

2005-2010

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VISION

PENNINGTON BIOMEDICAL
RESEARCH CENTER

2010

A Strategic Plan



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Executive Director

The new Pennington Biomedical Research Center Strategic Plan, *Vision 2010*, covers the period from 2005 to 2010. This new Strategic Plan is being launched at a critical time in the history of the Center. By almost any indicator, the Center is a success story. Based on the original gift of C.B. "Doc" Pennington in 1980, the Pennington Biomedical Research Center was opened in 1988, and Dr. George A. Bray became its first full-time Executive Director the next year. There was modest growth in the first few years, but later the number of faculty and the number of grant awards and contracts grew steadily. By 1999, when *Vision 2005* – our first strategic plan – was developed, the Center had about 45 faculty and 350 support staff with an operating budget of about \$22 million. It could only be described as a remarkable achievement considering the difficulties associated with launching a new research institution.

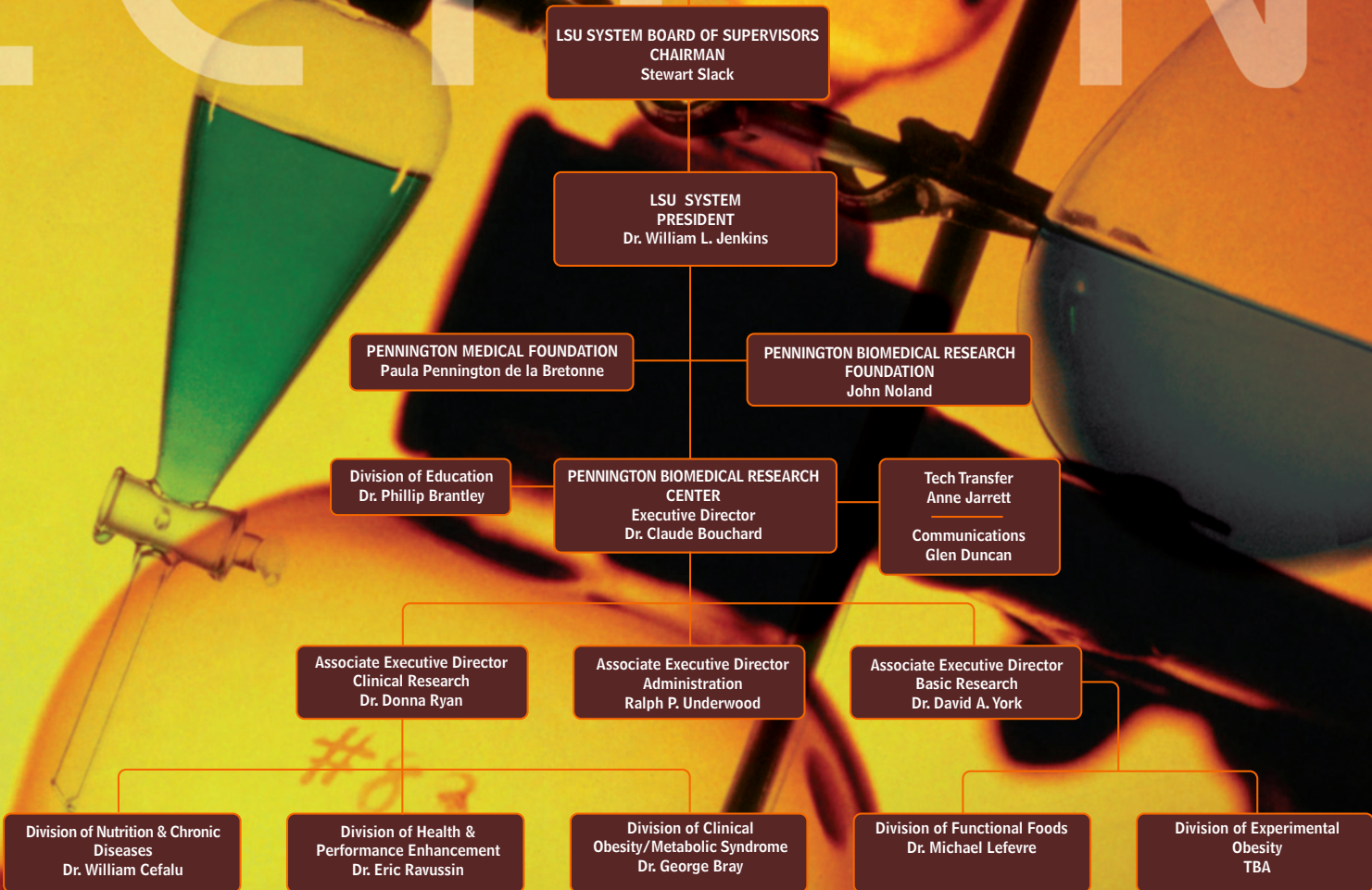
As we near the end of the first Strategic Plan, it is an opportune time to review the progress made over the 2000-2005 period and to set new strategic goals for the next five years. To this end, we launched a vast planning operation in January 2004. The result is *Vision 2010*, the Pennington Biomedical Research Center Strategic Plan for the period 2005-2010. It is with great pleasure that I submit this new plan to the President of the Louisiana State University System, the Board of

Supervisors of the LSU System, the Board of the Pennington Medical Foundation, the Board of the Pennington Biomedical Research Foundation, faculty and employees of the Center, the External Advisory Board of the Center, and to all those in our community and in the State of Louisiana. Each have helped us over the years, have interest in the future of the Center and believe that it can be a leading institution in science, preventive medicine and in the evolution towards a knowledge-based economy for our region.

Vision 2010 reflects the new maturity level of the Center and its growing seniority status in the scientific community. It is characterized by a series of ten priorities designed to increase the depth of scientific expertise of the faculty and to enhance the contribution of the Center to preventive medicine in accordance with its mission. The Plan will require the infusion of \$75 million of new money over the current operating budget during the next five years. If the Plan is realized in full, it will propel the Pennington Biomedical Research Center as the leading institution in the world of nutrition and preventive medicine. With the support of the leadership of the Louisiana State University System, the State of Louisiana, the Pennington Foundations, the local business, health care and philanthropic communities, and other state and local institutions, we can meet these ambitious goals.

Organizational Chart

E C T I N



The Pennington Biomedical Research Center launched its first Strategic Plan in early 2000. It emphasized four long-term goals:

1. Build a world-class research center in nutrition and preventive medicine.
2. Generate cutting edge and influential research.
3. Maximize the benefits of technological advances and new discoveries made at the Center.
4. Contribute to the economic development of the State of Louisiana.

