MARK SELIGER

ACCELERATING THE CURE

The newsletter for friends and supporters of
The Michael J.Fox Foundation for Parkinson's Research

FALL 2009

Glutamate-based Approach to Parkinson's Moves One Step Closer to Clinic

LEAPS 2007 awardee hits major milestone on path to new class of symptomatic treatment that could overcome limitations of current therapies

In September The Michael J. Fox Foundation and Vanderbilt Medical Center in Nashville, Tennessee, announced that P. Jeffrey Conn, PhD and his coworkers have reached an important milestone in their work to develop a new class of drugs for Parkinson's disease. Dr. Conn, director of the Vanderbilt Program in Drug Discovery, is targeting a specific glutamate receptor in the brain as a strategy to treat PD while bypassing the dopamine system altogether — an approach that could overcome serious limitations of currently available Parkinson's treatments.

Dr. Conn, the principal investigator on a $4.4-million MJFF *LEAPS (Linked Efforts to Accelerate Parkinson's Solutions)* 2007 award, is leading a multidisciplinary drug development research consortium at Vanderbilt focusing on the mGluR4 glutamate receptor. Other key leaders in the effort include Drs. Colleen Niswender, Corey Hopkins, Craig Lindsley, Carrie Jones, and David Weaver, all members of the Vanderbilt Program in Drug Discovery, each of whom directs critical components of this large multidisciplinary effort. The team has now identified two drug-like molecules that, when given systemically in a pre-clinical model, demonstrate a robust ability to reduce Parkinson's symptoms by acting on mGluR4.

"If Jeff and his team can develop a molecule that has the right properties and does not have toxicity, we believe this project could have a major impact for Parkinson's patients," said Todd Sherer, PhD, vice president of research programs at MJFF.

"Obviously there are no guarantees," cautioned Dr. Conn. "But if progress continues, we are hopeful that clinical trials in PWPs could begin as early as 2013."

Dopamine vs. Glutamate in PD

The dopamine system has long been the primary therapeutic target for PD. Dopamine replacement therapy relieves some symptoms of PD, but it also causes side effects and becomes less effective as the disease progresses. For this reason, Parkinson's researchers have become increasingly interested in developing therapies that exert a therapeutic benefit without manipulating the dopaminergic system.

Like dopamine, glutamate is a neurotransmitter — a signaling molecule that plays a role in transporting brain messages and controlling body functions. Early findings suggest that manipulating specific parts of the glutamate system could alleviate Parkinson's symptoms and complications. Alternatively, it may be possible to develop a dual or complementary treatment approach, in which glutamate-based therapies lessen patients' needs for dopamine-based therapies — in turn reducing the debilitating side effects of long-term dopamine replacement.

In previous studies funded by MJFF to refine strategies for effectively targeting glutamate in Parkinson's, Dr. Conn homed in on mGluR4 — one of a highly specific group of glutamate receptors known as the metabotropic receptors. That research originated with a hypothesis that orally administered drugs may one day be able to achieve the benefits of surgical approaches such as deep brain stimulation, eliminating the need for these more invasive procedures.

"The mGluR4 receptor is present at a key synapse in the basal ganglia motor circuit impacted by Parkinson's surgeries, but it is not widely distributed in other brain regions; nor is it present, for the most part, in any peripheral tissues," said Dr. Conn. "By targeting this specific receptor, we believe we can limit potential adverse effects and that we'll be looking at a very favorable profile."

Next Steps

In pre-clinical models, the two compounds identified by Dr. Conn's team get to the brain and relieve PD symptoms. The next step is to test the compounds rigorously across multiple pre-clinical models.

"We need to look at the effects of chronic dosing, which we've not yet been able to do due to the lack of systemically active compounds; obviously, this is critical for Parkinson's patients," explained Dr. Conn. "We need to look for possible toxicity that we may not be expecting. What's truly exciting is that we are now at the point where we can begin to systematically perform this testing, which is the next pre-clinical phase on the path toward first-in-human trials."

Dr. Conn presented the data at MJFF's PD Therapeutics Conference, held in New York City on September 30. *(See related story, page 2.)*

Additional information on this project, including a detailed Q&A with Dr. Conn, is available on the Foundation's Web site, www.michaeljfox.org.

