



# NUTRITION MATTERS

SPRING 2008

*Improving the health of  
future generations*

PENNINGTON BIOMEDICAL RESEARCH CENTER AND FOUNDATION • LSU SYSTEM

*Celebrating 20 Years*  
*Moving Biomedical Research Forward Since 1988*



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# Message from the Executive Director of the Pennington Biomedical Research Center




**T**he year 2008 marks the 20<sup>th</sup> year of the opening of the Pennington Biomedical Research Center. Since the first day, our overarching goal has been to conduct cutting-edge research designed to “prevent diseases” and “promote healthier lives.” We have planned several functions to share what we’ve learned with others and to let our community take a closer look at the Center it has generously supported. The Center was founded on the premise that it would be successful only if the state government, the federal science programs and the Greater Baton Rouge community would contribute dollars to its research enterprise. Our 20-year history has proven that to be true.

During the last 20 years, about 20-percent of our revenues have come from state tax dollars. The remaining dollars came from the ability of our scientists to compete for – and win – federal research dollars and corporate contracts, as well as from personal and corporate donations. Nearly 20 years ago, community support helped open our doors, and now that same support is helping us grow. For the moment, I can say that every building on our campus (totaling more than 500,000 sq. ft. of administrative, mechanical and research space) was a gift to the state of Louisiana, built with private donations. Soon, however, we will reach a milestone. Last year we made our first request to the legislature for construction funds, and we were awarded most (but not all) of our request through the capital outlay process – enough to begin construction in the summer of 2008 of a new 88,000 sq. ft. clinical research facility.

We hope our community will enjoy as much as we will watching this building take shape. It will not only dramatically change the face of our campus, it will change lives. Clinical science is where people come face-to-face with research, as Baton Rouge citizens volunteer for the dozens of clinical research trials we undertake each year. This facility will allow more citizens to take part, and will allow our researchers to undertake many new projects aimed at preventing the harmful effects of diabetes, obesity, hypertension and other nutrition and lifestyle related maladies.

During our 20<sup>th</sup> year, we have already convened a major conference to highlight the 20 most significant achievements in obesity research around the world; we are planning a public health conference on childhood obesity, during which we will make public a “report card” on the health of Louisiana’s children; and we’ll hold a public forum on the economic development opportunities offered by the research conducted at the Center and their impact on the future of Baton Rouge and the state of Louisiana. These events are true to our mission “*to promote healthier lives through research and education in nutrition and preventive medicine,*” and we felt that our 20<sup>th</sup> anniversary was an appropriate time to undertake these special events.

We have approached the governor and the legislature with the most ambitious growth plan that we have ever undertaken, and secured an additional \$50 million during a special session, which will fund a good portion of our total plan (See right column story). Although hard work has given us the advantage of becoming a world class research institution, we see extreme competition on the horizon. Other states are currently building similar institutions with several times more funding and endowment than we currently enjoy. Some are closely examining the operation of the Pennington Biomedical Research Center to learn how we did it. If we are not careful, they will open their doors and instantly be ahead of us. The harsh reality is that in the extremely competitive field of biomedical research, if an institution does not grow and improve, it can rapidly become stale and less respected. We look forward to our elected officials to once again voice their strong support for the Pennington Biomedical Research Center. Our vision is to be the best at what we do and continue our work to promote healthier lives. With your help, we will achieve those goals.

  
Claude Bouchard, Ph.D.  
PBRC Executive Director,  
George A. Bray, Jr. Endowed  
Super Chair in Nutrition

## EXPANSION OF PBRC: A TIMELY INVESTMENT LEGISLATURE EARMARKS \$50 MILLION

In a time of intense national competition in scientific health research, Governor Bobby Jindal and the Louisiana legislature have stepped up with one-time funding at a critical growth juncture of the Pennington Biomedical Research Center.

Governor Bobby Jindal, in a special session focusing on economic development, recently supported new funding to develop expansion opportunities at the Pennington Biomedical Research Center. The Legislature approved the measure during the March session.

One week before the session, Governor Jindal, LSU President John V. Lombardi, Ph.D., several members of the Louisiana Legislature and PBRC Executive Director Dr. Claude Bouchard, participated in a press conference in the PBRC Basic Science Building to announce the overall economic focus of the session and to spotlight the growth and expansion needs of the Center.