Vision 2005 was an ambitious Strategic Plan, calling for almost a doubling of the

faculty and support staff, the addition of 200,000 square feet of research space, and a doubling of revenue to support the research programs.

We created a new organizational structure (*see previous page*) and management team of the Center, including the establishment of an Executive Committee, a Management Committee, and the consolidation of five major administrative and operational services. The Center is now better aligned to manage the growth in human resources and research space and the increase in complexity of the research programs. Thanks to the support of the Pennington Medical Foundation, we have also completed a new 180,000-square-foot Basic Science Laboratory Building. When fully occupied, this new facility will make it possible for about 30 faculty, 80 postdoctoral fellows and 200 support staff to be engaged in research. We established five research Divisions and a Division of Education. The faculty was grouped among nine basic research laboratories and four clinical research units in order to reduce fragmentation

and increase faculty interactions. We consolidated 16 core services to provide support to the research programs. The number of faculty has increased to about 70 including 45 new recruits who joined the Center in the last

five years. We now benefit from collaborations with about 50 adjunct faculty from various institutions across the State of Louisiana.

The Pennington Biomedical Research Center's yearly appropriation from the general fund of the State of Louisiana has increased by about \$4 million over the last five years, slightly below our original target, to the current total of \$10 million. Funds generated by the faculty through federal grants, corporate contracts and other awards have doubled to about \$30 million. In addition, the number of postdoctoral fellows trained at the Center has doubled and is now about 50. The Division of Education has created a high-quality International Scientific Symposium Series with two yearly meetings plus a series of other initiatives. The contribution of the Center in the regional economy has grown significantly as evidenced by the out-of-state dollars awarded to its faculty, its building expansion program, its growth in technology disclosures and patent applications, to name but a few.

The plan projected revenue growth to support operating costs, from \$22 million in 2000 to about \$45 million by 2005. We essentially achieved this goal primarily due to the success of our world-class faculty in attracting competitive research grants from federal agencies and industry. The increase in the base funding from the state of Louisiana played an important role as it provided us with the seeding resources to attract new faculty to the Center. In addition, several new endowed chairs were funded by private donors and matched by the Board of Regents Eminent Scholar Fund over the last few years.

The next chart compares a number of indicators in 1999 (the year we created *Vision 2005*) with the reality at the outset of 2005.

VISION 2005 Accomplishments

VISION

Tracking our progress toward Vision 2005

Goals set in 2000

- Create 4 key Research Divisions
- Double operating budget from \$22 million to \$45 million
- Expand faculty from 45 to 90
- Increase total personnel from 350 to 750
- Construct 3 new research buildings totaling 180,000 square feet: a basic science building (100,000 sq. ft.); a clinical research building (40,000 sq. ft.); and a building for population and prevention studies and for the education programs (40,000 sq. ft.)
- Create educational program
- A new lodging facility to be built
- Increase Chairs and Professorships from 7 to 20
- Increase postdoctoral fellows from 19 to 100
- Upgrade to physical plant
- Increase core services from 15 to 20
- Increase number of labs from 27 to 60

Status at end of 2004

- Center organized into 5 Research Divisions.
- 2004 – 2005 budget is about \$40 million
- About 70 by end of 2004
- About 600 by end of 2004
- Basic Science Laboratory Building is completed (180,000 sq. ft.); Clinical Research building on hold; about 5,000 sq. ft. of temporary building space currently in use; construction of a new 15,000 sq. ft. wing plus renovation of space in the Pennington Conference Center are in final planning stage for the population and prevention studies
- A Division of Education Programs has been created
- Project was cancelled
- 12 chairs and professorships fully funded
- About 50 postdoctoral fellows by the end of 2004
- Addition to the central facility; 250 new parking spaces; new driveways, sidewalks and extensive landscaping, primarily for Basic Science Laboratory Building
- Consolidation in 16 core services
- Consolidation in 13 labs or research units which incorporate 37 smaller groups

Vision 2010

Our Vision Statement is the cornerstone of our strategic planning because it effectively captures how we would like the Center to be perceived. The Vision 2010 is embodied in the following statement: By the year 2010, the Pennington Biomedical Research Center will be the leading nutrition and preventive medicine research center recognized for the outstanding quality of its research, its contribution to scientific discovery, and its commitment to professional and public education initiatives. The next five years will be critical for the future of the Pennington Biomedical Research Center. It has the potential to become the leading nutrition and preventive medicine research center in the world and a major biomedical research institution. The development of the Strategic Plan has been influenced by several major considerations that are briefly summarized here.

Mission Statement

In Vision 2010, the Mission of the Pennington Biomedical Research Center remains unchanged. It is "to promote healthier lives through research and education in nutrition and preventive medicine." This Mission Statement has considerable implications. It defines the scope of programs and activities that are compatible with the nature of our institution and on which we should expend our resources. It requires that the Center be multi-disciplinary with adequate strengths in the basic science, clinical research, population science and translational research. It also emphasizes that education is an important component of the Center's activities with multiple target groups.

Overarching Goals

We remain committed to the following long-term goals:

1. Build a world-class research center in nutrition and preventive medicine.
2. Generate cutting edge and influential research.
3. Maximize the benefits of technological advances and new discoveries made at the Center.
4. Contribute to the economic development of the State of Louisiana.

Even though the center has not yet reached its full potential, it has clearly grown beyond its infancy stage. Vision 2010 sets new goals encompassing the period from 2005 to 2010 for this campus of the Louisiana State University System.

Prevention of Premature Death

An institution like the Pennington Biomedical Research Center is more important than ever not only from a local but also from a national perspective. There are approximately 2.3 million deaths per year in the USA. Common chronic diseases cause almost 1.5 million of these deaths. The major causes of the latter include the familiar culprits: cardiovascular disease, cancer and the complications of obesity and diabetes mellitus. Together they account for about one million of these deaths. Why we develop these diseases in such large numbers continues to be a major topic on the research agenda. However, there is plenty of evidence to support the thesis that our genes, our behavior and a variety of social and environmental factors are contributing to the development of these diseases. An institution devoted to preventive medicine needs to take all these complex causes into account in its effort to shed light on the specific role of nutrition. By one CDC estimate, 435,000 people died in 2000 as a result of their smoking habits, with perhaps as many as 400,000 mortalities occurred in the same year because of poor nutrition and a sedentary lifestyle. Understanding the mechanisms by which the latter occurred, the role that a genetic predisposition may have played and how to prevent such premature deaths represent one of the major challenges that can only be addressed through cutting edge research.