ELENA OLIVO

NEWS FROM THE CEO

At The Michael J. Fox Foundation, the year 2009 was about progress. Founded less than a decade ago, our Foundation is now the largest private funder of Parkinson's research in the world, funding over $150 million in research since inception. Our in-house research team reviews more Parkinson's-specific grant applications, up to 800 every year, than any other organization. And at any given time we're managing up to 250 active awards. All for one simple reason: to speed the most promising science toward transformative treatments and a cure for PD.

While we will not be satisfied until we've found the cure and closed our doors, we are proud of the progress we've made so far — progress we owe to your dedicated support. I hope you'll read this newsletter with pride, knowing you have made possible every story of our commitment to identifying and prioritizing the science that will accelerate new therapies — from advancing early-stage discoveries along the pipeline to driving development of critical new research tools.

We're shooting for nothing less than a cure for Parkinson's, and we'll do whatever it takes to get there. As we approach the end of another year, we're reflecting on our progress while taking stock of what still needs to be done. And the bridge from where we've been to where we're going is you.

Thank you for sharing our vision of a world without Parkinson's disease. Together, we can make progress that leads to a cure.

Warm regards,

Katie Hood

Katie Hood, CEO

INSIDE

A Virtual Workplace to Enable **Faster Progress toward a Cure**

Every year MJFF brings together hundreds of research professionals at scores of in-person scientific meetings. It has become clear that the interactions that take place at these meetings — which inform next steps for the Foundation's research program efforts, existing projects and new field directions — are as important to progress as is funding.

In June, to help extend the reach of these meetings to a global audience, the Foundation launched **PD Online Research (pdonlineresearch.org),** a resource-rich virtual workplace that MJFF hopes will become a vibrant Web-based community of PD researchers and funders collaborating and conversing around the world. MJFF's goal for the site is to enable quicker knowledge turns, and therefore faster progress, in driving the next generation of therapeutic breakthroughs for Parkinson's disease.

"PD Online Research will provide a platform for thousands of research professionals across the world to engage daily on key hurdles and hot topics, hopefully accelerating the pace of PD drug development," said Katie Hood, CEO of MJFF.

More than 1,200 research professionals have registered as members to date, taking advantage of the site as a one-stop shop for both an overview of the state of Parkinson's disease research as well as deep dives into key therapeutic targets and technical issues. The Foundation also hopes PDOR will help drive even better decision-making about PD research investment, helping public, nonprofit and private PD investors access a larger pool of experts than ever before, and in the process make smart and timely decisions about the research paths they choose to pursue.

All PD Online Research content is offered as a free resource to the general public. But since MJFF's primary focus is on building a technical hub for Parkinson's research, only scientists, clinicians, allied healthcare professionals directly engaged in scientific research, and investment decision-makers interested in Parkinson's disease in the public, nonprofit, and private sectors will have the ability to post directly to the site. Other interested parties, including people with Parkinson's and their families and members of the general public, will have the ability to read content and discussions and are invited to submit ideas and questions about PD science and therapeutic development to the PD Online team, who will add this input to the PD Online mix where it can help drive discussion and debate forward.

The site was conceptualized and built by MJFF in collaboration with Massachusetts General Hospital and the Initiative in Innovative Computing at Harvard University.
To learn more, visit www.pdonlineresearch.org

> "PD Online Research will provide a platform for thousands of research professionals across the world to engage daily on key hurdles and hot topics, hopefully accelerating the pace of PD drug development" — Katie Hood

Third PD Therapeutics Conference attended by over 170 academic and industry research professionals

On September 30 the Foundation and the New York Academy of Sciences co-sponsored the third **PD Therapeutics Conference** in New York City. Over 170 academic and industry researchers and business development professionals, as well as members of the media, attended the event, which was chaired by MJFF Scientific Advisory Board member J. William Langston, MD, of The Parkinson's Institute and Clinical Center in Sunnyvale, California.

The PD Therapeutics Conference is the only major symposium exclusively focused on speeding therapeutic development for Parkinson's disease. The fast-paced format is designed to help broker key relationships and foster collaborations that can keep early-stage hits moving forward toward clinical testing. MJFF-funded investigators present recent results ripe for new collaboration, industry investment or follow-on funding, and after each talk the floor is opened to commentary and debate. Attendees gain an understanding of the therapeutic and clinical implications of the most current PD research in an environment that provides ample discussion time and networking opportunities.

