



SPRING 2005

NUTRITION MATTERS

*Unlocking the Secrets of
Nutrition and Health*

PENNINGTON BIOMEDICAL RESEARCH CENTER AND FOUNDATION

DID YOU Know?

- The Pennington Biomedical Research Center (PBRC) is the largest academically based nutrition research center in the world.
- Every \$1 in state funding to PBRC has attracted approximately \$4 in federal and/or private funding.
- PBRC counts on state funding for only about 20-percent of its total budget.
- PBRC research and projects have reached into 35 parishes in every region in the state.
- PBRC's new vision statement is to "become the leading nutrition and preventive medicine research center" in the world.
- More than 8,000 citizens have voluntarily participated in ground-breaking clinical research trials at PBRC, including some 1,200 in the last year alone. An additional 20,000 individuals have volunteered and completed screening for future research studies.

Pennington Executive Director Receives Awards

Dr. Claude Bouchard, Pennington Biomedical Research Center (PBRC)

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SHAPING UP FOR SUCCESS:

HOW PBRC CHANGES LIVES

Success comes in all shapes and sizes, and no one understands that more than those who have shipped out to Pennington Biomedical Research Center (PBRC) and shaped up for their own personal victories.

Scott Westbrook is a believer; especially in himself now that he has the success of losing weight under his belt. He's happy and he's proud, but most importantly, Westbrook is the healthiest he's been in years.

As a former participant of CALERIE, Comprehensive Assessment of Long-Term Effects of Reducing Intake of Energy, Westbrook admits he had a few second thoughts about the study that would require his participation for a total of two

years. Even though he knew he wanted to change his harmful and rather cumbersome stress-induced eating habits, Westbrook didn't fully know if CALERIE and its strict dietary and record-keeping regimen was the right weight loss avenue for him. But realizing he needed some immediate course of action, Westbrook, relying on support from family and friends, decided to participate in the research. For Westbrook, it paid off. CALERIE technicians determined how much food Scott would need to maintain his starting body weight, then cut that. He couldn't gain weight if he stuck with the diet. As he saw the weight coming off, he experienced what he called his "Eureka! Factor."



Scott Westbrook, A CALERIE Participant

"It took me starting to lose the weight to hang in there," said Westbrook. "Seeing the natural weight loss in conjunction with how I learned about food and exercise through the classes helped me. I was seeing that I wasn't starving and still eating large quantities of food, but they were healthy foods."

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released a new five-year strategic plan called *Vision 2010* (see message from the executive director). The plan starts with the bold vision statement to "become the leading nutrition and preventive medicine research center" in the world.

Dr. Claude Bouchard, the executive director of the Center, is a firm

A VISION TO BE THE BEST

believer in strategic planning, and made it his first priority upon assuming leadership of the Center six years ago. He called for the Center's first five-year plan and led to its development. An ambitious plan, it called for nearly doubling the size of the Center with increased research, more faculty, and new construction of facilities for both of the Center's broad divisions - basic science research and clinical research.

The new *Vision 2010* picks up where the first plan left off, including the unfinished work of building a new clinical research

facility. Long needed, the facility envisioned by the plan will alleviate the crowded clinical building constructed as part of the original center in 1986. But construction is only part of the plan, which highlights ten priorities in basic research, clinical research, and support and facilities. You may see the plan and all its priorities at www.pbrc.edu under "*Vision 2010*," or may request a copy from the communications office at 225-763-2599.

Activity will begin soon in what the plan calls "Phase I" of clinical expansion - an addition to the

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Message from the Executive Director of the Pennington Biomedical Research Center



Dr. Claude Bouchard
Executive Director

I am pleased to report a significant moment in our efforts to chart the future of the Pennington Biomedical Research Center. For more than a year, we have worked to develop a new 5-year strategic plan. In January, we presented it to the Board of Supervisors of the Louisiana State University System, where it was warmly received. I was especially gratified to hear the comments of the chairman of the board, Mr. Stewart Slack, who told the board that the plan was "outstanding...aggressive and achievable."

That plan, *Vision 2010*, is the product of hard and dedicated work on the part of our faculty and upper management colleagues. It opens with a bold vision statement, setting a course to become the world's "leading" nutrition research center. The plan defines 10 priorities for our research, education and support departments. I invite you to read them in detail on our website www.pbrc.edu under *Vision 2010* or to request a copy from our Communications Office.

We intend to create a new division - Nutrition and the Brain - which is a natural next step for our neuroscience research. One key message of the plan is that we intend to increase the depth of our science in the next five years. For instance, we will increase our expertise in

developmental biology, stem cell biology, nutrient sensing, cell signaling, genetics and epigenetics. This faculty expansion will make it possible for us to focus on the role of nutrition and of specific nutrients in all phases of life, including maternal nutrition and its effects on fetal development. To achieve these goals, it will be necessary to increase the size of our comparative biology facility by about 50%.

The same philosophy will prevail for the growth of our clinical research program. However, in this case, the top priority is to find the resources to build a new clinical research facility to relieve the stress on our currently overcrowded building and create room to grow. Additionally, we will recruit new faculty in nutritional epidemiology, physical activity epidemiology, genetic epidemiology, biostatistics, and health promotion to strengthen our research in our population and prevention research programs. We also intend to increase our expertise in pediatric obesity and diabetes, aging, metabolic syndrome, physical activity and wellness, and minority health behaviors.

We also have made plans to expand our Division of Education. The focus will be on the growth of our postdoctoral program and

our professional education efforts. Special emphasis will be placed on the recruitment of clinical fellows.

These are not small challenges. Recruiting talented and productive scientists to relocate to the Center, winning highly competitive research grants in ever larger numbers and, most importantly, gaining an increase in state appropriations are not simple undertakings. However, they are worth our best effort. During the next five years, the Center will spend a total of \$350 million for operation and construction costs. This growing level of activity is not without substantial economic benefits for Baton Rouge and the state of Louisiana. Thus, the numerous contributions made by our scientists to the health and well being of the citizens of this state and the nation are nicely complemented by the growing economic impact of the Center.


Claude Bouchard, PhD
Executive Director

PENNINGTON BIOMEDICAL RESEARCH CENTER'S GROWING RESEARCH PROMPTS EXPANDED POPULATION AND PREVENTION STUDIES

As part of its new *Vision 2010* strategic plan, Pennington Biomedical Research Center (PBRC) will expand its growing population and prevention studies program, according to PBRC Executive Director Dr. Claude Bouchard. With the help of the Pennington Medical Foundation and the Pennington Biomedical Research Foundation, construction will soon begin on a 14,000 sq. foot addition, called Clinical Research Expansion - Phase I: Population and Prevention Studies.

The construction is part of an agreement reached with the conference center owners, Pennington Medical Foundation, and its operators, the Pennington Biomedical Research Foundation, for PBRC to assume

ownership of the entire facility for research and scientific meetings.

Approved by the LSU System Board of Supervisors at its January meeting, the \$5 million expansion and renovation will be underwritten by the Pennington Medical Foundation trust, which is dedicated to capital expansion at the Center.

"We are committed to finding a nutritional approach to reducing and controlling the epidemic of obesity, metabolic syndrome, diabetes and other diseases," said Dr.



Population and Prevention Studies Expansion

Bouchard. The expansion will include a two-story addition to the existing conference center and renovation and remodeling of existing seminar rooms and classroom space.

"Researchers who move into the new space

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A Message from the Chairman

Pennington Biomedical Research Foundation

Dear Friends,

It is with great pride and enthusiasm that I accept the chairmanship of the Pennington Biomedical Research Foundation. This is an important time for the organization as we seek to meet the needs of a growing research institution. The Pennington Biomedical Research Center's mission of disease prevention and its focus on nutrition research has tremendous merit at a time that our state and country are facing a life-threatening epidemic posed by obesity and other nutrition related diseases. We cannot wait for the next generation to find a solution. We must act now.

The Pennington Center, in only its 16th year, has enjoyed tremendous growth and success and currently includes a faculty of 70 and support staff of nearly 600. A majority of the funding comes from federal sources, including the National Institutes of Health, U.S. Department of Agriculture, and the Department of Defense, for research on nutrition and preventive medicine. Its initial construction was, in and of itself, a special gift from Doc and Irene Pennington. Much of those trust funds have been leveraged through construction of laboratories and facilities. Many groups, businesses, and individuals provided start-up funds for staffing and equipment, and the state of Louisiana earmarked an annual allocation. All of these groups should be recognized for their foresight and vision.