The new appropriation provides one-time funding of \$50 million for construction, renovation, research instrumentation and infrastructure. Additionally, the Governor is asking the Legislature to approve a \$3 million increase in annual operating funds during the regular session which commenced on March 31st. According to Bouchard, “The appropriation means new direct and indirect jobs, and with new facilities we will generate research grant potential, intellectual property development and private-sector development and partnerships.” The funding will increase PBRC research and support space from 545,000 sq. ft. to 675,000 sq. ft. of facilities with state-of-the-art research instrumentation, and will increase research

*story continues on page ten*



▲ Governor Bobby Jindal announces state support for PBRC at a recent press conference held in the PBRC Basic Sciences Building. Louisiana Representative James Fannin, PBRC Associate Executive Director of Finance and Administration Ralph Underwood, LSU System President Dr. John V. Lombardi, and PBRC Executive Director Dr. Claude Bouchard attended the press conference.

# BRAIN FOOD

## WELCOME NEW DEMENTIA PREVENTION RESEARCH TEAM

You've probably heard the expression "brain food," a description of a food item that contains compounds that are thought to improve brain function. In reality, our entire diet is "brain food;" the key is to understand exactly how diet helps the brain or harms the brain, especially as we get older.

"We're all about successful aging," said Jeff Keller, Ph.D., Pennington Biomedical Center's new Associate Executive Director for Basic Research. "By successful aging, I don't mean living 200 years, I mean living healthier and with fewer ailments or diseases related to age."

Dr. Jeffrey Keller joins PBRC as Associate Executive Director for Basic Research in addition to holding the Hibernia National Bank/Edward G. Schlieder Endowed Chair. Previously, he was associate professor and holder of the R.C. Durr Endowed Chair for Alzheimer's Disease at the University of Kentucky as well as assistant director of the Sanders-Brown Center on Aging. Dr. Keller will also become a member of the Executive Committee and the Management Committee of the Center.

"Most of us will face a fairly long decline in function and face a period of months or years of less-than-healthy living," Keller said, "Seventy percent of health costs are in the last six months of life. Our goal would be to find a means – through nutrition and other interventions – to stave off or prevent that loss of function as long as possible."

Keller assumed the head of basic research at the Center with the vision to create an entire range of research focusing on how nutrition and age related illnesses – like diabetes, metabolic syndrome and obesity – affect the brain and promote maladies like Alzheimer's disease. "That's why I moved here," Keller said.



▲ Dr. Jeffrey Keller in his lab

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*"...the key is to understand exactly how diet helps the brain or harms the brain, especially as we get older."*

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"We know that long-term diabetes, for example, affects a wide range of organs in the body and over time creates a wide range of problems, but we have no data of the affects of long-term diabetes on the brain," Keller said.

Keller is already underway with several projects that come under the umbrella of "how diet helps the brain or how diet hurts the brain." For example, researchers know about an enzyme in the body that removes toxic substances from our body's cells. They also know that with age, that enzyme doesn't work as well and our skin, muscles, liver and brain begin to decline in function. Recently, however, Keller has seen that reducing calories over a lifetime seems to keep that enzyme active. Rodents who are put on a calorie restricted diet (a nutritious diet, but with 20 percent to 40 percent less calories) remain healthier longer.

"We know humans have a hard time with these extreme calorie restrictions," Keller said, "so the idea is to develop a means to mimic calorie restriction, through activity or diet or drug, to get the same effect in humans: the cell cleaning enzyme continues to work well with age."

Keller will also lead the Center into its first comprehensive research into a fatal brain ailment, Alzheimer's

disease. "We know that certain diets plus calorie restriction reduce pathology in models of Alzheimer's and that diabetes, other diets and obesity seem to accelerate or amplify the disease," Keller said. "If you place mice on a high fat diet for just five weeks, you will see accelerated pathology relevant to Alzheimer's disease."

Additionally, Dr. Jeff Keller and his colleagues would like to develop a world-class research program focused on: identifying the basis for dementia in the elderly by establishing the first brain bank in Louisiana, providing a platform for identifying potential pharmaceutical and nutritional therapeutics for the prevention and treatment of dementia, and ultimately improving the quality of life for elderly in Louisiana suffering from the effects of dementia.