Overview

Quality of Life

Causes of deaths and death rates, however, do not fully represent the reality of health and well-being. Quality of life is extremely important, particularly as one gets older. In this regard, preventing morbidities and remaining free from disability are of the utmost importance. As the population gets older with many more Americans living 80 years of age and beyond, preserving personal autonomy and a high quality of life has moved into the forefront of the health agenda. For instance, more than 20% of Americans over the age of 65 live with at least partial disability. Above the age of 85, 45% of men and women need some assistance with basic activities of daily living. This is an area where the research programs of the Pennington Biomedical Research Center can make a significant contribution. Indeed, there is not one single cause accounting for the way we look and feel as we get older. It is evident that one's genes play a critical role, but nutrition and physical activity are also two important determinants of the decline in overall physical and cognitive independence and in well-being associated with aging. It would be shortsighted to focus only on the period after retirement to study the mechanisms and conditions under which the prevention of physical and mental deterioration can occur. Indeed, prevention should begin as early in life as possible and, as a result, the center will continue to make important investments in developmental biology, maternal biology and pediatrics.

Economic Development

The Pennington Biomedical Research Center has the potential to be a major economic development institution in a local and state perspective. We expect that the Center will play a growing role in the state economy as it continues to bring in more federal grants and private sector contracts, to attract more postdoctoral fellows from out-of-state, to generate more technology disclosures, patents and licensed technologies, and to spin off knowledge-based companies. During the last ten years, the Pennington Biomedical Research Center has been one of the most productive investments made by the State of Louisiana. For every dollar invested by the state, the Center attracts a minimum of \$3 from out-of-state grants and contracts. Thus the \$93 million contributed by the state since the opening of the Center have made it possible to attract more than \$200 million in grants and contracts plus contributions of about \$125 million from the Pennington Medical Foundation for construction, equipment and general support during the last 15 years. Overall, the Pennington Biomedical Research Center has proven to be an excellent investment and promises to be an even greater economic engine in the future.

Human, Physical and Financial Resources.

The Pennington Biomedical Research Center operates in a highly competitive environment. To be successful, the Center depends first and foremost on the quality and productivity of its faculty, postdoctoral fellows and employees. In the quest for excellence, nothing can replace the strength of the faculty. However, there are also several other factors that can make a difference between an average performance and excellence. Having a first class physical plant, being able to count on philanthropy for resources that are otherwise out of reach, and receiving the support of state and local leaders and agencies increases the probability of success. A clear mission, well-defined goals, a concrete plan to achieve these goals, well-organized laboratories, core facilities and support services, and a competent management and leadership team are extremely important factors that make a difference.



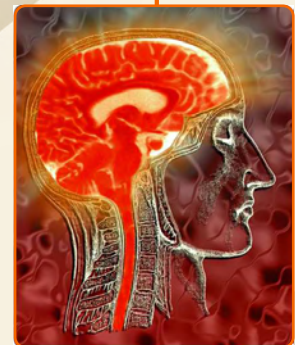
The Basic Science Programs at the Center have grown considerably during the last five years. The new Basic Science Laboratory Building that became available for occupancy in January 2004 has played a key role in this regard. Because it became available relatively late in the last Strategic Plan, we were not able to recruit as many basic scientists as we had planned.

However, this recruitment effort will continue at a steady pace over the next several years. There are currently two divisions reporting to the Associate Executive Director for Basic Research: the Division of Functional Foods and the Division of Experimental Obesity. The Division of Functional Foods focuses on biologically active components in foods that impart health benefits. The Division of Experimental Obesity focuses on understanding the central and peripheral regulatory systems involved in the control of energy balance and, potentially, of body weight. Nine major laboratories encompassing about 20 smaller units contribute to the basic science effort of the Center. During the next five years, we intend to increase the depth of these units so that the science produced at the Center becomes even more influential. To this end, several senior scientists will be recruited. Of the 10 priorities set for the next five years, three pertain to the basic science programs of the Center.

Priority 1

Establish a Division of Nutrition and the Brain

This new division would be a natural next step for our neuroscience research activities. Currently, more than ten faculty conduct research relevant to this area. The creation of such a division should foster collaboration among faculty and high-quality faculty recruitment.



Basic Science Programs

Priority 2

Expand Comparative Biology and Enhance the Transgenic Animal Core

The Comparative Biology facility has already become too small and cannot accommodate further growth in the basic science programs. It has become necessary to add about 25,000 square feet of new space to this facility. In addition, the number of scientific personnel of the Transgenic Core facility needs to be increased. Additional support staff will be needed for the expanded services and for the management of behavioral studies in animal models. Collaboration with LSUHSC and Tulane Medical centers on gene delivery systems should be enhanced.

We anticipate these measures will result in an increased production of genetically engineered animals and a wider range of manipulations including knockouts, tissue-targeted knockouts, knockdowns, conditional and targeted expressions, more research space for use of viral vectors and other biohazardous agents, and better facilities and equipment available for behavioral research in animal models.



Priority 3

Increase Expertise in Developmental Biology and Genetic Epidemiology

We believe that our goal of increasing the depth of our current research effort will necessitate the appointment of several new, highly productive and well-established faculty. We intend to fill an already funded endowed chair in fetal and maternal nutrition and to appoint more faculty in developmental biology, aging, stem cell biology, nutrient sensing and cell signaling, epigenetics and genetic epidemiology. It is among our priorities to establish stable funding mechanisms for a number of key core services, including genomics, bioinformatics, proteomics, microscopy and transgenics.

Overall, we anticipate that these measures will result in a much stronger basic science research program and lead to increases in the number of externally funded grants, the number and quality of publications, the number of postdoctoral fellows, and the number of technology disclosures and patent applications.

The research programs of the Center focusing on people encompass clinical research and population and prevention studies. Three research divisions report to the Associate Executive Director for Clinical Research: Division of Nutrition and Chronic Diseases, Division of Health and Performance Enhancement, and Division of Clinical Obesity and Metabolic Syndrome. The Division of Nutrition and Chronic Diseases focuses on the relationship between nutrition and heart disease, diabetes, and cancer by combining basic and clinical science disciplines. The focus of the Division of Health and Performance Enhancement is on improving health and performance throughout the life cycle by studying gene-diet and gene-physical activity interactions. The Division of Clinical Obesity and Metabolic Syndrome focuses on the prevention and treatment of obesity and its metabolic complications, including those observed at an early stage in the metabolic syndrome.

Over the next five years, we intend to aggressively expand the clinical research portfolio of the Center as well as the population and prevention study area. This will require new clinical research space and the recruitment of additional senior faculty. Three priorities have been identified and are summarized below.