But none of these resources is enough to fuel its full growth POTENTIAL! The Pennington Center is at a crossroads, embarking on a major opportunity to expand--perhaps tripling the number of employees in the next 10 to 12 years. If we will work together to help expand the Center, adding the laboratories and clinics needed for this astounding research potential, great strides will be made from a health and economic impact.

I invite you to share the vision of our board of directors to support the Pennington Biomedical Research Foundation as it strives to help the Center reach its goals. (See the article on *Vision 2010* on Page 1.)

We can all be a part of the solution. For every dollar of support, the Center is successful in attracting \$4 in federal and private funding. We must think about what we can give and how that investment will be multiplied fourfold.

In this publication alone, you will find many ways to support the Center. Your support and gift, no matter the size, is extremely appreciated and will make a difference.

With warm regards,
John Noland, Chair
Pennington Biomedical Research Foundation



NOLAND NAMED PENNINGTON BIOMEDICAL RESEARCH FOUNDATION CHAIRMAN

John B. Noland has been elected chairman of the board of directors of the Pennington Biomedical Research Foundation. Other newly elected officers are Immediate Past Chair Kevin P. Reilly, Sr., Reilly Enterprises; Vice Chair Paula P. de la Bretonne, community activist; Treasurer C. Brent McCoy, Lamar Advertising, and Secretary Pat Cheramie, retired broadcast management executive.

New board members elected to serve on the board include Tim Barfield, The Shaw Group, Inc.; Maxine Cormier, lobbyist; Madhu Beriwal, Innovative Emergency Management, Incorporated; Kevin R. Lyle, RELco, L.L.C.; and J. Gerard "Jerry" Jolly, KPMG, L.L.P.

The Pennington Biomedical Research Foundation is dedicated to supporting the Pennington Biomedical Research Center and its mission to promote healthier lives through research and education in nutrition and preventive medicine.

In accepting the leadership role, Noland challenged the board to work energetically to increase awareness of the importance of the Pennington Biomedical Research Center as an economic force in the state. "Many individuals, organizations and foundations have helped the Center move forward in its early years. These, however, were baby steps as the Center built its reputation. It is now incumbent upon this community to continue to enhance this world-renowned institution and its needs for additional funding."

Special Thanks

The PBRF board of directors and staff extend a sincere "Thank You" to Thomas L. Frazer for his dedication and service to the board.

Pennington Biomedical Research Foundation Welcomes Five New Board Members

Five business leaders and community activists have recently been appointed to the Pennington Biomedical Research Foundation Board of Directors.

Joining the board as new members are Tim A. Barfield, Jr., president and chief operating officer of The Shaw Group, Inc; Madhu Beriwal, chief executive officer of Innovative Emergency Management, Incorporated; Maxine Cormier, lobbyist; J. Gerard "Jerry" Jolly, managing partner of KPMG, L.L.P., and Kevin R. Lyle, president and chief executive officer of RELco, L.L.C.



Tim Barfield joined The Shaw Group, Inc. in 1994 as General Counsel and Secretary and has served in numerous positions, including Senior Vice President and the President of Shaw Environmental & Infrastructure, Inc., one of the largest environmental and infrastructure engineering companies in the United States; Senior Vice President of Special Projects for The Shaw Group Inc.; and Assistant to the President, Vice President of Operations, and others. Prior to joining Shaw, Barfield practiced law and also served as Law

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LABORATORY DOMINOS

Dr. Jianping Ye

Dr. Jianping Ye joined the faculty at the Center in 2001. He received his M.D. from Beijing University, taught there for a short while, then came to the United States as a visiting scientist at the National Institutes of Health (NIH), where he began his work on biochemical signaling and gene regulation of immune responses. Shortly afterward, he embarked on a journey of personal discovery of his talents as interesting as his lab discovery. "I didn't know anything about insulin resistance or Type II diabetes when I came here," he said.

Dr. Ye's specialty is in the analysis of signaling molecules, including several years of cancer studies. Ye moved from NIH to Johns Hopkins as a cancer researcher, studying breast cancer. Ye soon moved to NIOSH (National Institute for Occupational Safety and Health), a federal agency known for creating standards for hazardous material procedures and personal safety equipment, where he explored how heavy metals cause cancer. While there, Ye came across an advertisement for a functional foods specialist at the Center. Ironically, the heavy metals he understood – chromium, cobalt, zinc and the like – are toxic only in overdose. In trace levels, they are essential nutrients. Ye responded, and only after arriving here did he learn of the connection between fatty acids and insulin resistance. In a bold move, Dr. Ye applied for and won \$2.5 million dollars from the NIH and the American Diabetes Association. To promote collaboration and awareness of related discoveries, Ye organized a network of colleagues at the Center called the "Insulin Resistance Interest Group." That network has now become a national effort, with members throughout the United States, meaning Ye is setting a brisk pace in his field. He has recently been invited to judge other investigators' work by reviewing grant proposals at NIH.

Dr. Jianping Ye is becoming an expert in highly complex domino effects, even though he can't see them. Ye wants to stop Type II Diabetes, but to do so he must observe several series of falling dominos that are smaller than microscopic; they are molecular.

Dr. Ye is slowly unraveling a collection of biochemical reactions that seem to lead to Type II diabetes in obese individuals. If he can do it, the work could lead to an eventual cure. He spends hours in the laboratory exploring, searching and experimenting to discover hidden strings of molecular actions and reactions that – like a complex string of falling dominos – start in our blood stream and pass right through our cells' walls. Dr. Ye calls these domino-like reactions a signaling network in which the very last domino to fall (the last in a series of biochemical reactions) signals the cell to start consuming glucose from the blood stream.

Sometimes the signaling network is broken. When that happens our cells don't get the signal to consume glucose (sugar), and our blood sugar goes up. The result is often Type II diabetes, and Dr. Ye is determined to prevent this crippling and often deadly disease.

Dr. Ye began his work with a general observation that obese individuals are likely to have a condition called insulin resistance, which means their body has lost its ability to respond to a signal from insulin, and that can lead to Type II diabetes. Here's how: our muscle cells use blood sugar (glucose) for nutrition, but our muscles must be told to start consuming glucose. This occurs when the pancreas detects increased levels of sugar in the blood, usually after eating. Our pancreas then produces insulin, which delivers a chemical message to our cells to consume glucose. The condition of insulin resistance means something is keeping the cells from acting on that message.

That explanation, by the way, is only a simple generality. Dr. Ye is searching out several individual biochemical steps involving dozens of molecules. There is a fine point, however, that has captured Dr. Ye's attention. Obese individuals also have elevated levels of fatty acids in their blood.



Dr. Jianping Ye

At normal levels, free fatty acids are essential nutrients to build new cells, but high levels of fatty acids can cause harm. They trigger a reaction called the "Inflammation Response," causing our cells and organs to become impaired in function. Dr. Ye believes that perhaps the important series of events is this: increased fatty acids cause the inflammation response, and the inflammation response triggers insulin resistance, which is a step toward diabetes.

Ye has mapped out two suspect series of molecular reactions that he likens to the accelerator and brake on a car engine. When insulin hits the blood stream, it attaches to the surface of muscle cells and acts as the driver, with one foot on the accelerator and one on the brake, making sure muscle cells take up extra glucose at just the right speed. In this case the brake is one series of biochemical reactions that tell the cell to stop taking up glucose, and the accelerator is a separate series of biochemical reactions that tell muscle cells to speed their uptake of glucose. Insulin resistance may simply be a signal gone awry, causing the brake to remain on, preventing cells from consuming glucose.

Ye's search is to find the exact molecular steps that keep the brake on, and he believes one of the biochemical steps in the inflammation response may be the culprit.

"If we know how insulin resistance occurs, we can develop means to combat it, perhaps by decreasing free fatty acids," said Ye.

Some anti-inflammation drugs already exist. Aspirin is one, so is glucocorticoid. However, Ye says, these drugs act very broadly, meaning they

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John W. Barton, Sr. Honored and Recognized Donors Create John W. Barton, Sr. Chair in Genetics and Nutrition

Family, friends and associates of John W. Barton, Sr. gathered at a special reception to honor his work for the Pennington Biomedical Research Center and to recognize the establishment of the John W. Barton, Sr. Endowed Chair in Genetics and Nutrition. The reception, hosted by the Pennington Biomedical Research Foundation (PBRF), was held recently to salute and recognize more than 60 individuals and institutions that donated \$625,000 to endow a new Chair in his name.

During the ceremony, PBRF Chairman John Noland and PBRF Chief Executive Officer Jennifer Winstead welcomed more than 100 guests, including Barton's daughter, Annette, his son and daughter-in-law, John and Peggy, and his granddaughter, Annette Hutchison. Barton's daughter, Mary Scott Barton of Houston, was unable to attend.