Accompanying Keller to the Center is his wife, Annadora Bruce-Keller, Ph.D., who is equally interested in nutrition and the brain – especially Alzheimer's disease. They are co-researchers with investigators across the country who are looking at the role of normal oxidative damage in the formation of Alzheimer's. "As a byproduct of normal brain metabolism, molecules called 'free radicals' are created, and they damage brain cells," Bruce-Keller said, "We want to understand this process and prevent it." 📖

## New Faculty:



### Jeffrey Keller, Ph.D.

Jeffrey Keller, Ph.D. joins PBRC as associate executive director for basic research in addition to holding the Hibernia National Bank/Edward G. Schlieder Endowed Chair. Previously, he

was associate professor and holder of the R.C. Durr Endowed Chair for Alzheimer's Disease at the University of Kentucky as well as assistant director of the Sanders-Brown Center on Aging. Dr. Keller will also become a member of the Executive Committee and the Management Committee of the Center.

prevention of neurodegenerative disorders. Dr. Bruce-Keller received a B.S. with honors in Chemistry from the University of Texas at El Paso and a Ph.D. in neurobiology from the University of Southern California. Most recently, she was an Associate Professor in the Department of Anatomy and Neurobiology at the University of Kentucky.



### Cedric Moro, Ph.D.

Dr. Moro joins the PBRC faculty as an Instructor in the Endocrinology Laboratory, where he has been a postdoctoral fellow under the mentorship of Dr. Steve Smith since 2006. He

will work on developing his own research program related to lipid metabolism as well as continue his work in the Endocrinology Laboratory and the CNRU. Dr. Moro received a B.S. in Cellular Biology and Physiology from the University of Toulouse in France, an M.S. in Integrative Physiology from the University of Lyon and his Ph.D. in Pharmacology from the University of Toulouse.

## Promotions:



### Viktor Drel, Ph.D.


Viktor Drel, Ph.D. has been promoted to Instructor in the Mechanisms of Diabetes Complications Division. He will continue working with Dr. Irina Obrosova in developing his own

research program on the mechanisms of diabetes complications.

## Faculty Honors:

### Abba Kastin, M.D.

Dr. Abba Kastin, a PBRC neuroscientist and holder of the United Companies/Harris J. Chustz Endowed Chair, was awarded a doctorate honoris causa by the University of Uppsala in Sweden on January 25.

The honorary degree is in recognition of Dr. Kastin's contribution of several concepts in the field of peptide research, including the findings that peptides cross the blood-brain barrier, and that some peptides have antiopiate as well as opiate effects. 



### Annadora Bruce-Keller, Ph.D.

Dr. Annadora Bruce-Keller joins the PBRC faculty as an Associate Professor in the Division of Neurodegeneration and Inflammation. She will be developing

a research program in neuroscience and

## PBRF BOARD OF DIRECTORS ANNOUNCES NEW LEADERS

*The Pennington Biomedical Research Foundation is proud to announce the addition of Herschel L. Abbott, Jr. and John M. Spain to the Pennington Biomedical Research Foundation Board of Directors.*

### Herschel L. Abbott, Jr.

Herschel L. Abbott, Jr., a native of Monroe, LA., has spent much of his adult life in New Orleans. After practicing law for more than 20 years with Jones, Walker, Waechter, Poitevent, Carrere, Denegre, Abbott joined BellSouth as General Counsel-Louisiana, was later elected President of BellSouth's Louisiana operations and eventually was named Vice President of Governmental Affairs for BellSouth in Washington, D.C. In 2007, he returned to Louisiana and presently serves as Special Counsel for Jones Walker.

Active in civic affairs, Abbott was appointed to the Louisiana Board of Regents, and served as Chairman of the Board for many organizations, including: Tulane University Hospital and Clinic, Louisiana LEARN Commission, Greater New Orleans Educational Television Foundation, University of New Orleans



Foundation, and the Committee of 100 for Economic Development.

### John M. Spain

John M. Spain is the Executive Vice President of the Baton Rouge Area Foundation, a nonprofit community Foundation.

Spain currently serves on the boards of the Manship Theatre, the Council For A Better Louisiana (CABL), and previously served as the chairman of the Board of the Greater Baton Rouge Chamber of Commerce, Louisiana Arts and Science Museum, and Baton Rouge Area Convention and Visitors Bureau to name a few.

Prior to his position at the Baton Rouge Area Foundation, Spain was the Managing Director of The Powell Group, a private holding company with thirteen diverse subsidiary companies. Spain started his professional career in the field of



broadcasting at WBRZ-TV, the ABC affiliate in Baton Rouge.