Conference highlights included Jeff Conn's presentation of data demonstrating the achievement of a major milestone on the path to a novel glutamate-based symptomatic therapy for PD *(see related story, front cover)*. Susan Bressman, MD, of Beth Israel Medical Center discussed the connection between Ashkenazi Jewish heritage and mutations in the PD-implicated gene LRRK2 *(see related story, page 5)*. In a Hot Topics session, Andrew Singleton, PhD, of the National Institute of Aging (National Institutes of Health) suggested new directions for leveraging data from genomewide association studies to speed targeted drug development.

In addition to the talks, a poster session highlighted compelling new data from several MJFF-funded projects including the Foundation's Prescott Family Initiative at the Arizona Parkinson's Disease Consortium, designed to enhance data collection and sharing through APDC's Brain and Body Donation Program; the development of the first published LRRK2 pre-clinical model of Parkinson's disease *(see related story, page 3)*; and the latest results from an ongoing *LEAPS* 2007 project working toward an RNA-interference approach to lower levels of alpha-synuclein (a protein whose clumping is a pathological hallmark of Parkinson's disease) in the brain.

Funding for the PD Therapeutics Conference was provided by Acadia Pharmaceuticals, the Biotechnology Industry Organization (BIO), Elan Pharmaceuticals, Park IP Translations and Sigma Advanced Genetic Engineering (SAGE) Labs.

Replicating the Human Condition in the Lab: **Progress on Pre-clinical Models of** Parkinson's Disease

Drug development for Parkinson's disease has historically focused on the relief of symptoms. While this is an important area of research, treatments that can slow, reverse or halt the progression of PD are urgently needed. A major roadblock to developing these neuroprotective therapies is the lack of pre-clinical models of PD that allow scientists to study the progression of the disease and to test the effects of new treatments before use in humans. Recognizing the importance of pre-clinical models in therapeutic development, MJFF is acting on multiple fronts to support the development of innovative models and ensure that all PD researchers are able to access new discoveries in this arena.

"To incentivize researchers to focus in this field, we've invested over $9 million to date in the development of progressive, predictive pre-clinical models — and we're starting to see real results," said Kirsten Carlson, PhD, associate director of research programs.

From first-of-its kind mouse models to never-done-before rat models, MJFF is taking the field in completely new directions. Yet, the best pre-clinical models of PD are useful only if they get into the hands of scientists. Access issues — including intellectual property restrictions, production expenses and distribution limitations — can be significant barriers to research progress. For this reason, MJFF is also working to forge practical solutions to these problems, increasing the feasibility of resource-sharing and ensuring that new models are readily available to the entire PD research community.

A First of Its Kind: LRRK2 Mouse Models

Mutations in a gene known as LRRK2 (leucine-rich repeat kinase 2) are believed to be responsible for the most common genetic form of PD. Based on this finding, MJFF has identified LRRK2 as a high-priority therapeutic target and is supporting the development of critical tools to advance LRRK2 research. *(To learn more about MJFF's LRRK2 strategy, see page 5.)*

This year, with funding from MJFF, CJ Li, PhD, and his team at Weill Cornell Medical College in New York produced the first reported mouse model for the study of LRRK2 gene mutations. The mouse models have been created to express the human LRRK2 gene, allowing scientists to evaluate the effects of these gene mutations — a critical step in the process of converting genetic discoveries into patient-relevant therapies.

"MJFF funded CJ Li to create an exciting new model for LRRK2 research that we hope can replicate some features of the Parkinson's condition associated with these gene mutations – progressive reduction of movement, loss of dopamine release and neuronal atrophy," says Dr. Carlson. "With these LRRK2 mouse models, scientists can study aspects of both the underlying biological processes of PD and its symptoms, and can test and screen new drugs that have the potential to benefit all patients with the disease."

Knockout Rats: A New Model of Parkinson's

Most existing genetic models of Parkinson's disease are mouse models focused on the PD-implicated genes LRRK2 and alpha-synuclein (whose clumping in the brain is a pathological hallmark of PD). MJFF is working to create a broader variety of animal models of PD, including the first "knockout rat" models of the disease.

Knockout technology involves creating models that lack a specific gene (or genes) of interest in a particular disease. Scientists turn the gene off ("knock it out") and study the effects of this action in the resulting model and its offspring. While knockout mouse models have been research staples for years, until recently the technology had never successfully been demonstrated in a rat. But rats have behavioral and physiological features that are distinctive from mice and can provide new and better ways of studying various diseases, including Parkinson's disease.