Priority 4

Expand Clinical Research, Population Research and Imaging facilities

Additional space will be required if the Center is to achieve its potential in these areas of research. In a first phase, we propose to build a 15,000-square-foot extension to the Conference Center in order to bring under the same roof all the faculty and staff devoted to population and prevention research. We will also renovate space for an in vivo biochemistry and imaging (MRS) laboratory and will acquire the necessary equipment for such studies. Finally, in a second phase, we would like to build a major Clinical Research Building of about 80,000 square feet linked to our existing facility.

Clinical, Population & Prevention Research



Priority 5

Increase expertise in pediatric obesity, aging, metabolic syndrome, physical activity and wellness, minority health behaviors and population health assessment

The expansion of the clinical and population research programs will require the recruitment of several senior and junior faculty. Two already funded endowed chairs will need to be filled, one in pediatric obesity and diabetes, the other in health wisdom. Additional recruitment efforts should focus on nutrition and metabolic diseases, aging, metabolic syndrome, physical activity and wellness, nutritional epidemiology, biostatistics, clinical trials, and community and population studies. It will also be necessary to recruit experts in MRS and other imaging technologies.

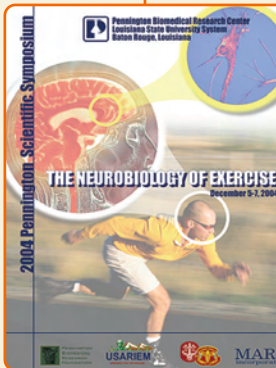
Priority 6

Secure NIH center grants and obtain designation and funding as a satellite of an NIH-funded GCRC

One of our priorities is to secure more funding from the National Institutes of Health through a number of competitive programs. Securing such funding is obviously a personal priority for each faculty at the Center. However, we also need to acquire center grants. Among the programs that we are targeting for the next five years are the Clinical Nutrition Research Unit (CNRU), Obesity and Nutrition Research Center (ONRC), and Botanical Research Center. Additionally, we intend to become a satellite of an existing NIH-funded General Clinical Research Center (GCRC) subject to appropriate arrangements.

The major indicators of success for our Clinical, Population and Prevention Research Program will be the number and quality of the new faculty recruited; the number of new externally funded grants, the quality of scientific publications; and the number of postdoctoral fellows. Achieving our goals of securing center grants from NIH will also provide strong evidence of success.

The Division of Education was established in 2002 to promote the Pennington Biomedical Research Center as a world-renowned research institution and to provide education on health and nutrition. The Division is composed of five major programs. It serves as the Center's Office of Postdoctoral Studies, which was established to support the training of postdoctoral fellows to become productive research scientists. The Division coordinates the Pennington International Scientific Symposium Series that attracts world-renowned scientists to the Baton Rouge area and allows them the opportunity to interact and synthesize knowledge in selected areas of nutrition and preventive medicine research. In a collaborative program with the LSU Agricultural Center, the Division offers research-based training and educational materials to Louisiana extension agents to support their community nutrition education efforts in parishes throughout the state. The Division's Women's Nutrition Research Program promotes research and educational events on important women's health issues. Finally, the Division sponsors professional and community health seminars for translating research into useful information for both health care providers and the general public to impact the health of the citizens of Louisiana. During the next five years, the Division of Education will pursue three major priorities.



Priority 7

Expand the Postdoctoral Program

Increasing the size of the Center's institutional postdoctoral training program will require attracting larger numbers of high-caliber applicants. To attract applicants we need to advertise a program that will be perceived as a valuable training experience. The major attraction for postdoctoral fellows is an institution with highly respected faculty mentors. Potential applicants also consider whether the institution has formal training programs for fellows. The Division of Education will continue to support postdoctoral training by developing new training opportunities both in terms of didactic instruction and hands-on training. Along with our established coursework in nutrition and research ethics, we will offer seminars in grantsmanship, laboratory management, and other key skills essential for research scientists.

We hope to increase the current number of postdoctoral fellows from 50 to 100. To expand our number of postdoctoral fellows we need to create more funded positions. We will pursue increased federal funding by applying for additional institutional training grants and by encouraging Center scientists to include postdoctoral positions in their research grant applications. One of our goals will be to develop an endowment that will support a number of fellows each year or supplement the salaries of the most meritorious candidates. Finally, we will increase our exposure to graduate students at academic campuses in southern Louisiana by encouraging our faculty to pursue adjunct appointments and by encouraging graduate students to participate in research at the Center.

Education

Priority 8

Expand Community and Professional Education Efforts

Since research is the priority at the Center, expanding educational programs must not place an undue demand on existing resources. To avoid this, the Division of Education will rely on two approaches:

The Division of Education, along with the Pennington Biomedical Research Center Administration and the Pennington Biomedical Research Foundation, will participate in efforts to secure an endowment to fund the Pennington International Scientific Symposium Series. The Division will also pursue funding from state and federal agencies in the form of demonstration grants that involve the training of health care professionals in the management of obesity and its related medical diseases.

Progress in the area will be monitored through a variety of indicators. We will increase the number of annual scientific symposia from two to three per year to fulfill our professional education mission and to heighten the visibility of the Center in the scientific community. To support these symposia we will establish an endowment with a revenue-generating target of \$200,000 per year. The Division will attempt to acquire at least one external grant to support the training of healthcare professionals. Collaborations with existing educational programs will be monitored to assess impact factors including number of website articles contributed by the Center staff, number of seminars presented and number and types of educational materials developed.

1. Explore innovative ways of using existing, outside educational resources, e.g., partnering with organizations which already have health education programs, and using the scientific knowledge and technical expertise of the Center to enhance these programs.
2. Acquire external training funds to expand professional and community educational programs.

Priority 9

Pursue partnerships to establish a wellness center with research-based wellness programs

The Division of Education, along with the Pennington Biomedical Research Center Administration and the Pennington Biomedical Research Foundation, will encourage and participate in negotiations aimed at the establishment of a research-based wellness center. This center would allow the Pennington Biomedical Research Center to offer state-of-the-art nutrition and wellness programs to the citizens of the Baton Rouge metropolitan area while maintaining a valuable scientific database on participants. We will explore the feasibility of such a project with potential sponsors with the goal of identifying a partner willing to underwrite the costs for building and equipping such a center. Careful feasibility studies will be performed to ensure that wellness center plans remain aligned with the Center's research mission.