Also joining the PBRF board of directors in an *Ex-officio* capacity are **Melvin "Kip" Holden**, Mayor-President, East Baton Rouge Parish, and **Adam Knapp**, the newly appointed President and CEO of the Baton Rouge Area Chamber. 

## PBRF SALUTES BERT TURNER

*The Pennington Biomedical Research Center and Foundation wishes to thank Mr. Bert Turner for his 14 years of continuous service as a member of the Board of Directors.*

*In December of 2007, Mr. Turner completed his service as a board member, but gratefully, he remains an ardent supporter of the Center and Foundation.*





## DISCOVERY PROMISES TO BE A POWERFUL TOOL FOR FUTURE THERAPIES

*Pennington Biomedical Research Center scientists have made a surprising discovery that the iron-containing heme molecule, which is a key part of hemoglobin, does much more than just help deliver oxygen from lungs to the body's cells.*


The iron based heme portion of hemoglobin leads two lives – one in the bloodstream and one within the body's cells as a powerful hormone that influences weight gain, the sleep cycle, and meal metabolism in ways that could lead to prevention of serious diseases such as obesity, diabetes, depression, sleep disorders and even breast cancer.

"This is a whole new ball game. Knowing that heme is actually a hormone allows us to envision a tremendous range of potential medical applications," said molecular biophysicist Tom Burris, Ph.D., a researcher at Pennington Biomedical Research Center.

Knowing that heme can control the genes that regulate sleep, metabolism and weight gain could lead to possible hormonal treatments or cures based on modified versions of heme.

"Before we identified them as heme receptors, the proteins we studied were well-known regulators of our internal 24-hour clock, also known as our circadian rhythm. Abnormal circadian rhythms are associated with sleep disorders such as insomnia as well as depression." Burris said, "If we learn how to control these heme receptors we may be able to provide better therapies for these diseases."

Earlier this year, the news media widely circulated a scientific study indicating shift-workers and overnight workers (people who are working against their own internal clocks) may be more susceptible to certain illnesses, including cancer. Burris said his finding that heme is a hormone may be the first step to actually finding a way to prevent those maladies.

The discovery of the once secret life of heme as a hormone promises to be a very powerful tool for future therapies for major metabolic processes. 

## SCIENTISTS DISCOVER IRONY: SUGAR CANE MAY HELP PREVENT DIABETES



Diabetes research physicians at the Pennington Biomedical Research Center now believe the fiber in sugar cane could become an important dietary supplement – one that may fight off weight gain, obesity and diabetes.

"A diet high in fiber clearly has been shown to have health benefits," said Dr. William Cefalu, a member of the research team, "It's interesting that different dietary fibers may have different health benefits, and now we know sugar cane fiber, when consumed as a dietary supplement at least in animal studies, has great specific benefits."

*Bagasse may one day play an important role in dietary health.*

When cane is refined into sugar, processors crush the cane to remove the cane juice and discard the leftover cane fiber, called bagasse. That same bagasse may one day play an important role in dietary health. Dr. Zhong Wang led the team that made the discoveries which were published in the December issue of **Metabolism** journal. His experiments in mice showed that adding sugar cane fiber to the mice's diet lowered the incidence of weight gain and blood sugar (glucose), and improved blood insulin and other metabolic measures. Wang fed mice a diet similar in nutritional composition to that of most U.S. citizens. Called a "western diet," it is high in fat content. Mice on this high fat diet without the benefit of added sugar cane fiber showed significantly higher weight gain and blood sugar, the first steps toward diabetes.

"It is not clear yet how the sugar cane fiber works, but it looks like it may have promoted changes in gastrointestinal tract to decrease glucose absorption and alter metabolism," Cefalu said. "The mechanism would be important if the next step is to study this in humans."

*The research is funded by grants from the National Institutes of Health Botanical Research Center and the American Sugar Cane League.* 



## 20<sup>th</sup> Anniversary upcoming EVENTS

- *2008 Amedisys Soaring to New Heights* – August 9, 2008
- *Public Health Conference on Childhood Obesity* – September 24, 2008
- *PBRC Economic Development Luncheon* – October 2008  
(date to be announced)

*Celebrating A*  
*Moving Biomedical Research*

1988 -



Pennington Biomedical Research Center (PBRC) "opens". Pennington Biomedical Research Foundation (PBRF) is formed. Business leaders and community supporters work to acquire initial funding.