In July Sigma-Aldrich Corporation published proof-of-principle for the first knockout rats with permanent, heritable gene mutations. Seeing the unique opportunity in this breakthrough, MJFF moved fast to partner with Sigma-Aldrich Corporation to mobilize the technology in Parkinson's research and develop knockout rat models of PD. In August the company was awarded a one-year grant to develop five models, each lacking a gene that plays a role in Parkinson's disease: alpha-synuclein, LRRK2, DJ-1, Parkin and PINK1. Creating individual knockout rat models of five different genes of interest opens new opportunities for understanding the functions of different PD-implicated genes.

Ensuring Access to New Discoveries: Open Source and Readily Available Models

In the current scientific arena, intellectual property (IP) issues can significantly limit labs and companies from sharing models, which significantly slows the pace of progress. To facilitate resource-sharing, MJFF is creating models of PD where IP is owned by the Foundation, whose only incentive is to see these "open-source" models used as broadly as possible in the pursuit of breakthrough therapies.

MJFF is funding Caliper Life Sciences to create three different open-source mouse models that will express the human LRRK2 gene plus two common LRRK2 mutations. These models will be available to anyone, free of IP restrictions, allowing widespread use by academic and industry scientists.

Additionally, to increase all PD researchers' access to newly developed models, MJFF is working with The Jackson Laboratory (JAX) in Bar Harbor, Maine, to strengthen JAX's existing Parkinson's Disease Mouse Model Repository. The repository will house and distribute valuable MJFF-funded mouse models for use by the entire PD research community, removing a significant barrier to access. The JAX PD repository has the capability to distribute numerous models, including special strains in which researchers can inactivate certain genes or label certain neurons with fluorescent protein markers to monitor their viability. And JAX carefully monitors the health status and the genetic composition of the mice that are distributed, so that experiments done in different labs and at different times can be reliably compared.

The mouse models created by Dr. Li and his colleagues, as well as other pre-clinical models developed with funding from MJFF, are already at JAX and ready for distribution. The next models to be transferred and housed at JAX will be those currently in development at Caliper.

"To incentivize researchers to focus in this field, we've invested over $9 million to date in the development of progressive, predictive pre-clinical models — and we're starting to see real results" — Kirsten Carlson

NEWSBRIEFS

THE MICHAEL J. FOX FOUNDATION ROUTINELY POSTS UPDATED INFORMATION ABOUT FUNDED PROJECTS ON ITS WEB SITE. FOR MORE INFORMATION ABOUT THE PROJECTS LISTED BELOW, PLEASE VISIT **WWW.MICHAELJFOX.ORG/RESEARCH**

NEW FUNDING FOR TROPHIC FACTORS

In September MJFF committed up to $5 million under a new directed *LEAPS* initiative for rigorous investigation of neurotrophic factors (also called trophic factors or growth factors) — specialized proteins that protect and nourish neurons, including the dopamine neurons that die in Parkinson's disease. Though preclinical results and several early-phase clinical trials, including major trials undertaken within the past five years, have raised hopes for a breakthrough trophic factor treatment for PD, no study has yet definitively demonstrated these factors' safety and efficacy in people with the disease. Despite these challenges, MJFF continues to believe that trophic factors hold great therapeutic potential, and trophic development remains a priority for the Foundation. Under directed *LEAPS*, MJFF will fund multi-year, potentially multi-million dollar grant awards for milestone-driven efforts to execute a comprehensive therapeutic development plan. The primary goal is to accelerate the progress of the most promising trophic-based therapies to date, speeding their progress through preclinical and/or clinical development and hopefully into clinicians' and patients' hands.

USING FUNCTIONAL MRI TO INVESTIGATE THE PLACEBO EFFECT IN PD

One factor that complicates the interpretation of outcomes from PD clinical trials, including trophic factor trials *(see above)*, is the placebo effect, a topic of growing interest to Parkinson's researchers. Placebo treatments are harmless, inactive substances administered to some of the patients in a clinical trial to provide a baseline comparison for measuring the effects of active treatment given to other patients in the trial. Previous imaging studies have demonstrated that dopamine levels increase in the brain when patients receive placebo treatments. But little experimental evidence exists to show whether these increased dopamine levels are tied to functional improvement on the Unified Parkinson's Disease Rating Scale (UPDRS), the tool used by clinicians to measure effects of experimental treatments. With new funding from MJFF, a research team at Columbia University is evaluating the potential of functional magnetic resonance imaging (fMRI) to provide such evidence. Led by Tor Wager, PhD, and Daphna Shohamy, PhD, the team will use fMRI to look at brain activity in Parkinson's patients as they execute specific motor and learning tasks, comparing how brain activity changes when the patients are given levodopa versus placebo. The goal is to more fully establish the biological markers of placebo effects in PD and determine whether placebo effects lead to measureable functional improvement for patients — and thus might be harnessed to enhance therapeutic development for PD.

