



**Economic Impact
of the
Johns Hopkins Institutions
in
Maryland**

**Prepared for:
The Johns Hopkins University
and
Johns Hopkins Medicine**

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Executive Summary

The Johns Hopkins Institutions (JHI) – comprising Johns Hopkins University and Johns Hopkins Medicine – are internationally regarded for delivering high-quality education and premier medical care and for performing cutting-edge research. Yet, the Johns Hopkins Institutions are more than labs, university classrooms or hospital beds in Baltimore. Together they form a statewide network of education, research, patient care and cultural programs. Through a multitude of undertakings, Johns Hopkins drives important advances in medicine, science, engineering and the arts and attracts businesses, research dollars and international attention to Maryland.

Running the operations of JHI requires tens of thousands of employees and billions of dollars in expenditures. Taken together, the components of the Johns Hopkins Institutions constitute an economic engine vital to the State of Maryland and its citizens.

Income

In 2002, the Johns Hopkins Institutions generated \$7 billion in income for the Maryland economy through the spending of the institutions and their employees, students, patients, visitors and retirees. In fact, Johns Hopkins generated fully one of every 28 dollars in the state's economy. Hopkins' economic contribution has grown steadily over the years, more than doubling since 1990; projections are that the trend will continue. The Johns Hopkins Institutions expect to grow 5.4 percent annually for the next five years, resulting in a contribution of \$9.1 billion to Maryland's economy in 2007.

Jobs

Johns Hopkins is also the largest private employer in Maryland. The Johns Hopkins payroll included 46,321 employees in Maryland in 2002. Since 1999, the Institutions have added an average of more than 1,000 Maryland jobs a year; they expect to continue adding jobs at that rate over the next several years. By 2007, 51,346 employees in Maryland are expected to draw their paychecks from Johns Hopkins.

The Institutions' expenditures sustain businesses and working people throughout Baltimore City and each of Maryland's 23 counties, even those without an obvious connection to Johns Hopkins. Expenditures generate "spin-off" that supports jobs outside of JHI. In this indirect manner, Johns Hopkins supports another 50,775 jobs throughout the state.

Subtract out jobs that likely would have existed even if Johns Hopkins was not in Maryland, and the bottom line is this: In 2002, the Johns Hopkins Institutions directly and indirectly supported a total of 85,410 net-new Maryland jobs. That's one of every 29 jobs in the state.



Maryland Income and Jobs Generated by the Johns Hopkins Institutions, Fiscal Year 2002

	Total	New to Maryland	Indirect Impacts	Total Net New
Income Generated		(millions of dollars)		
Non-Construction Expenditures	\$ 4,105.2	\$ 2,865.8	\$ 3,729.6	\$ 6,595.4
Construction Expenditures	\$ 208.2	\$ 202.6	\$ 223.2	\$ 425.8
Total Income Generated in Maryland	\$ 4,313.4	\$ 3,068.4	\$ 3,952.8	\$ 7,021.2
Jobs Created				
On-Going Employment	44,281	32,645	48,695	81,340
Construction Employment	2,040	1,990	2,080	4,070
Total Maryland Jobs Created	46,321	34,635	50,775	85,410

Sources: Johns Hopkins University; Johns Hopkins Health System; U.S. Bureau of Economic Analysis; BAE, 2002.

Research Dollars

The Johns Hopkins Institutions annually attract more federal research and development funding than any other U.S. university – \$1.4 billion in 2002. The Institutions' continual investment in staff, equipment and facilities makes possible this huge infusion of federal dollars into the state's economy. The Johns Hopkins University is currently the leading recipient of research funds from the National Institutes of Health. The University's Applied Physics Laboratory (APL) built on its 60-year history with the U.S. Navy to earn a \$1.75 billion contract for the next five years.

Affiliated Institutions

Six distinguished research institutions have located in Baltimore in order to capture the synergies that come from close proximity to Johns Hopkins. They are the Space Telescope Science Institute, the Kennedy-Krieger Institute, the Howard Hughes Medical Institute Laboratory, the Department of Embryology of the Carnegie Institution of Washington, the Gerontology Research Center of the National Institute on Aging and the Addiction Research Center of the National Institute on Drug Abuse. Efforts in education and research at the affiliated institutions have also seen substantial growth. Since 1990, spending increased by \$232 million to a total of \$374 million in FY 2002.

Partnership with the State of Maryland

Johns Hopkins and the State of Maryland have had a long and valued partnership. Contributions from the State have played a vital role in building and maintaining the Johns Hopkins physical plant that is so important to attracting and retaining research funds. Such investments have provided beneficial returns to the state economy. For example, the State invested \$20 million in the Bunting-Blaustein Cancer Research building project at



Johns Hopkins. The opening of this new building added 200,000 square feet for new laboratories and offices. The resulting returns included 55 percent more research activity worth \$23 million, 690 new Maryland jobs, \$31 million in spin-off income for Maryland businesses, and new approaches in cancer treatments. The State's \$20 million investment achieved a 270-percent return in new economic activity.

Maryland has also long recognized the importance of higher education to the economy. Financial assistance provided through Maryland's Seller Aid to Independent Colleges and Universities program has enabled Johns Hopkins to further invest in a broad list of programs including those devoted to teacher preparation, diversity, student services and student aid.

Economic Development

Johns Hopkins economic contributions go far beyond expenditures and jobs. The Institutions spawn, attract and keep businesses in Maryland. In 2001, Johns Hopkins researchers executed 78 license and option agreements, received 360 invention disclosures, submitted 405 new patent applications and received 95 patents. Over the Fiscal Year 1997-2001 period, Johns Hopkins received 425 patents. Such technological advances have been developed into commercial applications at 45 start-up companies, 24 of which call Maryland home.

