity, probably to much less than one-half the current population. If we remain paralyzed with the paradigm of “unqualified spreading of our seed” then there will be even more deaths once the unrenewable energy bubble bursts.

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Congratulations to **Michael Armento, M.D.** and his wife, Eileen on the birth of their second daughter, *Ava Elizabeth*. Little Ava was born on January 22, 2008 and weighed 7 lbs. 9 oz. Ava is also welcomed by big brother, Michael.

Congratulations to **Maya Evans, M.D.** (Class of 2008) and her husband on the birth of their 2nd child, *Jacob Ronan*. Little Jacob was born on May 15, 2008. He weighed 8 lbs., 7-1/2 oz. and was 22 inches long.



Katherine Bentley, M.D. (Class of 2011) and her husband announce the birth of their son, *Alfred “Alfie” Young Bentley IV*. Little Alfie was born on August 2nd at 12:03 a.m. He weighed 8 lbs., 13 oz. and was 20-3/4 inches long.