John W. Barton, Sr. (center) and his family at the recognition event: granddaughter Annette Barton Hutchison, daughter, Annette, and his son and daughter-in-law, John and Peggy Barton.

Lee Griffin, who served as chairman of the eight member development committee for the Barton Chair, shared antidotes from Barton's past, particularly his tireless efforts to provide direction, guidance, and fund development for the Center since its inception more than sixteen years ago. Griffin also talked about Barton and his accomplishments as a businessman, farmer, and community leader. Other members of the special development committee attended the reception: John Campbell, Jr., David Ellison, Jr., Annette Barton, Charles Lamar, III, Hermann Moyse, Jr., John Noland, Tom Phillips, and Kevin Reilly, Sr. Paula Pennington de la Bretonne, vice-chairman of the Pennington Biomedical Research Foundation, made the formal presentation to Barton, which was a specially crafted commemorative plaque with a brass medallion and etched relief of the Pennington Center. In her presentation, de la Bretonne read the inscription: "With Appreciation and In Honor of John W. Barton, Sr. and in Recognition of the Family, Friends, and Associates who created the John W. Barton, Sr. Endowed Chair in Genetics and Nutrition at the Pennington Biomedical Research Center."

After the presentation, Dr. Claude Bouchard, executive director of the Center, explained that the recipient of the new chair will research the biological basis of human variation response to nutrients, uncover the genes that may enhance the risk of diseases as a result of long-term



(left to right) Pennington Biomedical Research Center Executive Director Dr. Claude Bouchard, Pennington Biomedical Research Foundation Chairman John Noland, PBRF Vice Chairman Paula Pennington de la Bretonne, Honoree John W. Barton, Sr., and Development Committee Chair G. Lee Griffin

exposure to certain nutrients and foods, and other issues involving genes and nutrition. Dr. William Jenkins, president of the LSU System, lauded the group for the depth and breadth of their gifts and its long-standing effects on the Center, the community and state.

Jewell Named Chief Financial Officer At Pennington Biomedical Research Foundation



J. Brad Jewell

J. Brad Jewell, CPA, MPA, was recently named Chief Financial Officer by the Pennington Biomedical Research Foundation board of directors. Jewell was previously associate executive

director of the PBRF and has worked with the PBRF and the Pennington Medical Foundation since September 2000. He also serves as the director of accounting for the Pennington Medical Foundation and for Pennington Discoveries, Inc., as well as the corporate secretary/treasurer of PMCT, L.L.C. Jewell was licensed to practice as a Certified Public Accountant in 1999. He received his undergraduate degree in Accounting from LSU, and recently completed a masters degree in Healthcare Management at the LSU Public Administration Institute. "We acknowledge the outstanding work of Brad Jewell and recognize his contributions to the PBRF," said PBRF CEO and President Jennifer Winstead in making the recommendation to the board.

Dr. Cohen Presents Built Environment Issues on Obesity at Foundation Event

The Pennington Biomedical Research Foundation welcomed Deborah A. Cohen, M.D., M.P.H., senior natural scientist from the RAND Corporation, to the fall Visiting Scientist Dinner Series. The educational series is sponsored by Hibernia National Bank to introduce innovative research to the community and the faculty at the Pennington Biomedical Research Center.

Dr. Cohen spoke to the group of Foundation supporters on "Obesity and the Built Environment: How our Everyday World Makes Us Fat." She presented data on the correlation between the decreasing access to parks and recreation areas and the escalating rates of obesity. Dr. Cohen is continuing her research on environmental issues facing America and the government's role in regulating environmental factors affecting obesity.

More than 60 supporters of the Pennington Biomedical Research Foundation attended the event. Dr. Cohen separately presented research to the faculty at the Pennington Center, sharing data and research statistics on the escalating obesity epidemic across America and its relationship to our environment.



Hibernia National Bank Senior Vice President, Baton Rouge Commercial Banking Janet Rack, PBRF Board Member Thomas Frazer, Visiting Scientist Dr. Deborah Cohen, and PBRF Executive Director Dr. Claude Bouchard

Employees Pledge Support to the Pennington Foundation

To fulfill its ongoing mission to support and enhance the work of the Pennington Biomedical Research Center, the Pennington Biomedical Research Foundation kicked off a volunteer, employee fundraising campaign in December. The kick-off was held during the annual staff service award program held annually to recognize five, ten, and fifteen-year service award recipients.

The employee fundraising program, led by two long-time employees of the Center, Robert "Bob" McNeese and Pam Fisher, was held over a two-week period. They appealed to the staff by saying, "Your gift to the Foundation is greatly appreciated, and benefits our work here by helping to fill funding gaps and needed resources. All gifts are totally voluntary, confidential and tax deductible."



Bob McNeese, director of facilities management, and Pam Fisher, business manager, served as volunteer co-chairs of the Employee Fundraising Campaign

The campaign culminated at the Employee Holiday party and was considered a success with more than 75 employees pledging gifts of more than \$20,000 to the Center for 2005. This annual appeal affords faculty and support staff with the opportunity to participate in fundraising efforts vital to the Center's work. "The campaign demonstrates that giving starts at home," said McNeese and Fisher, in thanking those who participated in the voluntary program.



Vision 2010

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existing C. B. Pennington, Jr. Nutrition Education and Conference Center (see population and prevention studies story on page 2). In recent years, researchers have reached out from the Center to study the affects of environment on nutrition and obesity, including in-school and rural projects. Clinical researchers are winning grants in this area and anticipate growing this area of research. In fact, one of the ten priorities is to "expand clinical research, population research and imaging facilities."

Other clinical priorities include growing faculty and expertise in pediatric obesity, aging, physical activity and wellness, and metabolic syndrome; secure National Institutes of Health (NIH) center grants and designation as an NIH General Clinical Research Center (GCRC).

On the basic research side, priorities are to establish a division of nutrition and the brain; expand and enhance biological core services; and increase expertise in developmental biology and genetic epidemiology (the study of disease.)

Education division priorities are to expand the postdoctoral program; expand community and professional education efforts and to pursue partnerships to establish a research-based wellness center.

These efforts are not without a cost, however, and *Vision 2010* anticipates an increase in funding in several areas, mostly from federal research grants. However, the Center and its supporting foundations will all take on the challenge of increasing funding in the way of increased state appropriations (which amount to about 20-percent of projected revenues) and increased philanthropy. In all, the Center's plan calls for \$350 million in revenues and expenses during the next five years, with annual

revenues increasing from about \$38 million in 2004 to \$65 million in 2010.

Traditionally, a formula for success has been a 1-to-3 or 4 ratio; if the state contributes a dollar to the Center, its researchers can win between 3 and 4 dollars. The state currently contributes about \$10 million per year to the Center.

The faculty has been so successful in winning competitive research grants, that those dedicated research funds now outstrip the 20-percent historical level from the state. That actually puts a burden on the Center to come up with means to cover costs associated with expensive research not covered by the grant funds.

10 Priorities of Vision 2010

1. Establish a division on nutrition and the brain.
2. Acquire greater capability in comparative biology and transgenics.
3. Grow expertise in developmental biology and genetic epidemiology.
4. Expand clinical, population and prevention research.
5. Grow expertise in fetal and maternal nutrition, pediatric obesity, aging and metabolic syndrome, and physical activity and wellness.
6. Secure NIH center grants, secure satellite NIH-funded General Clinical Research Center.
7. Grow postdoctoral program.
8. Grow community and professional education activities.
9. Establish research-based wellness center.
10. Grow support functions to sustain research growth.

The Pennington Biomedical Research Foundation board of directors has taken the challenge issued in *Vision 2010* to raise \$10 million in funds during the next 5 years that can contribute to key priorities. The Foundation is, in fact, planning an energized campaign on multiple fronts on behalf of the Center.

As a campus of the LSU System, the Pennington Biomedical Research Center is a world leader in obesity research and disease prevention because

its generous founder, Doc Pennington, displayed tremendous wisdom about the future of health research. In doing so, he provided the laboratories and facilities but challenged the community and state to fill the buildings with top-notch researchers and world-renowned scientists.

Although the Center has surpassed Doc's vision – it is now the largest academically based nutrition research center in the world – *Vision 2010* calls for it to become the best in the world.

With the continued support of these public and private partners, *Vision 2010* will become a reality.

TAKING RESEARCH TO MARKET – fast and high or slow and steady?