George Bray, Jr., M.D., appointed first PBRC Executive Director.

1988



Louisiana Legislature commits \$5 million annual appropriation for operations.

1990

PMF completes the first major campus expansion with the addition of a conference center, guest lodge and exercise research facility.

1993



1980

1980  
 C.B. "Doc" and Irene Pennington pledge \$125 million to LSU to build a nutrition and preventive medicine research center.

1983  
 The Pennington family, LSU officials and Governor David Treen, ceremonially break ground for the Center on LSU agricultural land formerly known as the "Quail Farm".

1986  
 Under the leadership of the Pennington Medical Foundation (PMF), the construction is completed, but the Center remains vacant for two years as operating funding is sought.

1984

1988

1989  
 David York, Ph.D. and Donna Ryan, M.D. are appointed to build the Center's Basic Science and Clinical Research efforts, respectively.

1992

1991  
 The first endowed chair is created through PBRF and the first human clinical research trials are launched.

1993



# 20 Years

March Forward Since 1988

## 2008

PBRC celebrates its 10th year of research with 45 full-time faculty members, 225 employees and grant awards exceeding \$15 million.

**1998**



Irene Pennington passes away at the age of 104.

**2003**



PBRC is awarded the first of three National Institutes of Health "Center Grants". Themelios, a venture capital fund dedicated to the development of early-stage PBRC discoveries, is created.

**2005**



Louisiana legislature appropriates funding to help build a new Clinical Research facility.

**2007**

**1996**

**1997**

Benefactor C.B. "Doc" Pennington passes away at the age of 97.

**2000**

**1999**

Claude Bouchard, Ph.D., becomes Executive Director of PBRC, as Dr. George Bray is named a Boyd Professor and engages in full-time research at PBRC.

**2004**

**2004**

The 187,000 square foot state-of-the-art Basic Science Laboratory Building is completed and opened.

**2006**

Expanding its strong basic and clinical research programs, PBRC formalizes a population research effort with a building addition and the appointment of Peter Katzmarzyk, Ph.D.

**2008**

**2008**

PBRC begins its 20th year with 85 full-time faculty members, more than 475 employees and grant income of \$47 million. Governor Bobby Jindal and Louisiana legislature approves a \$50 million investment in PBRC.





# 20<sup>th</sup> Anniversary Gala Honors Supporters

On Saturday, April 12th, the Pennington Biomedical Research Center and Foundations joined together to celebrate 20 years of vision, growth, discovery and excellence. The gala also recognized the many individuals, whose passion and generosity greatly contributed to the Center's vital mission of promoting healthier lives through research and education in nutrition and preventive medicine. The evening was generously underwritten by the Irene W. and C.B. Pennington Foundation.



- ① *20th Anniversary Gala hosts were the Irene W. and C.B. Pennington Family Foundation and the Pennington Biomedical Research Center and Foundations. Pictured from left to right: Sharon and Claude B. Pennington III; Paula Pennington de la Bretonne and Dr. Jacques A. de la Bretonne; Peggy Cole; Monique Chagnon; Dr. Claude Bouchard, Pennington Biomedical Research Center Executive Director*
- ② *PBRF supporters Mayor Melvin "Kip" Holden, Lois Holden, with Ruth McCoy and Sunny McCoy*
- ③ *Pennington Biomedical Research Foundation Chairman John B. Noland, Pennington Biomedical Research Center Associate Executive Director of Clinical Research Dr. Donna Ryan, Pennington Medical Foundation Chairperson and PBRF Board of Director Paula Pennington de la Bretonne, PBRC Executive Director Dr. Claude Bouchard, and PBRC's first Executive Director Dr. George Bray*
- ④ *Special thanks is extended to the 20th Anniversary Gala Planning Committee and Supporters who planned the special event – (front row - seated left to right) Elizabeth Querbes Sammons, Paula Pennington de la Bretonne, and Janet Olson; (middle row - standing left to right) Melissa Bell, Donna Jolly, Diane Luikart, Page Silvia, Anne Hise, Annette Barton, Lori Bertman, Jennifer Winstead, and Joshua Hayes, Jr.; (back row - standing left to right) Nan Barfield and Virginia Noland*
- ⑤ *Dr. John Lombardi, William Silva, Jr., Paula Pennington de la Bretonne, Dr. William Jenkins, Dr. Claude Bouchard, and Jerry Shea, Jr.*
- ⑥ *Jim Bailey, Laura Bailey, Dr. William Hansel, Margo Kadair and Dr. Roy Kadair*



2nd Nature Productions, Inc. "The Living Garden®" is seen in the background.