MEN, WOMEN AND PARKINSON'S

A Harvard University team is throwing its hat in the ring to try and answer the age-old question of what makes men and women different — when it comes to Parkinson's disease, at least. Men are more susceptible to PD than women are. Anne Young, MD, PhD, hypothesizes that this may be due to differences between the male and female brains' ability to process and stabilize the alpha-synuclein protein (whose clumping in the brain is a pathological hallmark of PD) following its synthesis. Using mass spectrometry, a technique that allows researchers to characterize the biological function of specific molecules by determining their mass, Dr. Young's team will analyze the alpha-synuclein clumps and determine how they vary between the male and female brains. Understanding these variances could shed light on a biological basis for the gender differences observed in the incidence of the disease. "As we move toward more personalized care for diseases, one factor that is often overlooked is the patient's gender," says Dr. Young. "Our team sees a unique opportunity to analyze the impact of gender on PD and bring our results into the clinical world to better tailor neuroprotective strategies."

MJFF drives LRRK2 cohort studies in New York, Israel and Tunisia

Effort is part of broader Foundation strategy to streamline research into high-priority therapeutic target

In September 2009 MJFF announced $5.2 million in support for two related studies aimed at answering critical questions about the association between Parkinson's disease and mutations in a gene known as LRRK2. The studies will help characterize LRRK2 and its role in Parkinson's onset and progression by evaluating two groups (or cohorts) of people whose risk of LRRK2-related PD is higher than that of the general population.

First linked to PD in 2004, LRRK2 mutations are now believed to be the most common genetic contribution to the disease. LRRK2 is a high-priority target for MJFF. As part of its characteristic efforts to speed development focused on the most promising therapeutic targets for Parkinson's disease, the Foundation is executing a broad and integrated strategy to carry out critical LRRK2-related initiatives in a streamlined way. The goal is to shed light on the biology of the gene and its underlying role in PD while simultaneously laying the foundation for conclusive outcomes of clinical trials once candidate drugs are identified.

Including this investment in LRRK2 cohorts, MJFF has invested nearly $16 million in LRRK2 research to date, a figure expected to rise to approximately $19 million by the end of 2009. The Foundation also expects to announce up to $3 million in funding later this year under LRRK2 Biology 2009, a program dedicated to increasing biological and pathological understanding of LRRK2's role in Parkinson's disease and developing essential tools to facilitate and accelerate therapeutic development.

Why LRRK2?

Though inherited cases of PD make up only a small percentage of Parkinson's disease cases overall, genetic research holds critical potential to help all people living with PD, whether or not they carry genetic mutations linked to the disease. By studying the biological processes underlying genetic forms of Parkinson's, scientists can elucidate mechanisms that play a role in the more common sporadic form of the disease, providing new avenues for therapeutic development.

Additionally, LRRK2 belongs to a class of protein known as kinases. Kinases are enzymes, or molecules that catalyze reactions inside of cells. They are known, primarily from cancer studies, to be highly "druggable" — that is, responsive to the active compounds that form the basis of many medications.

For these reasons, LRRK2 has energized Parkinson's genetics and been the focus of intensive scientific inquiry throughout the PD research field.

About MJFF's LRRK2 cohorts

The LRRK2 cohort studies will collect clinical, genetic and olfactory information from two distinct populations, Ashkenazi Jews and North African Arab-Berbers, in whom LRRK2 mutations lead to a significantly increased risk of Parkinson's disease. LRRK2 mutations are implicated in an estimated 13 to 40 percent of PD cases in these groups, compared with a much lower percentage — an estimated one to two percent — in the general population. Data collected from the cohorts will allow researchers to link clinical features of the disease to underlying biological and genetic processes. This in turn will help provide a basis for the design of future clinical trials more likely to yield conclusive outcomes.