A glance at the growing number of newspaper, television and magazine stories published about the Center reveals a common theme... the possibility of future rewards for the Center and for Baton Rouge from inventions or discoveries. However, making discoveries through research is one thing, maturing those ideas to marketability is another; and hitting it big with a major money-maker is yet another level altogether. The process of identifying marketable ideas from research and getting them into the business sector bears the rather bland moniker of “technology transfer,” – literally transferring new knowledge into the business sector – but the reality is the road to commercialization is a fascinating blend of discovery, salesmanship, law and human personality.

The last five years of the center have produced an upswing in the interest in technology transfer and in real activity. The activity has risen naturally with a growth in faculty and research funding, but also due to a change in culture. Anne Jarrett, the Center’s attorney for technology transfer, is one result of that cultural shift. Her position and mission were elevated and made to report directly to Executive Director Claude Bouchard. Currently, the Center’s leadership is encouraging and assisting Center researchers to think about future marketability of their findings and to take steps early to protect and nurture them.

Jarrett says her role is to help license, protect and manage intellectual property by working with researchers or technicians to identify anything they “discover, invent or create” that may turn into a marketable item, such as specialized research software, a compound or drug, a laboratory device or even an assessment tool for nutrition or eating behavior evaluations. Jarrett has formed a technology transfer committee populated by basic and clinical researchers, patent attorneys, and outside business experts in the biotechnology field. Lately, some news articles have pointed out a mindset among some academicians to protect their findings, but not pursue them. Jarrett and her committee have a more proactive philosophy. “The whole point of patenting something,” she said, “is to commercialize it, not get a patent and let it sit in the corner.”

The Center, however, is in a position that must be made clear to all those who may be waiting for the big pay off. The Center’s mission is to enhance lives through research and education. Large corporations pour great amounts of money into “research and development” specifically to find and market new products. The Center carries out only half that process – excellent research. Center researchers, according to Jarrett, are so far ahead of development that their findings may ultimately be only a piece of a final marketable product.

“On average, about half of discoveries in a university setting end up with some potential to go another step, meaning half of identified, protected, intellectual property never goes all the way to market. Here at the Center, we are so specialized, only about a third of our discoveries, so far, have any level of market potential,” said Jarrett.

Also, The Center is not a business. “We’re not in business per se.” Jarrett said, “That’s not the purpose of a university affiliated institution. We’re an entity trying to commercialize discoveries, fuel the economic engine, but not be in business.”



Center technology transfer attorney Anne Jarrett discusses with Ken Eilertsen, Ph.D., legal details of a corporation based on discoveries in his lab.

Jarrett’s cautionary note, though, is to not expect or plan for a grand slam. “Those are few,” she said. Jarrett points to two huge money winners: Gatorade from the University of Florida, and Taxol, a successful cancer drug from Florida State University. Florida’s State University’s total royalty revenue before Taxol was \$500,000. The year Taxol hit the market, that figure skyrocketed to \$58.2 million. “Everyone wants one of those, but those are the only two,” Jarrett said. “The best plan is maximize all revenue possibilities with a steady stream, steady growth, and regular successes.”

The Center may be heading in that direction. For example, for the year 2002-2003, Tulane University as a whole produced about 50 technology disclosures, the first document created by a researcher to note a possible discovery. The Center last year approached nearly half that number, with far fewer faculty.

Jarrett’s role is to let researchers know she is open, accessible and willing to create those technology disclosures. That starts a process of thinking about the future, for the researcher and the center. From that moment, Jarrett and the researcher, backed by the technology transfer committee, blend their knowledge with the uniqueness of the discovery and its potential to determine how far it may go, and start down the road to licensing if the discovery is strong enough. Currently, Jarrett is working with three start-up companies built on discoveries made at the Center.

A recent audit and report of the entire Louisiana State University System technology transfer methods and processes pointed out the Center is proceeding rather well.

“We are in a good place at the Center, and in the state to move things along in a good way,” Jarrett said, “I think we are going to see a more savvy, mature way of looking at commercialization. Not a ‘magic bullet,’ but even, sustained growth.”

*“We are in a good place
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Dr. DeGronzo Speaks on Diabetes Prevention

The Pennington Biomedical Research Foundation hosted its fourth 2004 Scientific Dinner in December at the Pennington Biomedical Research Center. The event featured the noted physician and scientist, Dr. Ralph Anthony DeFronzo, of the Texas Diabetes Institute.

DeFronzo, an endocrinologist and specialist in diabetes, spoke on "Type II Diabetes: What We



Dr. Eric Ravussin, professor of human physiology; Guest Lecturer and Scientist, Dr. Ralph Anthony DeFronzo, deputy director of the Texas Diabetes Institute; Scientific Dinner sponsor Mike Wack, Hibernia Bank executive vice president; and Jennifer Winstead, PBRF president and chief executive officer.

know and What We Need to Know." His presentation included data from research findings on the positive affects of exercise and diet on preventing the onset of diabetes and other obesity-

related diseases. DeFronzo is a graduate of Harvard Medical School and is currently director of the diabetes research unit at the University of Texas Health Science Center in San Antonio and deputy director of the Texas Diabetes Institute.

The Scientific Dinner Series is sponsored by the Pennington Biomedical Research Foundation to highlight medical research and its impact on improving and enhancing quality of life issues and to honor those individuals who support the work of the Center.

The series is underwritten by Hibernia National Bank, which that evening announced its sponsorship of the series through 2005.

Attending the event were more than 65 donors to the Pennington Biomedical Research Foundation, including Paula Pennington de la Bretonne, vice chairman of the Pennington Biomedical Research Foundation; Dr. Donna Ryan, associate executive director of clinical research at the Pennington Biomedical Research Center; Michael Wack, head of commercial banking for Hibernia National Bank's Southwest Region; John Noland, incoming chairman of the PBRF board of directors, and his wife Virginia; Dr. Eric Ravussin, chief of the division of health and performance enhancement and holder of the Douglas L. Gordon chair in Diabetes and Metabolism; and Jennifer Winstead, PBRF president and chief executive officer.

Reception Held to Honor Donors of Three Endowed Chairs

The Lod Cook Alumni Center on the LSU campus was the setting for a special reception held recently to honor the donors of three new Endowed Chairs at the Pennington Biomedical Research Center. The Louisiana Board of Regents sponsored the award ceremony to formally announce the matching grant funding to endow the new Chairs.

Honored and recognized for their generosity at the event were representatives from Our Lady of the Lake Foundation, the Coypu Foundation, and the Irene W. and C.B. Pennington Foundation.

The Louisiana Board of Regents announced its matching funds of \$1.2 million to the \$2.2 million gifted to the Pennington Center for the new Chairs. At the event, Dr. Donna Ryan, associate executive director of clinical



Dr. E. Joseph Savoie, commissioner of higher education; William Moore, executive director of Our Lady of the Lake Foundation; Roland Toups, Louisiana Board of Regents chair; Dr. Donna Ryan, associate director, PBRC; Dr. Roberta Vicari, Our Lady of the Lake chief of pediatrics; Robert C. Davidge, chief executive officer, Our Lady of the Lake Regional Medical Center; and Dr. William Jenkins, president, LSU System.



Dr. E. Joseph Savoie, commissioner of higher education; Roland Toups, chairman, Louisiana Board of Regents; Julie Callihan, Coypu Foundation; Dr. Donna Ryan, associate executive director of clinical research, PBRC; Polly & John Hernandez; William Callihan, Coypu Foundation; and (back) Dr. William L. Jenkins, president, LSU System;



Dr. E. Joseph Savoie, commissioner of higher education; Roland Toups, chair, LA Board of Regents; Dr. Donna Ryan, PBRC associate director; Peggy M. Pennington Cole, endowed chair honoree; Paula Pennington de la Bretonne vice chair, PBRF; and Dr. William Jenkins, president, LSU System.

research at the Pennington Biomedical Research Center, proudly recognized the Marie Edana Corcoran Endowed Chair in Pediatric Obesity and Diabetes, funded with a \$1,000,000 donation from Our Lady of the Lake Foundation; the John S. McIlhenny Endowed Chair in Health Wisdom, funded with a \$600,000 donation from the Coypu Foundation; and the Peggy M. Pennington Cole Endowed Chair in Maternal Biology and the Risk of Obesity, funded with a \$600,000 donation from the Irene W. and C.B. Pennington Foundation and the Community Foundation for Southeastern Michigan.

Also attending was LSU System President Dr. William Jenkins, Commissioner of Higher Education Dr. E. Joseph Savoie, and Roland Toups, chairman of the Louisiana Board of Regents.