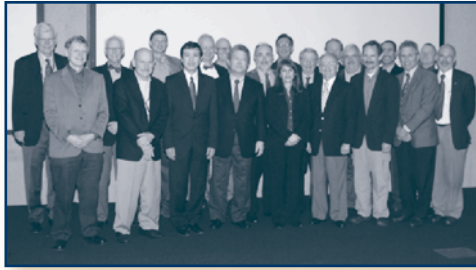




# PBRC HOSTS WORLD SCIENTISTS

MORE THAN 100 OF THE LEADING OBESITY RESEARCHERS FROM AROUND THE WORLD GATHER ON PBRC'S 20TH ANNIVERSARY

*As part of PBRC's 20th anniversary activities, more than 100 of the leading obesity researchers from around the world gathered at the Center to determine the top 20 most significant advancements and achievements in obesity research and the prevention of related diseases.*



and exercise-deficient environment contributes to obesity. The Pennington Biomedical Research Center gratefully acknowledges the

PBRC conference chairs Drs. Claude Bouchard, George Bray, Leslie Kozak, and Eric Ravussin welcomed conference guests, which included a world-renowned team of researchers whose discovery of leptin, a key compound secreted by fat tissue and monitored by the brain to control body weight was one of the obesity advancements

discussed at the conference. This scientific advancement means that researchers now regard fat tissue as a vital organ, not just a place to store energy.






Other intriguing advancements discussed at the conference were the work of a research team who identified the nature of the creation of a fat cell and its growth as well as those leading the way in the human trials of clinical research and how understanding the role in which our food-rich

sponsors who helped make this global conference such a success: Conference Gold Sponsors were Takeda and the Pennington Biomedical Research Foundation; Silver Sponsors were Amylin, GlaxoSmithKline, Kraft Global Nutrition, Eli Lilly and Company, Purina Lab Diet, McCormick Science Institute, Unilever, Merck Research Laboratories, National Dairy Council, Orexigen, Nestlé, and Weight Watchers; In-kind sponsors were Community Coffee and the Mockler Beverage Company. 

## TOP PBRC DISCOVERIES






*Significant discoveries have been made by PBRC scientists over the years and many of the advances in science made by others would not have been made in a timely manner if PBRC scientists had not contributed important observations or facts to the knowledge base. We are proud to highlight just a few of the leading scientific discoveries of PBRC.*

### BASIC SCIENCE

-  Discovery of a novel gene product involved in translating signals from the brain to the periphery and associated with the level of accumulation of adipose tissue (fat).
-  Discovery of a new secreted protein influencing fat deposition and obesity-related metabolic disorders including fatty liver disease and insulin resistance.
-  Discovery of a property of stem cells isolated from an adipose tissue depot that allows them to convert to bone cells when grown on a bone promoting scaffold.
-  Discovery that a gene in a human adenovirus associated with obesity induces fat cells to multiply and increases fat storage.
-  Discovery that genetically identical laboratory animals raised in a similar environment can vary considerably in their level of adiposity.









### CLINICAL RESEARCH

-  Discovery that caloric restriction in non-obese adults improves biomarkers of aging including metabolic rates, body temperature, insulin level, markers of inflammation and other systems.
-  Discovery that physical activity protects against the tendency to store excessive amounts of fat in the presence of a diet rich in fat.
-  Demonstrated together with 21 academic sites that Type 2 diabetes can be prevented in high risk individuals: loss of 7% of body weight and 150 minutes of physical activity per week producing a 58% reduction in the rate of conversion to diabetes.
-  Discovery that the cardiovascular and metabolic response to regular exercise is highly individualized and that several genes determine the benefits to be accrued from a physically active lifestyle.
-  Demonstrated that insulin can be inhaled and absorbed through the lungs instead of by an injection in order to control blood glucose in diabetics.



### POPULATION SCIENCE

-  Reported that food insecurity with hunger is higher in the lower Mississippi River Delta than in other parts of the United States.
-  Reported that Louisiana school children, measured in 17 school systems, have among the highest rates of overweight and obesity in the United States.
-  Demonstrated that obesity in both black and white children predicts the development of health problems in adulthood.
-  Demonstrated the efficacy of an environmental approach to induce behavioral changes in physical activity and eating habits among elementary school children.
-  Demonstrated the efficacy of internet-based programs for weight loss. 