"Because LRRK2 is a relatively recent discovery, and because these two populations are uniquely affected by it, our Foundation sees an unusual opportunity to help streamline and centralize efforts to characterize the gene and its role in PD," said Brian Fiske, PhD, of MJFF. "By collecting as much data as possible on clinical features of PD related to small changes in the LRRK2 gene, and standardizing how that data is collected, we can make drug development efforts centered on LRRK2 more efficient and speed patient-relevant outcomes from this work."

MJFF is supporting one team of investigators, from the Mayo Clinic, Jacksonville, and the Institute of Neurology in Tunis, to study an Arab-Berber cohort in Tunisia. A second group, led by investigators at Beth Israel Medical Center, Columbia University, Tel Aviv University and the Institute for Neurodegenerative Disorders, will evaluate Ashkenazi Jewish populations in New York and Tel Aviv, Israel.

All told, the cohorts will comprise nearly 4,000 individuals, including people with LRRK2 mutations who have PD as well as family members who may carry the mutations but may not have the disease. For the New York/Tel Aviv study, researchers will also collect biomarker and imaging data. The information from both groups will be evaluated by researchers to help answer critical questions about LRRK2 including:

- How similar is LRRK2 PD to the more common sporadic form of the disease?
- For individuals with LRRK2 mutations, what is the actual risk of developing PD?
- Why do some individuals with LRRK2 mutations develop PD earlier in life, while others get the disease later or not at all?
- What other factors (including genetic factors) play a role in the frequency and timing of PD in individuals with LRRK2 mutations?

By studying asymptomatic people with LRRK2 mutations who may later develop PD, the researchers have the unprecedented opportunity to study the earliest stages of the disease. A better understanding of the early PD process could lead to earlier diagnosis and refined treatment strategies tied to stages of disease progression. Data collected from individuals in pre-diagnosis stages of PD onset also could open new investigative avenues for the development of critically needed Parkinson's biomarkers.

For more information on the LRRK2 cohorts, including grant abstracts and researcher biosketches, please visit www.michaeljfox.org.

FACES OF PARKINSON'S

When a Woman Has PD

We take for granted that many life experiences are fundamentally affected by our gender. Kathleen Reardon, a PWP and professor at the University of Southern California, has been contemplating how gender differences may impact the way individuals experience Parkinson's disease.

Visit www.michaeljfox.org to read a thought-provoking essay in which Reardon probes the reasons why women with PD may have difficulty being heard by their doctors and others in their lives, and offers tips for helping women with PD ensure that their voices are heard.

Reardon is the author of numerous articles on communication, persuasion, negotiation and politics and, along with MJFF CEO Katie Hood, is a featured blogger on the Huffington Post (www.huffingtonpost.com).

For a biological take on gender differences in PD, see "Men, Women and Parkinson's Disease," page 4.

"Sharing Strengthens My Treatment Plan and My Spirit"

PWP Steve Dewitte's story in his own words

After reading Michael J. Fox's first book, *Lucky Man*, I felt as if I had found my long-lost twin. Except for his enormous talent, fame and good looks, we were just alike — at least when it came to our early Parkinson's symptoms.

In 2003, my left hand started to exhibit a slight tremor, and that arm was often limp by my side. After four medical opinions, I was diagnosed with Parkinson's at age 48. I began a search for a young-onset support group and, discovering none in Connecticut, I started one. This month our group is celebrating its third anniversary. It has tripled in membership since inception and become a second family to me. Our sharing strengthens my treatment plan and my spirit.

Since the start of my education about PD, I have been heartened by my contact with Parkinson's organizations like MJFF that share and reinforce the message: Keep the faith — the cure is coming. In August the Connecticut Parkinson's community was thrilled to host a mini Research Roundtable presented by MJFF. The program featured all the partners who will help get us to the cure: researchers, patients, care providers and advocates, among others. You could sense the energy and unity in the room.

I would have never believed that having a progressive disease could somehow be interpreted as a blessing. But in the end, it's all about people. The support I've received from friends, family, fellow PWPs and PD organizations is humbling. It keeps me going every day.

Eileen and Steve Werndorfer

Steve DeWitte (left) and Norman Greenstein cross the finish line at the 2009 Brookfield Parkinson's Run. Event organizers Eileen and Steve Werndorfer have hosted this event for Team Fox for three years, with help from friends and area businesses.

Calling All Canadian MJFF Supporters!