About the Louisiana Board of Regents Support Fund

In 1986, Congress determined that Louisiana and other coastal states should receive a portion of revenues earned from federal leases on certain offshore oil and gas tracts, known as the 8g zone, in the Gulf of Mexico. The Louisiana Legislature created a fund to be used for educational programs. A portion of the annual earnings is allocated to the Board of Regents Support Fund, which is used to match gifts for endowed chairs or professorships at colleges and universities. The guidelines for matching gifts for endowed chairs allow for a matching grant of \$400,000 for each endowment of \$600,000 funded by private gifts. The Pennington Biomedical Research Center is in the process of submitting an additional matching gift grant application to the Board of Regents for the new John W. Barton Endowed Chair in Genetics and Nutrition.

DR. BOUCHARD AND COLLEAGUES CONTINUE TO GUIDE OTHERS

Long considered standard fare in the teaching and education of researchers and physicians, *The Handbook of Obesity* is now published in an expanded 2nd edition. Drs. George A. Bray and Claude Bouchard, the former and current executive directors of the Center, have edited an expansive work in which one volume outlines the causes, prevalence and consequences of obesity treatment and the second volume, subtitled Clinical Applications, serves as a reference for physicians and clinicians treating obesity. The works contain significant data and discussions on the societal influences of obesity, environmental solutions, and of the stigma and potential discrimination faced by obese individuals.

One reviewer summed it up by writing, "The well-published authors of this edited book represent more than 20 institutions and express diverse solutions for the evaluation, prevention, and treatment of obesity." (Allen S. Levine, Minnesota Obesity Center.)

In a separate publication, also newly printed in a 2nd edition, Dr. Claude Bouchard and colleagues contribute substantially to the growing body of knowledge on the development of children into adults and the influence of physical activity. *Book News* states that "*Growth, Maturation and Physical Activity, 2nd ed.*, overviews the biological process of human growth and maturation, and outlines the milestones of motor development and performance... and age-associated and sex-associated variation in body size and composition, responses to exercise during childhood and adolescence, and the primary factors that regulate growth and maturation."

"GET READI" STUDY EXPANDS TO REACH NEW NEIGHBORHOODS

A 'hearty' study well underway at Pennington Biomedical Research Center (PBRC) now has researchers and participants alike saying to themselves, "Ready, Set, GO!" – into the community, that is. In an intense effort to provide better accessibility for some "GET READI!" participants, the Center has begun branching into the Living Faith Church community.

Before the expansion into north Baton Rouge, "GET READI," Gene-Environment Trial of Response in African Americans to Dietary Interventions, participants were to eat dinnertime meals at the Center for 10 weeks. Now, many participants can eat their meals and pick up the next day's breakfast, lunch, and snack closer to home and work, which may alleviate many transportation and scheduling difficulties that might arise for individuals.

Marlene Most, Ph.D., associate professor and PBRC metabolic kitchen director, is excited about the study's single newest local feeding site, Living Faith Christian Center, located on Winbourne Avenue, as well as the opportunity to trek the message of heart disease across the Baton Rouge area, especially if such a move hinges on the ultimate success and overall progression of the 'Get ReadI' study. Hopefully for Most and her colleagues, bringing in the food will bring in the results. "I hope it is making it easier to participate," said Most.

For the move, however, dietitians, assistants, and food specialists face enormous preparation efforts. Transporting food for all participants is just one of the many hurdles of PBRC being on the go.

Once meals and snacks are respectively grouped, the food is placed into scores of color-designated coolers

that line the pathway to the Center's Metabolic Kitchen. All the coolers are then loaded into a large van.

Upon arriving at Living Faith, the coolers are unpacked and the meal is ready to begin. After a pre-ating weigh-in administered by research specialists, participants enjoy the meal, served by church employees. Twenty meals were scheduled for the first night at Living Faith and that number is expected to grow nightly.

A clean up quickly follows the meal, and it's back to Pennington for the van, coolers, and some rather tired researchers.

"It's been nice to go out into the community," said Most. "It's a lot of work, but it is going very well."

Ryan Clark, a 'Get ReadI' participant, is "elated" about receiving meals at Living Faith. Clark lives in Baker and estimates that the new feeding site will take off about an hour of his rush-hour driving time and be more convenient with his work schedule.

"I couldn't sleep last night because I was so excited to come," said Clark.

In addition to the Living Faith Church, a 'Get ReadI' feeding site has been designated in Bogalusa (Louisiana), and similar preparations are in the making for Southern University.



PBRC Staff Recognized

Since the Pennington Biomedical Research Center (PBRC) first began staffing its facility in 1989 and 1990, early employees have had the opportunity to witness extraordinary change and notable transition. Recently, a selective six of that initial workforce still employed by the Center were honored with a fifteen-year employment service award for their longtime dedication, commitment, and effort in molding a very young PBRC into the highly reputable research institution it has become.

George Bray, Ph.D., division of clinical obesity and metabolism chief; Catherine Champagne, Ph.D., professor of nutrition and women's health; James Delany, Ph.D., associate professor; Steve Kelly, business manager of fiscal operations; Janice Warren, coordinator office of associate executive director for clinical research; and David York, associate executive director for basic research and Boyd professor, were each given the award presented in December.

Past fifteen-year employment service award recipients still working at PBRC include: Ray Allen, Ph.D., coordinator of information systems (Clinical); Paul Johnson, facilities management; Bob McNeese, director of facilities management; Donna Ryan, M.D., associate executive director for clinical research; and Yvette Stokes, fiscal administration.



PENNINGTON in the News

Women and weight

Dr. Paula Geiselman's remarks on the weight gain/loss episodes during a woman's lifetime will appear in an upcoming issue of the national *Glamour Magazine*, a well-read and widely received popular publication.

Gastric Bypass Surgery - Long-term study

Work by Dr. Claude Bouchard and other researchers has been published in the New England Journal of Medicine. The study tracked more than 600 obese individuals for 10 years following three types of bariatric surgery, including gastric bypass as weight-loss and health enhancing measures. Results showed sustained weight loss and other beneficial effects, including an enhanced lifestyle and reduced blood pressure and reduced risk of diabetes.

National Exposure

PBRC got double exposure nationally as two very popular science journals featured Center researchers ...

New Year's Resolution - *Nature* produced a feature on fitness and exercise in its January 25th issue. The article describes the work of Drs. Claude Bouchard and Tuomo Rankin. Their findings are

surprising...not everyone benefits equally from exercise. Some are simply genetically wired to benefit more through lower blood pressure, lower cholesterol, lower tendency toward diabetes and cardiovascular disease and lower weight.

Couch Potato - The January 28th issue of *Science* published an editorial by Dr. Eric Ravussin, who offered a review of some new data that suggests fidgeting, walking, sitting upright and moving around can account for a substantial use of energy, and may help ward off weight gain by burning excess calories. The conclusion came from observations of "couch potatoes" who agreed to wear devices to measure their activity during the day. The more "couch potato" time spent each day, the more the weight gain.

These articles led to a good deal of exposure for PBRC in the NY Times, Wall Street Journal and other national papers.

Dental appliance makes bites smaller; wearers eat less.

The Los Angeles Times ran a story about a device tested here at PBRC. Participants in the study placed a device in their mouth that fits like an upper retainer. The device lowers the roof of the mouth, causing smaller bites. Participants did eat less with it. LA Times reporter Linda Marsa

interviewed Dr. Corby Martin recently. The results are making news once again, because they were published recently in *Obesity Research*.

Holiday Weight Gain

PBRC dietitian Susan E. Seab, LDN, RD, is once again in the news. Her review of research and observations of holiday weight gain (we gain only a pound or so, not the mythical 10 pounds) were picked up by more than a hundred news outlets nationwide.

Superbowl binge eating

Syndicated columnist Bev Bennett (*Chicago Tribune*) also interviewed Susan Seab for advice and comments on weight gain and eating during Superbowl week. This column appeared in more than 200 newspapers nationwide during the week of Superbowl.

Healing aspects of food

Today's Health and Wellness magazine interviewed Dr. Elaine Hardman for her insights in functional foods, especially the healing aspects of food components. Her current work is on fish and fish oils (Omega-3 fatty acids) and their beneficial effects on the treatment of breast cancer. *Men's Health and Prevention* magazine also interviewed Dr. Hardman which will appear in the near future.

DID YOU KNOW -- CENTER NEWS, CONTINUED FROM PAGE 1

executive director, has recently been selected to receive two prestigious awards. One is the annual Canadian Federation of Biological Societies (CFBS) Past-President's Award. Bouchard has also been asked to speak to the CFBS annual meeting at the University of Guelph this summer, in which the program will feature Bouchard's presentation on obesity and the integral role of genetics and environmental factors in the disease. Bouchard is also the most recent recipient of the Earl W. Crampton Award. Speaking at an award ceremony hosted in Montreal recently, Bouchard addressed the biology of obesity.