It is crucial that the scientific and education programs of the Pennington Biomedical Research Center be supported by an adequate administrative structure and high-quality services. Clearly, this requires increasing the resources of the various support services to meet the demands imposed by the growth of research and educational activities. With the exception of the Communications Department and the Intellectual Property, Legal and Regulatory Affairs Office, the Center's support services are organized under the Associate Executive Director for Administration and Finance.

Priority 10

Expand the administrative and service resources to sustain the growth of the research and education programs

Fiscal Operations

This service consists of 11 employees and is headed by the director of Fiscal Operations. We anticipate that it will be necessary to add four new employees during the next five years, two business managers and two administrative assistants

Human Resources

This service consists of seven employees. During the next five years, the director of Human Resources will need to add at least two more analysts to the service.

Sponsored Projects Administration

This office is currently staffed by an assistant director and a grant specialist. A full-time director of the service plus another grant specialist will need to be added during the next five years to keep up with the demand.

Computing Services

This office currently has 13 staff members including the director, an assistant director, three data processing managers, three systems analysts, four application analysts, and a telecommunications analyst. It will be necessary to expand the physical and human resources of the service during the next five years. For instance, we will have to add cooling units, expand the storage area network and upgrade servers. We will have to add as many as three new employees as well.



Administration & Services



Communications

This service has been re-organized, and its director now reports directly to the Executive Director. During the next five years, we anticipate that it will be necessary to add a media specialist, a web designer and several student workers to the service.

Facilities Management

The director of Facilities Management relies on 19 employees to maintain the existing buildings and grounds and to oversee new construction and renovations. In the next five years, this office will expand its staff by at least two new employees. In addition, the security staff contracted through LSU will expand by one additional officer. Moreover, facilities expansion in comparative biology, clinical research, and the addition and renovations to the conference center for population and prevention studies will increase substantially the yearly facility operating costs. We also anticipate replacement of heating and air conditioning units as well as other equipment that has been in operation for about 20 years in the oldest buildings of our campus.

Intellectual Property, Legal and Regulatory Affairs

This service is a recent creation, and its director reports to the Executive Director. The Office of Intellectual Property, Legal and Regulatory Affairs oversees activities involving economic development, technology transfer, and commercialization of research as well as activities involving legal, regulatory and compliance functions. Both areas of the office are expected to grow during the next five years.

As the number of technology disclosures, patent applications, license agreements, joint ventures, new business start-ups, and other economic development activities continues to grow, additional expertise and support staff will be needed to provide the services necessary to ensure success. Based on the projected growth of commercialization activities, it is anticipated that the office will need to increase its staffing to include a full-time technology transfer commercialization coordinator and a technology transfer fiscal manager in addition to a number of interns.

With the volume of contracts, regulatory mandates, and compliance requirements increasing, the office staff will need to be expanded to meet these demands. It is anticipated that during the next five years, the compliance requirements will increase to a level that will require a full-time administrative and compliance coordinator.

The implementation of *Vision 2010* will require a considerable amount of new resources. In this section, we summarize the expected increases in human and physical resources from the end of 2004, the baseline year, to 2010. These estimates will be used in the next section to develop the business plan and define the additional funding and its sources for the Strategic Plan to be successful.

1. Human Resources

Faculty and postdoctoral fellows
There are currently about 70 full-time faculty of all ranks at the Center, plus about 50 adjunct faculty and 50 postdoctoral fellows. We expect that the number of faculty will reach 100 by 2010. The number of fellows should also be about 100, while the increase in the number of adjunct is likely to be more modest, reaching perhaps 75.

Research support personnel
The research staff includes laboratory coordinators, research associates at three levels of qualification (bachelor, master or doctoral degrees), study coordinators, dieticians, nurses, data management specialists, animal caretakers, graduate assistants, student workers and others. These individuals work in research laboratories, on clinical projects or in one of our 16 core services. Currently about 240 research support personnel work at the Center. We predict an increase to 400 by 2010.

Administrative staff
Although administrative costs have been a decreasing percentage of overall budget in recent years, it will be necessary to expand the administrative area to properly support projected increases in research activity and to ensure continued growth. At present, about 60 administrative staff are employed at the Center. We expect that this number will increase to about 75 by 2010.

Educational programs
We anticipate adding three new resources to the Division of Educational Programs during the next five years.

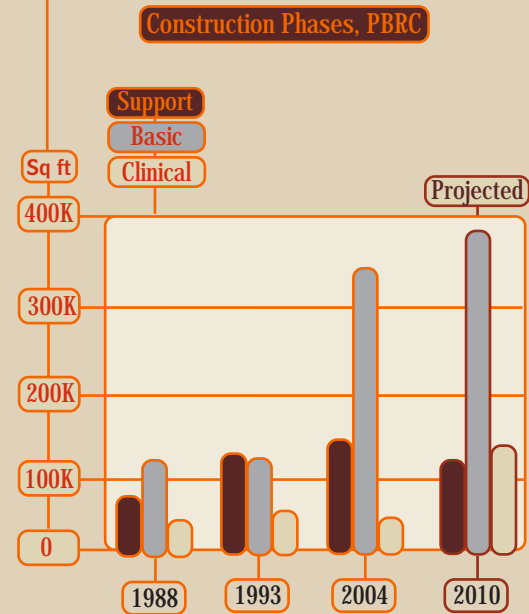
In summary, we predict an increase of about 50% of the overall human resources working at or associated with the Pennington Biomedical Research Center by 2010.

2. Facility Resources

To support this expansion of the research and education programs, it will be necessary to build new facilities. The construction program for the five-year period includes the following:

Phase 1 of the Clinical Research Expansion
This building will take the form of a new wing of about 15,000 square feet linked to the Conference and Education Center. In addition, some space in the west section of the same building will be renovated to accommodate new scientists and their teams. This facility will house the population and prevention research component of our Clinical Research program, and the total space devoted to these studies will reach about 36,000 square feet.

Position	Current Level	Predicted by 2010
Faculty	70	100
Adjunct Faculty	50	75
Postdoctoral Fellows	50	100
Research and Support Staff	240	400
Administrative Staff	60	75
Graduate Assistants and Student Workers	155	200
Total	625	950



Human & Physical Resources

Imaging and In Vivo Biochemistry Laboratory

This will require the re-dedication of some existing laboratory space or the construction of about 2,000 square feet of new space to house MRS equipment and related resources.

Comparative Biology Expansion

The existing Comparative Biology facility is at capacity. To sustain the growth of our Basic Science program, it will be necessary to expand the current 40,000-square-foot building by about 50%. This expansion will also make it possible to enhance our Transgenic Core service capability.