Since inception MJFF has been fortunate to receive tremendous support from friends in Michael J. Fox's country of origin, Canada. We're thrilled to announce that we are now a registered Canadian charity (registration number 83230 9892 RR0001). Our new status means that all donations to MJFF from Canadian residents are tax-deductible to the full extent of the law.

On September 24, Michael and members of the Foundation's staff, as well as Board Chairman George E. Prescott, arrived in Toronto for a day of events held in partnership with The McEwen Centre for Regenerative Medicine and Toronto Western Hospital to officially announce MJFF's new status.

The day began with a press conference to raise awareness of Parkinson's research efforts taking place in Canada, including many funded by MJFF. Then about 300 guests attended a Research Roundtable featuring clinicians and researchers from the University Health Network in Toronto, including MJFF Scientific Advisory Board Member Andres Lozano, MD, PhD.

Later, about 250 guests joined a star-studded "Evening Celebrating Science" featuring a one-on one conversation between Michael and George Stroumboulopoulos, host of CBC Television's "The Hour," and a performance by Canadian rocker Bryan Adams. Proceeds will benefit Parkinson's research activities at MJFF, The McEwen Centre and Toronto Western Hospital.

Our deepest thanks to our supporters to the north for your steadfast commitment to our mission. Together, we will find a cure for Parkinson's disease.

Alex Berliner / BEI Images

Michael J. Fox with Holly Robinson Peete and Rodney Peete at the 11th Annual DesignCare benefiting the HollyRod Foundation, where Michael was honored with the Matthew T. Robinson Courage Award in July. The HollyRod Foundation raises money for adults and children battling Parkinson's disease and autism.

Team Fox @ Red Sox!

On August 22 Team Fox became part of the most storied rivalry in Major League Baseball as our creative and dedicated members were celebrated at a Yankees-Red Sox matchup in Beantown.

With the help and support of the entire Red Sox organization, Team Fox took historic Fenway Park by storm. Boston-based Team Foxers Nicholas Frasso, John Fitzmaurice and Andrew Bechtel were recognized for supporting MJFF's mission to speed a cure for PD. Michael Costa, a longtime friend of MJFF and a lifelong Yankees fan, threw out the ceremonial first pitch to start the game. "In front of a packed stadium and on national television, I was definitely nervous. But once my pitch reached its mark, it was indescribably delicious," he reports.

As an inspirational Team Fox video played on the Jumbotron to the sold-out crowd of 40,000, Team Fox staffers manned a booth in the "Community Home Stand" — providing one-on-one information and advice to prospective new members.

The opportunity to bring Team Fox to Red Sox Nation came to the Foundation through Amiel Sawdaye, the team's assistant director for amateur scouting, whose mother was diagnosed with PD in November 2008.

"Without much background about PD, I turned to The Michael J. Fox Foundation for some knowledge about the disease," said Amiel, who has since joined Team Fox himself and raised over $7,000 in the New England Parkinson's Ride on September 12. "Now I want to do whatever I can to help find the cure for this disease."

MJFF thanks Amiel and the Sox for this fun, fantastic opportunity to spread the word about Team Fox.

Pedaling Coast to Coast for the Cure

On September 18 Team Fox member Skip Bailey crossed the finish line of a coast-to-coast, 4,280-mile bike journey from Astoria, Oregon, to Yorktown, Virginia, in honor of his father, who was diagnosed with Parkinson's disease in 2007. Skip's cross-country ride raised an incredible $8,951 for The Michael J. Fox Foundation and PD research.

"Biking across the country was something I'd always wanted to do," said Skip, a professional equestrian announcer and course designer. His father's diagnosis was the impetus to make the journey a reality. After learning about Team Fox online, Skip quickly became a member and started planning, training and fundraising. A year later, he set out on his Specialized hybrid bicycle.

"Having my father here has shown me that there is so much more to life," said Skip. "This trip means a great deal to me."