Basic Science Building captures top prize in Louisiana

The Basic Science Laboratory building took the blue ribbon as "Best Private Building Project" in

Louisiana. *Louisiana Contractor* magazine "Best of 2004" awards ceremony highlighted the design and construction for meeting the "sensitivity of the experiments performed here." The 9-judge panel of architects, designers and construction experts based their decision on solutions to challenges, project management, construction innovation, client service and safety. The general contractor was Milton J. Womack, Inc. and the architects were Post Architects and Washer Hill Lipscomb Architecture, L.L.C.

PBRC sweeps national awards

Researchers at Pennington Biomedical Research Center captured four of the five major awards presented at the annual meeting of the North American Association for the Study of Obesity. Dr. Claude Bouchard, executive director, won the Albert Stunkard Lifetime Achievement Award; Dr. David York, associate executive

director for basic research, won the George Bray Founders Award, given for "significant contributions that advance the scientific or clinical basis for understanding or treating obesity;" and Dr. Jim Trevaskis, a post-doctoral fellow, won the Ethan Sims Young Investigator award for his work on neuronal protein regulation of energy balance. Trevaskis won based on his submitted work and presentation at the national meeting. He completed his work while still at the University of Deakin in Geelong, Australia, and is currently working with Dr. Eric Ravussin on genetics of calorie restriction.

Also, Jaqueline M. Stephens, an adjunct faculty member of the Center, received an award from the journal *Obesity Research*, which recognized exemplary research in scientific manuscripts submitted for publication.

Pennington Scientists study the effect of developing a “Wise Mind” for good health

Field scientists, psychologists and behavior specialists from the Center, with the cooperation of local school students, are learning if an environment that builds lifestyle wisdom can improve health among youngsters.

Center researchers, driving a large, specially equipped recreational vehicle they've dubbed the “Wise Mobile,” have worked with area middle school students for more than a year to create awareness and environmental change towards an enhancement of health and lifestyle habits for the children and their families.

The idea they are testing is simple: can solid early training about these issues, coupled with important changes in the school or home environment, be a useful tool in the quest for healthier children nationwide?

Students at St. Thomas More, Redemptorist, St. Isidore, St. Francis Xavier middle school, and St. Theresa in Gonzales climb aboard the Wise Mobile for measures of body composition and lifestyle habits, as well as health choices.

Now in its second year, Wise Mind researchers are working to influence the students on lifestyle changes and health and provide them and their schools and parents with educational materials, an interactive website and newsletter.

“We call the study Wise Mind, because we're trying to develop just that,” said Tiffany Stewart,

Ph.D., one of the lead researchers on the project. “The idea we are testing is that developing a total wisdom about health during these critical developmental years will be an important means of turning our children toward a permanent, healthy lifestyle.”

The researchers also work with school staff to make environmental changes such as health programs and education on healthy choices. Family members and school faculty are also encouraged to participate in order to support and empower the children that are participating in the study.

The Pennington team will work with the students for the remainder of the school year to determine how the Wise Mind idea is most useful. Based on early positive results, the team has received a federal USDA grant to expand the program to other schools across the state, but with a new name: LAHealth. Governor Kathleen Blanco has signed a letter of support to help the researchers in their requests to school superintendents and principals to bring LAHealth to their schools in the fall.



LABORATORY DOMINOS

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create many biochemical reactions. Some do stop inflammation; others cause side effects. Aspirin in doses high enough to stop inflammation can cause stomach pains and bleeding. Glucocorticoid actually increases the production of glucose in the liver, which is the opposite effect needed in insulin resistant patients who have trouble consuming normal levels of glucose.

This is why Ye wants to discover the specific molecules that cause inflammation and insulin resistance. “If we know the specific steps, we will have a pharmacologic target,” he said, “The goal would be to develop a drug to block the inflammation response.” Ye said that a specific drug designed to block the action of a specific molecule would cause far fewer side effects than aspirin, glucocorticoid or other very broadly acting drugs.

Ye's work may lead to such a drug; he has little doubt that one day those suffering from insulin resistance may simply fill a prescription that corrects the problem, stopping diabetes before it begins.

Four Nutritionally Based Soups Developed and Tested

PBRC, JOHN FOLSE AND ST. JOSEPH'S ACADEMY COLLABORATE ON HEALTHY SOUP PROJECT

Healthier eating in schools is at the thrust of a program called the Healthy Soup Project, which is now in its second phase of testing nutritionally based soups. After more than a year of preparation, the Pennington Biomedical Research Center and Chef John Folse, working with St. Joseph's Academy students, have created four healthy Louisiana soups. The students have learned how to assess the nutritional ingredients and reformulate the recipes, lowering the fat and sodium content, while enhancing the taste. One group of students worked in the Center's food laboratories while others worked in the Folse research and development kitchens. Students learned the importance of formula yield and how to attain it, the importance of flowing the scientific method for repeatability, as well as different methods of viscosity measurement. While the Folse group was working with recipe reformulations, the Pennington team was preparing for taste testing.



Then, a separate marketing group promoted the soups for the “roll-out” at the school. Surveys were designed to gain feedback from the students. Now on the menu are reformulated crawfish, corn and potato soup, broccoli-cheese soup, tomato basil, and seafood gumbo. Overall results are showing that the students are giving high marks to the quality and taste of the healthier product, while the students have learned the immense task of what it takes to develop and test a healthy product for marketability. Over 20 St. Joseph's students volunteered and dedicated more than 500 hours to the design, study, development, and implementation of the healthy soup project, said Pennington Center nutrition expert and food analyst, Dr. Catherine Champagne. In addition, the students are working with the Baton Rouge Diocese School Food Service to develop a marketing plan to make the soups a regular menu item in area schools. This project was funded through a grant from the Irene W. and C. B. Pennington Foundation.

NEW FACULTY



Hong Tu, Ph.D., Instructor.

Dr. Tu joined PBRC from the Shanghai Jiao-Tong University and will investigate the molecular means of leptin transport across the blood/brain barrier using various techniques, including immunofluorescence, electron microscopy, yeast two-hybridization, fusion protein expression, FRET, microarray, and proteomics. Dr. Tu is not only grateful for the opportunity to explore cell biology of the blood/brain barrier at PBRC, but also for the opportunity to work alongside Dr. Abba Kastin, who is a highly regarded leader and publisher in the blood/brain barrier field.



Robert Newton, Ph.D., Instructor.

Dr. Newton is interested in the interaction of physical and mental health. Having already spent three years at PBRC as a post-doctorate,

Dr. Newton now focuses his studies on African American health relating to physical activity and obesity and will include research on possible interventions aimed mainly at increasing adult physical activity, stimulating weight loss, and preventing weight gain.



Barry Robert, D.V.M., Ph.D.

Dr. Robert is the new attending veterinarian. Dr. Robert serves as associate professor and will manage the Comparative Biology Facility.

Prior to PBRC, Dr. Robert served as Associate Director of Laboratory Animal Facilities at the University of Mississippi Medical Center in Jackson, MS.

2005 AND WEIGHT MANAGEMENT

Are you aiming to lose weight in 2005? Start by determining if your current weight is healthy or not: calculate your Body Mass Index (BMI). To figure out if your weight is on target, overweight, or obese (which carries a greater health risk), divide your weight in pounds by your height in inches squared (multiply your height by itself). Then, multiply the result by 703. If your BMI is below 18.5 you are underweight; between 18.5 and 24.9 indicates a normal weight. Work with your physician on an exercise and nutrition program, and use the information and calculator for BMI on the Pennington Biomedical Research Center Web site to learn about other weight loss enhancements. You can also sign up for the free *Louisiana On the Move* weight loss and maintenance program on the site www.pbrc.edu.

FACULTY RECOGNITIONS

Andy Deutsch, Ph.D., Professor,

was recently named as a member of the Cancer Etiology Study Section for the National Institutes of Health (NIH) Center for Scientific Review. This appointment, effective immediately through June 30, 2007, was based on level of expertise and achievement shown through Dr. Deutsch's quality of research accomplishments, publications, and other awards. This is a prestigious honor and a contribution to PBRC and the Center's efforts in enhancing national biomedical research. As a member, Dr. Deutsch will be active in reviewing NIH applications, providing grant recommendations and evaluating the status of research on the onset and progression of human cancers.