Phase 2 of the Clinical Research Expansion

The extraordinary potential of the Center in the area of Clinical Research is such that we cannot keep up with the current demands and are forced to bypass many opportunities presented to us. To achieve our potential in this area, we will need to add another building entirely devoted to clinical studies and intensive clinical physiology and behavior research. We are therefore planning a Phase 2 expansion in the form of a four-floor, 80,000-square-foot building connected to the existing clinic building.

Upgrades, Renovations and Maintenance

Half of the research space and all the administrative facilities of the Center are now about 20 years old. We anticipate that we will have to upgrade and replace several units in these buildings during the next few years. Moreover, it will be necessary to renovate the existing space and add extra square feet for computing services within the next five years.

In summary, it will be necessary for the Center to achieve its growth during the next five years to add major facilities, particularly in the clinical research area and in the comparative biology core service.

3. Equipment Resources

In general, the equipment needs of the Center are met by general funds but also by special grants awarded from federal agencies. We anticipate that the research and computer equipment required in the context of this five-year plan will also be covered by the same sources.

In summary, the cost of implementing the ten priorities defined in this plan will require about \$75 million of new money during the next five years. The cost associated with each of these priorities is listed in the following Table.

Priority	Operating Cost	Building Cost
1	\$2.0M	--
2	\$2.0M	\$15.0M
3	\$3.0M	--
4	\$2.0M	\$30.0M
5	\$5.0M	--
6	\$1.0M	--
7	\$1.0M	--
8	\$1.0M	--
9	--	--
10	\$8.0M	\$5.0M
Total	\$25.0M	\$50.0M

The current operating budget (FY 2004-2005) of the Center is about \$40 million. We estimate that without any special initiatives such as those defined in the current Strategic Plan, the operating budget of the Center would grow by approximately \$5 million per year. Thus it will reach about \$65 million by 2010. However, as a result of the emphasis on the ten priorities defined in the plan, we estimate that the budget of the Center will become significantly larger during this five-year span.

The total cost of implementing the ten research, educational, administrative and other services priorities of the 2005-2010 Strategic Plan is estimated to be about \$75 million during the five years of the plan. Of this amount, \$50 million will be capital costs for construction or renovation of facilities and for equipment. The remaining \$25 million will be increased operating costs resulting from the new activities and expanded facilities. The next table summarizes the increases in the operation budget of the Center plus the \$75 million that will be necessary to implement the initiatives defined in the plan. The total amount of funds to be expended over the next five years reaches \$350 million. (See graph depicting revenue sources for this five-year expenditure:)

The plan for funding the additional costs associated with the implementation of the Strategic Plan is described in the following paragraphs.

New Capital Costs

The \$50 million of anticipated capital spending from 2005 through 2010 result from five projects:

1. Expansion and renovation of the conference center to provide space for population studies (\$5 million).
2. Equipment and dedicated space for the imaging facility (\$3 million).
3. Expansion of the Comparative Biology facility (\$15 million)
4. Construction of a new, 80,000-square-foot clinical research building (\$22 million).
5. Miscellaneous upgrades to the original buildings and to our computer infrastructure (\$5 million).

The Pennington Medical Foundation has committed approximately \$500,000 for renovation of existing space which will be dedicated to an in vivo biochemistry and imaging facility. The Department of Defense has approved the use of grant funds for approximately \$2.5 million needed to acquire the MRS equipment.

To provide space for population and prevention research, the Pennington Medical Foundation is considering a proposal to commit \$5 million to fund a new wing and renovation of conference center in Phase 1 of the Clinical Research expansion. Work should begin as soon as possible in 2005 after securing the appropriate approvals from the LSU Board of Supervisors and the Louisiana Board of Regents.

\$15 million required to increase the Comparative Biology facility by 50% is not yet secured. Plans are to request funding for this facility primarily through the National Institutes of Health.

Baseline	FY 2005	Base Budget	Strategic Plan Operation	Strategic Plan Capital
		\$40 M		
	FY 2006	\$45 M	\$3 M	\$8 M
	FY 2007	\$50 M	\$5 M	\$2 M
	FY 2008	\$55 M	\$5 M	\$16 M
	FY 2009	\$60 M	\$6 M	\$12 M
	FY 2010	\$65 M	\$6 M	\$12 M
Totals		\$275 M	\$25 M	\$50 M

Business Plan

We anticipate that the Pennington Medical Foundation will provide funding for Phase 2 of the Clinical Research building expansion sometime during the latter stages of this five-year plan. In the interim, actions are being taken to reduce obligations that the foundation currently has in operating the conference center, thereby freeing funds that will allow the construction to occur.

\$5 million required for miscellaneous upgrades to the original Center buildings and to the computer infrastructure will be funded through a variety of sources, including hopefully private philanthropy.

New Operating costs

We estimate that approximately 60% of the projected \$25 million in operating costs will come from the general fund from the State of Louisiana. This would represent an increase in the total contribution from the state of \$15 million during a period of five years. Since 1990, the State of Louisiana has been an important partner in the growth and success of the Pennington Biomedical Research Center. In the early years of the Center, state funding provided approximately two-thirds of the Center's operating funds. As the Center matured, the portion of operating funds that were

provided through external funding sources has steadily increased. Today the Center generates \$3 to \$4 of non-state funding for each dollar provided by the State of Louisiana. However, the state funds remain a critical component of the Center's funding, and state funding of 25% of the operating budget is necessary for the Center to continue its present rate of growth.

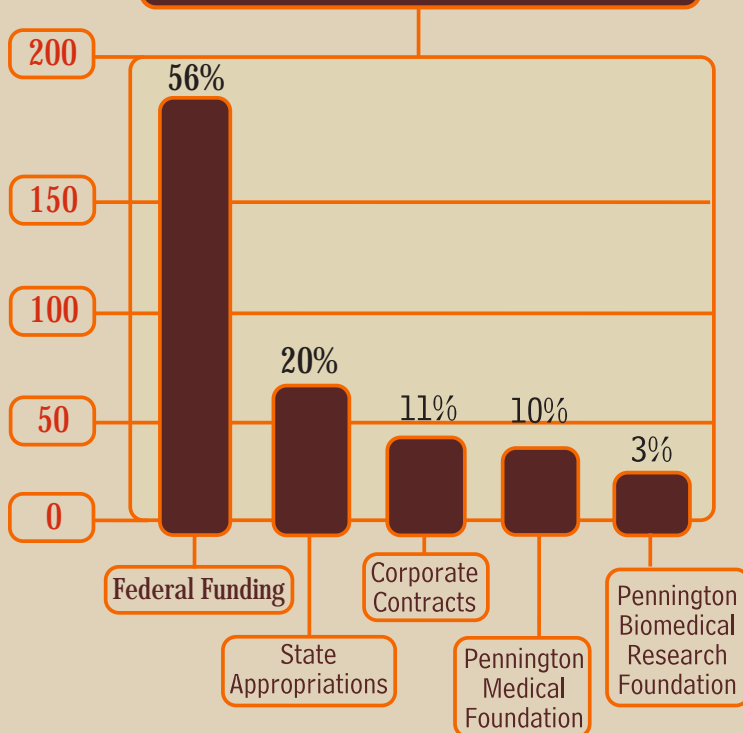
The remaining 40% of the operating costs necessary for the implementation of the