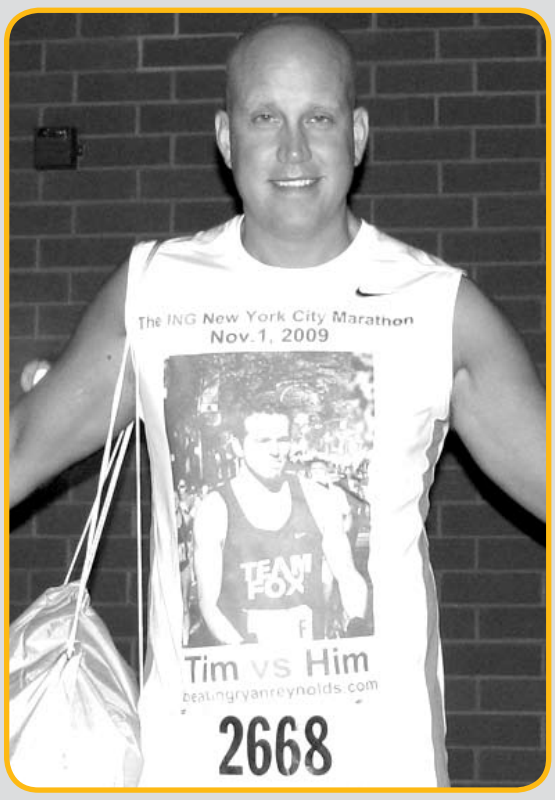
With the help of a major supporting cast — including his father, Archer Bailey; his fiancée, Ashley Jones; and his trusty golden retriever, L-E — Skip set out from the Pacific Northwest on August 5. Nearly seven weeks later, after averaging about 125 miles a day, Skip glided past the finish line to the sweet sound of spectators' cheers.

To read more about Skip's trip and view pictures, visit his blog at http://coasttocoastforpd.blogspot.com or follow his Twitter feed at http://twitter.com/cyclenation

Team Fox Member's Mission: Beat Ryan Reynolds

On November 1 Team Fox member Tim Reid will run the ING NYC Marathon to benefit The Michael J. Fox Foundation. His $20,000 fundraising goal is ambitious, but that's the least of his concerns. Tim's real mission: Demolish the 3:50 race time posted by Ryan Reynolds, actor and Team Fox Celebrity Chair, last November in New York.

"Michael J. Fox's memoir *Lucky Man* was amazing and really inspiring to me," Tim said. "Then, Ryan ran the NYC marathon in under four hours — something I had always wanted to do. It all came together when my wife got a huge crush on Ryan. She would stare, drool and ask, 'Honey, why can't you get in shape like Ryan Reynolds?' Other than my love for wine, vodka, nachos and wings, I had no good reason."



Tim's next steps were clear: Begin marathon training and launch a Web site (www.beatingryanreynolds.com) to publicize his ~~new obsession~~ spirit of healthy competition. After the site was featured in the *New York Daily News*, good sport Ryan reached out to Tim personally to root him on.

Considering the amount of training it will take to show Ryan who's boss, it's incredible that Tim's already had the time to raise nearly $12,000 (and counting!) for his run. He still needs all the help he can get, so please visit his Web site or Team Fox page today and show your support for the Everyman in all of us!

THE MICHAEL J. FOX FOUNDATION FOR PARKINSON'S RESEARCH

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FALL 2009 NEWSLETTER

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Our work to find the cure for Parkinson's moves fast. But there are lots of opportunities online to stay up to date on our latest news and activities. We'll see you on the World Wide Web!

WE'RE TWEETING:

twitter

Follow @MJFFNews, @TeamFox and @PDOnline for daily (sometimes hourly) updates on every aspect of our mission to make Parkinson's disease a thing of the past.

WE'RE ON FACEBOOK:

facebook

Our Michael J. Fox Foundation Facebook group is 15,000 strong and growing. Join us for weekly bulletins of the news we're most excited to share.

Learn more at www.michaeljfox.org or call (800) 708-7644.

REGISTER FOR OUR NEXT

VIRTUAL RESEARCH ROUNDTABLE

SATURDAY, NOVEMBER 21, FROM NEW YORK CITY

Our world-class research staff and scientific advisors will brief you on the latest advances in Parkinson's disease research. Watch live (and submit your own question for our panel) or after the fact.

LEARN MORE AT WWW.MICHAELJFOX.ORG OR CALL (800) 708-7644.

Solvay Pharmaceuticals

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THE MICHAEL J. FOX FOUNDATION IS DEDICATED TO FINDING A CURE FOR PARKINSON'S DISEASE THROUGH AN AGGRESSIVELY FUNDED RESEARCH AGENDA AND TO ENSURING THE DEVELOPMENT OF THERAPIES FOR THOSE LIVING WITH PARKINSON'S TODAY.