# PENNINGTON BIOMEDICAL RESEARCH FOUNDATION WELCOMES WORLD LEADER IN FETAL DEVELOPMENT AND CHILDHOOD OBESITY

*Community supporters of the Pennington Biomedical Research Foundation welcomed Dr. Peter Nathanielsz, professor and director of the Center of Pregnancy and Newborn Research at the University of Texas Science Center at San Antonio during a recent March dinner.*

Dr. Nathanielsz traveled to PBRC to join researchers and scientists from around the world who gathered recently in Baton Rouge at the Pennington Biomedical Research Center for PBRC's "20 Most Significant Advances in Obesity Research Conference." The conference was one of many activities planned to highlight the 20th anniversary of the Center.

During his visit to the Center, Dr. Nathanielsz was invited to be the featured speaker at the Scientific Dinner Series, hosted by the Pennington Biomedical Research Foundation (PBRF) and underwritten by Capital One.


More than 70 community members and supporters attended a cocktail reception and dinner held at the Pennington Biomedical Research Center. PBRF President and CEO Jennifer Winstead

welcomed guests. Dr. Claude Bouchard, Executive Director of the Pennington Biomedical Research Center, introduced Dr. Nathanielsz and his work in the area of nutrition during pregnancy and newborn growth and development.

Speaking on "The Prenatal Prescription for the Prevention of Adult Diseases," Dr. Nathanielsz gave guests an insight into newborn development and how exposure during a critical period in pregnancy may influence lifetime function and health later in life. He discussed various studies

demonstrating the correlation of nutrition during pregnancy to long-term health through adulthood.

"We pass more biological milestones before we are born and in the early months as a baby than at any other time in our lives. How we pass these milestones will be greatly affected by our very first environments, the womb and immediately after birth," affirmed Dr. Nathanielsz. "For tomorrow's children, we need to do all within our power to give them an optimal start in life - to give them the gift of health for life," said Dr. Nathanielsz.

This is the fifth year that Capital One has underwritten the Scientific Dinner Series. During the program, the Pennington Biomedical Research Foundation acknowledged the importance of Capital One's sponsorship of the series and for its continued support and commitment to the Pennington Biomedical Research Center. 



▲ Left to Right: PBRC Executive Director Dr. Claude Bouchard, Capital One Senior Vice President Janet Olson, Guest Speaker Dr. Peter Nathanielsz, Woman's Hospital Senior Vice President Tricia Johnson, and PBRF President and CEO Jennifer Winstead

**Capital One**<sup>®</sup>

▲ Scientific Dinner Series Underwritten by Capital One


*continued from page 2*

## EXPANSION OF PBRC - A TIMELY INVESTMENT

funding, primarily from external sources, from \$40 million to \$100 million annually. PBRC has a track record of attracting an additional \$3 to \$4 in grant funding for every \$1 the state invests.

"This is a bold investment that will help PBRC compete with the largest and most sophisticated biomedical research centers in the country," said Governor Jindal. Competition is intense in today's scientific "arms race"; as several states have made recent major investments in biomedical research facilities, competing for national research dollars and award-winning faculty.

"Today's opportunity is to boldly invest in a proven, successful institution with economic and health potential," said Bouchard. PBRC ranks in the top six percent of all institutions nationally for National Institutes of Health funding. The Center has earned a stellar reputation with a mission focused on the science of nutrition, including the prevention of diabetes, obesity, heart disease and cancer.

"As we celebrate our 20th anniversary, we are grateful to the State of Louisiana and its leaders for continued investment in an institution with endless economic and health research potential," said Bouchard. 


## EMPLOYEE GIVING

### PBRC FACULTY AND STAFF PLEDGE SUPPORT FOR THE CENTER



Faculty and staff members from the Pennington Biomedical Research Center united once again to participate in the *4th Annual PBRC Employee Giving Campaign* in support of the Center. The campaign is held in conjunction with the *Pennington Biomedical Research Foundation's*

*Annual Giving Campaign*. Employees and community supporters join together in providing gifts of support to help further the health, nutrition and preventive medicine research ongoing at PBRC.