Strategic Plan should come from a variety of sources, including contributions from the Pennington Medical Foundation, the Pennington Biomedical Research

Foundation, and other philanthropic sources. This is a conservative scenario as the new partnership between the Center and USDA in the area of research on the prevention of obesity and other initiatives is likely to add significant resources to our operation costs during the next five years. We will work diligently to turn our vision into reality. Our greatest challenge is to raise unrestricted funds, money which we may use to recruit new faculty of world-class reputation. Unrestricted funds are also necessary for administrative costs, computer services, education programs, tech transfer activities, communications and general expenses of the Center.

In summary, the Pennington Biomedical Research Center's Vision 2010 is an ambitious blueprint for the future of the Center. If successful, the Center will experience a 50% increase in its workforce and research and education programs. This level of growth will make it possible to achieve the prominence that the Center is seeking in the domain of nutrition and preventive medicine around the world. There will be many economic and disease prevention benefits for the people of Louisiana associated with this expansion. However, complete, successful execution of Vision 2010 will require the total support of all our stakeholders. Since the Center does not have a body of graduated alumni, these stakeholders include primarily the State of Louisiana, the Board of Regents, the Louisiana State University System Board of Supervisors, civic, health care and business leaders, the Pennington Medical Foundation and the Pennington Biomedical Research Foundation. Our stakeholders have given us strong support in the past. We hope that they will continue to recognize that an investment in the Center is a wise investment in our economy and in the health and quality of life of the children and adults of the state and the country.

Revenue Sources for Vision 2010



The Pennington Biomedical Research Center grew quite significantly under the Strategic Plan implemented in January 2000. Although at the close of the 2000-2005 Strategic Plan we still had some unmet goals, we are not simply reiterating them in our new Strategic Plan. Rather, we are setting new major challenges for the Center for the period 2005-2010.

Our mission remains the same, but we have clarified and amplified our vision to “be *the leading* nutrition and preventive medicine research center” in the world by 2010. This vision foresees the Center’s role in specific outcomes in our global community: prevention of premature death, improvement in quality of life and positive economic development, all of which require directed and intentional growth in our human, physical and financial resources.

Perhaps our most important goal in **Vision 2010** is to increase our ability to conduct clinical research. Our first step will be to convert campus buildings previously used for conferences and education to clinical research space. That will be complemented by the addition of a modest new building until we secure financing for a major expansion of our clinical research space. In Vision 2005, we added 180,000 square feet of basic research laboratory space. In Vision 2010, we intend to expand our clinical research space by about 110,000 square feet. In addition, we have begun to establish convenient, off-campus locations at which clinical research participants can be screened for specific studies and receive the instructions associated with their research protocols, including receiving standardized meals. This is especially

important to attract greater numbers of African-Americans to clinical trials designed to answer important questions about the prevention and treatment of conditions such as diabetes, obesity and cardiovascular disease.

Vision 2010 has defined 10 priorities, which in abbreviated form are:

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.

Executive Summary



The faculty, staff, research space and support functions necessary to achieve our priorities result in an ambitious list of goals and a bold business plan. We project operating expenses to grow from about \$40 million per year to \$65 million per year by 2010 independently of the additional costs associated with the implementation of the 2005-2010 Strategic Plan. The Plan predicts that we will expend \$75 million more during the next five years in the pursuit of the 10 priorities identified on the facing page. The Center will therefore expend about \$350 million from 2005 to 2010. By 2010, our faculty will have grown from 70 to 100 and the number of postdoctoral fellows from 50 to 100. Currently, The Center employs about 600 individuals, and by 2010 we anticipate that this number will be above 900. We have ample space on the campus to accommodate this rate of growth.

Of the \$350 million total, \$275 million will come from the current level of funding provided by the State of Louisiana and the projected increases in funding from the National Institutes of Health, United States Department of Agriculture, and the Department of Defence as well as from food and pharmaceutical companies. The remaining \$75 million need to be raised. Of this amount, \$50 million is for major upgrade and maintenance of the oldest buildings, space renovation and a new clinical research building, and expansion of the comparative biology facility. We expect that these funds will come in part from the Pennington Medical Foundation and the rest from federal funds raised by the Center.

The remaining \$25 million associated with the Strategic Plan will be for new operating expenses associated with the growth. We would like for about 60% of this amount to come from an increase in appropriation from the general fund of the State of Louisiana. This seems to us a reasonable goal for this five-year period. If the State adds \$15 million to its current level of contribution to the Center, the total funding from the State will reach about \$65 million during the next five fiscal years. This would represent 25% of the total operating expenses (\$275 million) of the Center, a key ingredient for the Pennington Biomedical research Center to be successful. It is our hope that the remaining \$10 million will come from philanthropy and direct contributions to our operating costs from both of our Foundations over their current levels of support.

The beginning of 2005 marks the official launching of *Vision 2010*. We are already at work to ensure that the new goals that we have set for ourselves in research, education and economic development will be met. The development of the new Strategic Plan took nearly a year of discussion and planning, and we believe that it will move the Center to new heights. The beneficiaries will be the children and adults of this state and of the country. We also anticipate that the Center will have a major impact on the economic development of the region and of the state in the coming years.