The presence of Center scientists on study sections such as this, is an indication of the depth of experience and knowledge of Center faculty and their profile within the scientific community.

Two other faculty member also occupy seats on study sections for grant review. They are:

Richard C. Rogers, Ph.D., who sits on the NIH IFCN-1 [Neurobiology of Motivated Behavior] committee as a regular member through 2007, and occupies two others: The NIH National Center for Research Resources as an ad hoc member (ZRR1, CM02 - Comparative Medicine), and the NIH IFCN-2 as an ad hoc member.

Jeffrey M. Gimble, M.D., Ph.D, who sits on the NIH Aging and Geriatric Systems Study Section as a regular member.

Several center scientists are called upon frequently to sit on other special interest or ad hoc review committees. Faculty currently sitting as reviewers are:

GEORGE ARGYROPOULOS, Ph.D.,

- NIH/NCI ad hoc reviewer, March 2005

PHIL BRANTLEY, Ph.D.

- NIH (NIDDK) Panel for Translational Research for Prevention and Control of Diabetes

WILLIAM T. CEFALU, M.D

- NIH- NCAM Special Emphasis Panel Review Committee (NCAAM SEP CP-15) PAS 03-038 (Centers of Excellence for Research on Complementary and Alternative Medicine (CERC))

CATHERINE CHAMPAGNE, Ph.D., RD

- USDA's Small Business Innovation Research Program, Cooperative State Research, Education & Extension Service (CSREES)

PAULA GEISELMAN, Ph.D.

- NIH (NIDDK), C Committee, Charter Committee Review Panel for Training Grants (T32, T35), Career Development Awards (K01, K08, K23, K24, and R03), and Research Conference Grants (R13) in obesity, digestive diseases, liver, nutrition, and eating behavior, 2003-present.

W. ELAINE HARDMAN, Ph.D.

- NCI Scientific Review Group, Subcommittee G, Education
- Susan G. Komen Breast Cancer Foundation, grant reviewer, Cell Biology
- American Institute for Cancer Research, grant reviewer, Panel II

IRINA OBROSOVA, Ph.D.

- American Diabetes Association grant panel member
- NIH, Neuroscience study section - ad hoc reviewer

ERIC RAVUSSIN, Ph.D.

- NIH (Metabolism Study Section), Currently ad hoc reviewer

ALBERTO TRAVAGLI, Ph. D.

- NIH study session: ZRG1 DIG-C (02) (M) meeting

JIANPING YE, M.D.

- NIH (NIDDK) ad hoc reviewer in "Integrative Physiology of Obesity and Diabetes Study Section," 2005

NIH = National Institutes of Health
NIDDK = National Institute of Diabetes & Digestive & Kidney Diseases
IFCN = Integrative, Functional and Cognitive Neuroscience
NCI = National Cancer Institute
USDA = United States Department of Agriculture

SHAPING UP FOR SUCCESS

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At first Westbrook judged success by pounds lost. Then, he began to notice how his thoughts on food, physical activity, and energy slowly improved for the better. It wasn't long before Westbrook began to tell everyone he could of his newfound way of life and some handy information to live and eat by – his basal metabolic rate, or the minimum amount of calories needed to sustain the living body in a resting state. Combine the new mental outlook with the 32-35 overall pounds he lost in just nine months and Westbrook has prepared a recipe for success.

"I was successful because I committed to the study and was held accountable," said Westbrook. When asked if he would do it all over again, there was no hesitation in saying "yes." Westbrook, after unlocking the secrets of successful weight loss is continuing to tell anyone willing to listen of his journey towards a happier and healthier life. Thanks to Westbrook and his dedication, this secret isn't such a secret anymore.

Last January, John Higdon's blood pressure soared to nearly 190. He knew that significant changes in his lifestyle were now a necessity to reverse the conditions and to prevent more serious health problems. But what and how?

While skimming through the local newspaper, Higdon's wife, Polly, saw an advertisement regarding a clinical study underway at the PBRC. After an initial physical exam and interviews, John Higdon, a successful Iberville Parish businessman,

entered the program. Each week for six months he worked with a dietitian/interventionist, Katherine Lastor, R.D.

The Weight Loss Maintenance Program included education, individual and group counseling, daily exercise, and most importantly, the DASH diet. The DASH diet was designed specifically to lower blood pressure by focusing on foods with a low sodium count, low-fat dairy products, and 9-12 servings of fruits and vegetables each day. "I was never hungry on this diet," said Higdon, who attests to being raised on meat and potatoes and other Creole specialties.

This Pennington clinical study is a two-phase program. The first phase was the same for all participants. Higdon was in a small group of about 12-15 individuals. In order to proceed to the next phase, members of each group had to lose nine pounds. Lastor taught them how to keep a food diary, how to tabulate caloric intake, and the importance of walking a mile EVERY day. Many of the participants walked the PBRC Lake, while others, like Higdon, used a treadmill. Lastor also stressed the importance of keeping weight off in the midst of difficulties faced by many who, after reaching their first success, stepped back into old behaviors.

In the next phase, the participants were randomized into three groups, the first of which receives standard care, where a physician follows up annually. The second group receives monthly contact with an



*John Higdon,
Weight Loss Maintenance Program participant*

interventionist, mostly by phone. Four times a year, participants meet with an interventionist and evaluate what works and what does not in terms of the complete weight management program. The third group is provided with interactive technology, and participants use a website to maintain motivation as well as to keep logs and chart progress.

In phase 1, Higdon and his group had access to an interventionist on a weekly basis and came to the Center weekly. After six months, the group had a combined loss of almost 200 pounds, an average of 16.5 pounds per participant. Higdon himself lost a total of 29 pounds and attributes most of that to the knowledge, motivation, and confidence he received from the program. Today, he continues to use his treadmill, exercising five times per week. Although Higdon continues to take high-pressure medication, he has greatly enhanced his chances for a longer and much healthier life.

WOMEN'S WELLNESS DAY PLANNING UNDERWAY



Participants visit PBRC Booth



LOL Health Screening Staff



PBRF and McRae's Teamed for a Style Show

The 6th Annual Women's Wellness Day is scheduled for Saturday, October 8, 2005 at the C. B. Pennington, Jr. Conference Center. This annual event is sponsored by the Women's Nutrition Research Program of the Pennington Biomedical Research Center (PBRC) to promote and advocate nutrition, health and wellness for women. Last year's event drew more than 750 women who participated in health screenings, education seminars, and cooking and exercise demonstrations. Shown here in the photos above are participants, left to right, visiting the PBRC information booth where PBRC staff provided weight and body fat data; Our Lady of the Lake health promotion representatives conducted a number of free screenings, including a lipid panel blood test; and McRae's staff produced a Style Show during lunch. Organizations and businesses interested in supporting the upcoming Women's Wellness Day event may contact Rhonda Ruffino at 763-2512. Booths, demonstrations and sponsorships are available.

Expanded Population Studies

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will work to define the factors and interventions that have the greatest chance of making a difference in improving the quality of life, preventing illnesses, increasing a disability-free life span and preventing premature deaths,” Dr. Bouchard said.

“This component of our broader clinical research program will focus on populations and will rely on classical epidemiology, nutritional epidemiology, genetic epidemiology, ecological studies, economical analysis, and behavioral and psychosocial models,” Bouchard said. “The overarching purpose is to understand whether we can induce small but sustained changes in large communities of people that will have a big economic and health impact.” The research would be performed under the PBRC’s division of clinical research.

The new strategic plan for the Center calls for an entirely new clinic building, which has been on the drawing boards in various forms for more than six years. It was, in fact, a goal of the Center’s first long-range plan issued in January 2000.

However, the Pennington Medical Foundation, in collaboration with the Pennington Biomedical Research Foundation, concluded that the best immediate solution was to convert existing seminar and classroom space in the conference center to scientific facilities for ongoing research and grant studies.

PBRC’s *Vision 2010* anticipates continued rapid growth. With more than 600 faculty and support staff working towards a mission of promoting healthier lives through research and education in nutrition and preventive medicine, the Center is making important scientific advancements and growing faster than the facilities can maintain.

For several years, the Center has used temporary office buildings anchored to a rear parking deck to meet space needs of the clinic. Phase 1 construction may help alleviate some of this, however, a new clinical building, dubbed Phase 2 construction, is still the goal to alleviate the need for temporary offices.

In the meantime, researchers are planning to move into the conference center additions. The conference center will remain open to all conferences and meetings scheduled through June of 2005. After renovation, a portion of the facility will be retained to house the Pennington Biomedical Research Foundation, the Pennington Medical Foundation, and the Facilities Management Department, and to conduct campus-wide gatherings and Pennington-sponsored educational programs and events, according to Jennifer Winstead, president and chief executive officer of the Pennington Biomedical Research Foundation, the entity responsible for managing the facility.