The 2008 employee campaign initiative lead by *Dr. Jennifer Rood* and *Dr. Tim Church*, both PBRC faculty and scientific researchers, was the most successful internal campaign to date. With supporting participation reaching more than 70%, faculty and staff members pledged more than \$44,000 in financial support for the Center. The Foundation greatly acknowledges both Drs. Rood and Church for their campaign leadership and the many employees of the Center who continue to sustain the Center's growth through their professional accomplishments and philanthropic support. 

# TAKE 5<sup>SM</sup> for diabetes KNOWLEDGE FOR LIFE

## Taking on Diabetes for A Healthier Life

Leborra Lee, a 72-year-old retired cook, struggles with diabetes every day, but thanks to Pennington Biomedical Research Center's (PBRC) *Take 5 – Diabetes Education for Life* program, she can live healthier.

Lee, who has had diabetes for 20 years, found out about the program from PBRC's newsletter. "At first, I thought Take 5 was for people who were just diagnosed, but it wasn't."

Throughout the series of five classes, Lee was taught five life lessons for diabetes education and prevention. Participants are informed on topics such as healthy nutrition and meal planning, physical activity, medications, glucose monitoring, foot care and handling stress and emotions.



▲ Leborra Lee and PBRC Dietician Cindy Puckett

The program gave Lee the motivation and means to stay healthy. "I was taught the importance of taking care of myself by having a healthy eating plan and writing a food diary," said Lee.

Aside from the main curriculum of the program, which she describes as "very informative," Lee explains that the camaraderie with other diabetics was another benefit of attending the classes.

After completing PBRC's Take 5, Lee left with new knowledge and skills to lead a better life than before.

**Call 763-0918  
to enroll in Take 5.**

## Do Emotions and Stress Affect My Diabetes?

*Yes, stress and emotions can affect your blood sugar and may cause it to go up.*

While we tend to view stress as toxic to our minds, we generally don't consider its potentially harmful effects on the body. Under stress, your body goes into fight-or-flight mode, raising blood sugar levels to prepare you for action.

As a result of this increase in blood sugar, you may be further stressed because you can't control your diabetes. It is hard to remove stress from your life, but you can learn to handle it. Dealing with stress in a positive way will help control your diabetes. **Try these hints to help handle stress.**

- 1. Relax:** Take time to relax each day. Listen to music, sit with your feet up, read a book or imagine yourself in a peaceful spot.
- 2. Be Physically Active:** Move to your favorite music for 30 minutes or get outside, take a walk and enjoy nature.
- 3. Find Support:** Attend a diabetes support group or talk to a friend or counselor about your feelings and concerns.
- 4. Be Realistic:** Learn to "let go" of things which are outside your control. Tackle one thing at a time and don't try to be perfect.
- 5. Be Kind to Yourself:** Get enough sleep, avoid excessive alcohol and caffeine, and practice deep breathing. ☺

## CLINICAL TRIALS

If you are interested in participating in our research studies, call our recruiting department at (225)-763-3000, or visit [www.pbrc.edu](http://www.pbrc.edu) or email [clinicaltrials@pbrc.edu](mailto:clinicaltrials@pbrc.edu).

Irene W. Pennington

## WELLNESS DAY for WOMEN



▲ Lucy Baudry, attendee and door prize winner, with her niece Anita Cambre.



▲ Lauren Shows, Lead Aesthetician, The Medical Spa of Baton Rouge; Diana Luikart, Wellness Day for Women Committee Member and Community Advocate; Dr. Kenyatta Shamlin, owner of the Medical Spa of Baton Rouge

▲ Dr. Kenyatta Shamlin, The Medical Spa of Baton Rouge; Paula Neck, Blue Cross and Blue Shield of Louisiana Foundation; Marilyn Shalley-Damberg, RN, MSN, Our Lady of the Lake Medical Center; Henry Burrell, Community Coffee House; Dr. Donna Ryan, PBRC

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## DID YOU KNOW...

PBRC is working with teachers and students in schools throughout Louisiana to improve the



health and nutrition of children across the state. Please help support the work of PBRC by making a gift today.

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Please make a gift today to help continue the vital funding for nutrition-based research. PBRC is striving to prevent premature death from chronic diseases such as heart disease, diabetes, cancer and obesity. Your support will provide funds for vitally needed research equipment, expanded laboratory facilities and resources for recruitment of world-class faculty members.

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 6400 Perkins Road  
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