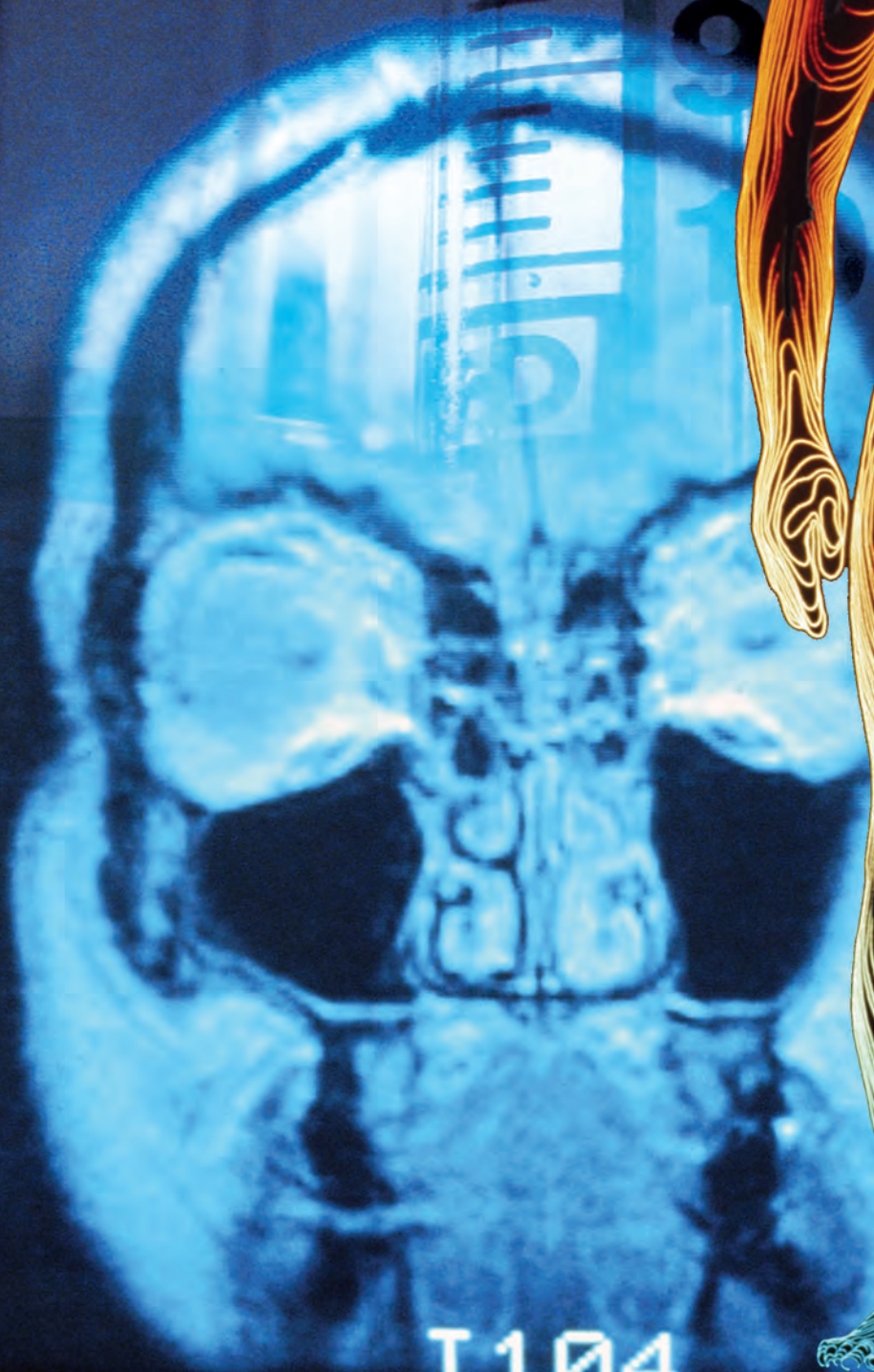
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Vision 2010

By the year 2010, the Pennington Biomedical Research Center will be the leading nutrition and preventive medicine research center recognized for the outstanding quality of its research, its contribution to scientific discovery, and its commitment to professional and public education initiatives.

VISION

2005-2010

1 2 3 4 5 6 7 8 9 10

Vision 2010
reflects the new maturity level of the Center and its growing seniority status in the scientific community.

Vision 2010
The new Pennington Biomedical Research Center Strategic Plan covers the period from 2005 to 2010.

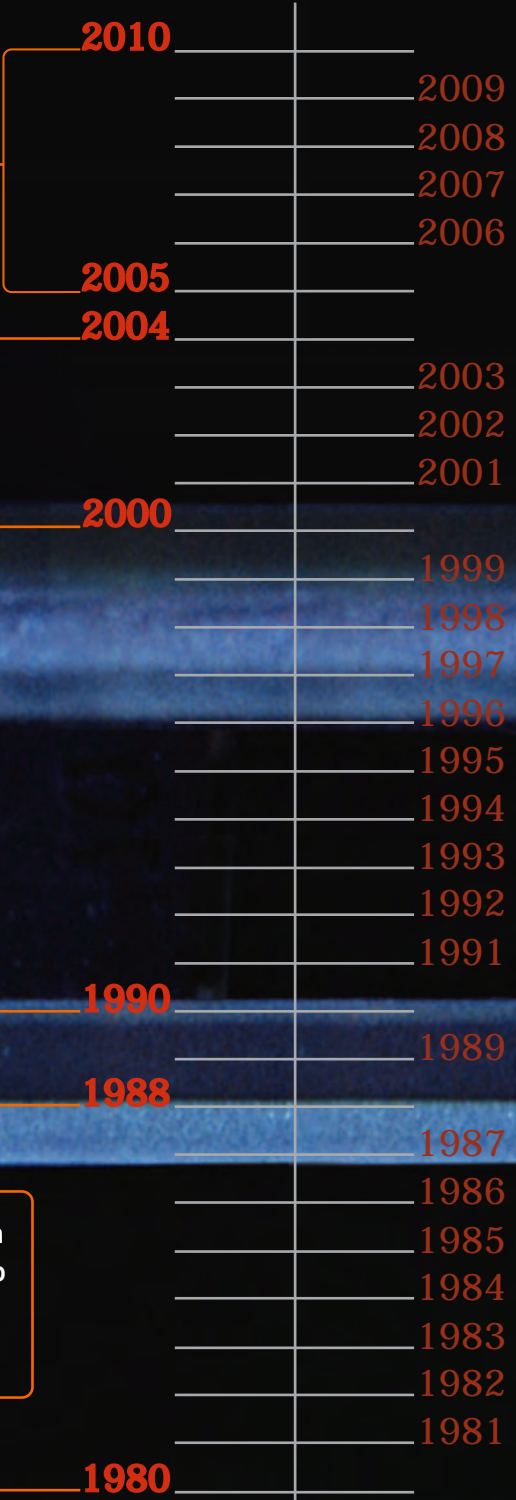
Construction of a new 180,000-square-foot Basic Research Laboratory building completed.

Vision 2005
was launched.

The Louisiana Legislature commits to an annual appropriation for operations.

The Pennington Biomedical Research Center opened.

C.B. "Doc" Pennington presents a major gift to Louisiana State University System



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