“Funding sources to support programs and future expansion continue to be identified,” said Winstead, including a critical need for the Phase 2 building, an 80,000 square foot Clinical Research Facility, estimated at a cost of \$20 million. The current clinical research facility is 44,500 square feet. Since the Center opened, more than 8,000 volunteers have participated in clinical trials housed in that clinical facility.

CLINICAL STUDIES

FALL SCIENTIFIC SYMPOSIUM *World’s Researchers Working Out the Brain*

Scientists know that regular physical exercise can help prevent or reduce symptoms of various health conditions such as obesity and cardiovascular disease. Now they also realize exercise helps the brain. Nearly two dozen of the most prominent neuroscience researchers worldwide and 25 guest scientists gathered in December at the Lod Cook Conference Center to focus on a different and relatively unknown benefit of physical activity – a stronger mind. Scientists eager to understand the effects and functions of exercise in conjunction with the brain and its functions, convened for “The Neurobiology of Exercise,” a symposium designed to generate discussion on the possibility of favorable aspects of exercise on the central nervous system as well as its influence in cognition, motivation, mood, stress and immunity, and energy balance.

In addition to physical exercise, the use of motor skills stimulates cognitive function and some types of learning. Detailed understanding of these adaptations and mental exercise of knowledge in conjunction with the central nervous system could suggest prevention and treatment of depression, the cognitive decline associated with aging, and neurological disorders such as Parkinson’s and Alzheimer’s.



Sponsored by the Pennington Biomedical Research Center, some of the world’s top researchers came to Baton Rouge for a seminar on how exercise affects the brain

New Foundation Board Members

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Clerk for the Honorable Frank J. Polozola, U.S. District Judge for the Middle District of Louisiana.



Madhu Beriwal, president and chief executive officer of Innovative Emergency Management, Incorporated (IEM), has nearly 20 years of

experience in emergency management, homeland security, and the use of information technology to resolve complex protection issues. Founded by Beriwal in 1985, IEM is a risk management corporation of international scope providing technical and analytical services to the Department of Defense, Department of Homeland Security, Centers for Disease Control and Prevention, state and local agencies, and private industry. She is a founding member of the Association of Louisiana Technology Companies and an active member of the Baton Rouge and Louisiana Technology Councils. She is on the board of directors for the Louisiana Technology Park, and served as co-chair of the Environmental Technology and Security Cluster for the Capital Region Competitive Strategy Initiative. In 2003, Ms. Beriwal received the Governor's Technology Award for "Technology Leader of the Year," and in 2004 she was named "Businessperson of the Year" by the Greater Baton Rouge Business Report.



Maxine Cormier is a Baton Rouge, Louisiana-based governmental and issues management consultant whose

decades of work have gained her respect and influence with elected officials at the local, state and national levels.

Cormier's past and present clients include AT&T, Entergy, Harrah's Casino, the Louisiana Oil Marketers Association, the Louisiana Primary Care Association, Louisiana's Clinical Social Workers, the Louisiana Physical Therapy Association, the Louisiana Trial Lawyers Association, the Louisiana Hospital Association, the Louisiana Independent Pharmacies Association, the Friends of City Park of New Orleans, Prudential Life Insurance and the Diebold Corporation. Cormier has been an independent lobbyist since 1988. A native of St. Martinville, Louisiana, she graduated from the University of Louisiana and continued graduate studies at Webster College, St. Louis, Missouri. Ms. Cormier serves on numerous local, state and national community boards.



J. Gerard "Jerry" Jolly joined the KPMG firm in 1974 and became a partner in 1981. Jolly served as managing partner of KPMG's Baton Rouge office and later held several regional positions, including

Partner-in-Charge for the Houston region of KPMG and Consumer and Industrial Business Market Leader.

Jolly was recently inducted into the Hall of Distinction of the E.J. Ourso College of Business Administration at LSU. Jolly currently serves as a board member of the CHS Foundation and as treasurer of Mary Bird Perkins Cancer Center. He is a member of the Baton Rouge Rotary Club and the St. Joseph's Academy Investment Committee. He is a graduate of Catholic High School and LSU.



Kevin Lyle is owner and president of RELco, L.L.C. and managing partner of LC Properties of Lafayette. He is a graduate of Louisiana State University. He was a director for LCR-M Corporation from 1981 until 2002. Lyle is dedicated to community activism, serving as officer and board chair for the Baton Rouge Area Foundation, Volunteer Baton Rouge! and the Academic Distinction Fund. He currently serves as board vice chair for Swine Palace. He is active at St. Luke's Episcopal Church and serves on the board of trustees of Episcopal High School.

Help us "Unlock the Secrets" by volunteering

Center researchers are currently seeking citizen volunteers for the following clinical studies.

Get Readi -

A study of the genetic factors in heart disease among African-Americans

Volunteers must be:

- Age 18-65
- African American only
- Not taking medication
- Non-diabetic
- Have a biologic sibling willing to participate

Diabetes -

The clinic is currently seeking volunteers for numerous clinical studies on the treatment of diabetes

Volunteers need to be:

- Type II Diabetic
- Over age 18
- Normal to Overweight
- Not Pregnant

Act Now

This study will test the drug *Actos* as a means of preventing diabetes.

- Age 18 or older
- Overweight
- Do not have diabetes
- No heart disease or hepatitis
- No lung or kidney disease
- No prescription medications for diabetes control
- Not pregnant
- Not on medication for weight loss

Inhaled Insulin

Can inhaled insulin replace injections? This study is designed to find out.

To qualify:

- Age 18-80
- Normal weight to overweight
- Diagnosed with Type II diabetes for at least 6 months
- Taking oral diabetes medication

Please call 225-763-2596 for specific information or visit the Center website, www.pbrc.edu.

YOU'RE INVITED!

The Digestive Health Foundation of Louisiana cordially invites you to the 4th Annual Wine Tasting Event Friday, May 6; 6:00 to 9:00 p.m. "White Linen Nights"

C.B. Pennington, Jr.
Conference Center
Tickets - \$50 per person

Sponsorship Opportunities Available

For more information call:
(225) 266-0728

Proceeds from this event will benefit the Pennington Biomedical Research Center and Foundation.



Pennington Biomedical Research Foundation
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Baton Rouge, LA 70808-7214
www.pbrf.org
www.pbrc.edu
225-763-2511

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PENNINGTON BIOMEDICAL RESEARCH CENTER
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CALENDAR OF EVENTS

Mark Your Calendar Upcoming Events

APRIL

April 21
Visiting Scientist Dinner
James Joseph, Ph.D., Tufts University

MAY

May 6
Digestive Health Foundation Wine Tasting Event
(see details, page 15)

AUGUST

August 3-7
Pennington Balloon Championships

August 6
Soaring to New Heights
For ticket or sponsorship information, call
Rhonda Ruffino 225-763-2512

August 28

Rocketkidz Triathlon
Fees are between \$15-\$20.
Swim/bike/run triathlon events of various distances
Contact: Susan Moss Hayden 225-603-1667 or
www.rocketkidz.com

OCTOBER

October 8
Irene W. Pennington Wellness Day for Women
Free Admission, 9 am - 2 pm
For sponsorship and booth information call
225-763-2512
<http://www.pbrc.edu/wnrp.htm>

FACTS ABOUT THE PENNINGTON CENTER

The Pennington Biomedical Research Foundation supports the Pennington Biomedical Research Center and its mission.

Mission: To promote healthier lives through research and education in nutrition and preventive medicine.

Size: Main research facility: 575,000 square feet; Conference Center: 96,000 square feet; grounds: 234 acres.

Staff: 70 faculty members, 50 post doctorates, and more than 500 technicians and support personnel.

6 Research Divisions: Functional Foods, Experimental Obesity, Clinical Obesity and Metabolic Syndrome, Nutrition and Chronic Diseases, Health and Performance Enhancement and Education, and Nutrition and the Brain. The center has also established an Education Division.

Laboratories: 13 laboratories and 16 core service laboratories including genomics, proteomics, clinical chemistry, mass spectrometry, cell culture, comparative biology, transgenic, body composition, and food analysis laboratories.

Clinic: Outpatient examination and interview rooms, inpatient rooms for 14 research volunteers, metabolic kitchen, metabolic procedure room, two whole-room indirect calorimeters, dual energy X-ray absorptiometry, and ultrasound imaging.