Johns Hopkins plays an active role in educating the workforce in technological, scientific, health, business and K-12 education disciplines, at the graduate and undergraduate level and in non-degree programs. Courses are offered on a part-time basis at locations across the state.

In addition to supporting business development, Johns Hopkins is committed to community development. Through more than 200 formal community-oriented programs and many other less structured initiatives, Johns Hopkins participates in making a difference in neighborhoods.

Health Care

The Johns Hopkins health care system delivers preeminent medical care through facilities across Maryland, including three hospitals and an extensive network of outpatient locations in Baltimore City and Anne Arundel, Baltimore, Carroll, Frederick, Harford, Howard, Montgomery, Prince George's and Washington counties. The Johns Hopkins Hospital (JHH) was named the number one hospital in the country in 2002, the 12th consecutive year JHH held that distinction. Johns Hopkins facilities house critical care centers vital to the statewide trauma system including the Adult Trauma Center, Eye Trauma Center, and the Pediatric Trauma Center at the Johns Hopkins Hospital as well as the Adult Trauma Center and the Baltimore Regional Burn Center at the Johns Hopkins Bayview Medical Center.

These world-renowned facilities attract patients from across the state, across the country and around the world. Out-of-state patients accounted for 22.4 percent of Johns Hopkins Hospital billings in 2002 and generated additional contributions to the local economy through hotel stays and spending at local restaurants and businesses. JHH doctors and hospitals also treat Maryland patients who cannot afford to pay, providing \$144.3 million in uncompensated care in 2002.

In addition to patient care, Johns Hopkins is in the forefront of advances in medical treatment and prevention including recent developments such as the first successful treatment for sickle-cell anemia, new sight-saving procedures for disorders of the eye, nerve-sparing surgery for prostate cancer, and new detection, treatment and prevention techniques for colon and other cancers.

Johns Hopkins also shares its resources to assist community-based efforts to prevent and fight disease. Public awareness programs such as the “Never Shake a Baby” campaign and training programs such as the Safe Sitter course empower citizens with knowledge, while programs such as the Community Nursing Outreach program provide health services at low or no cost to those in need.

K-12 Education

While Johns Hopkins is known as a higher education institution, it is committed to enabling education over a lifetime. Johns Hopkins is engaged in more than 500 programs that touch the lives of K-12 students, teachers and administrators in Baltimore City and each of Maryland’s 23 counties.



Johns Hopkins instructs professional educators through a variety of degree and teacher training programs and conducts research in education techniques and strategies to best enable educational achievement for children at risk, gifted children and kids with special needs. Hopkins faculty, staff and students are also

involved in extensive outreach programs to expose kids to educational opportunities, to assist students with educational hurdles and to enable K-12 students to achieve their potential.

Other Impacts

Johns Hopkins is also active in a mix of community activities from programs devoted to opening up opportunities to under-represented minorities, to sporting and musical events, to assisting populations on the margin. Johns Hopkins contributes to community improvement, culture and civic life throughout the state.

Conclusion

Johns Hopkins is a critical resource to Maryland, unmatched by other institutions in the state. As is the State, the Johns Hopkins Institutions are devoted to improving the quality of life in Maryland. Through education, healthcare, community outreach and cultural endeavors, and through its contributions to the state’s economy – more than \$7 billion in 2002 alone – Johns Hopkins is a major factor in that quality of life.

I. Income Generated in the Maryland Economy

Comprising a broad sphere of disciplines, the Johns Hopkins Institutions are internationally renowned for their innovation and quality. The Johns Hopkins Institutions (JHI) are more than labs, university classrooms or hospital beds in Baltimore; they form a network of education, research, medical and cultural programs that reach all across the state. The multitude of programs and courses of study are forging important advances and training leaders in medicine, science, engineering and the arts. Taken together, the components of the Johns Hopkins Institutions constitute an economic engine vital to Maryland and its citizens.

The economic impact associated with Johns Hopkins may be separated into three categories – Johns Hopkins University (JHU), Johns Hopkins Medicine (JHM) and Affiliated Institutions. The University focuses on traditional education and research in a variety of fields, while Johns Hopkins Medicine combines the components of medical education, patient care and research under one guiding entity. Though independent, the affiliated institutions mirror the Johns Hopkins mission and were attracted to the area to capture the synergies that come from close proximity to Johns Hopkins. Likewise, through targeted partnerships between the Institutions and other interests, Johns Hopkins enhances its capacity to achieve its goals.

Not only do the Johns Hopkins Institutions (JHI) achieve important research breakthroughs, they also generate substantial income and activity for the Maryland economy. In Fiscal Year 2002, Johns Hopkins generated \$7.0 billion in **net new income** in Maryland – fully \$1 of every \$28 in the state economy.

Johns Hopkins' Fiscal Year 2002 performance is more than double the impact in Fiscal Year 1990. In just the last three years, the net new income created by the Johns Hopkins Institutions has increased by 37 percent from \$5.1 billion in Fiscal Year 1999 to \$7.0 billion in Fiscal Year 2002. Much of this three-year increase has come from rapid rise in Hopkins' research funding. Johns Hopkins' research excellence has allowed it to attract a growing share of federal funding. Research grant funding at the University has more than doubled since Fiscal Year 1990. This growth has been possible only because the University has invested in new physical facilities to accommodate additional research activity, often with the financial assistance of the State of Maryland.

Net new income refers to income that would not exist in Maryland if Johns Hopkins were not located in Maryland. These dollars come from a myriad of sources in both large and small purchases, including expenditures by:

- the University;
- the Health System;
- six affiliated research institutions located in Maryland for collaborations with Johns Hopkins;
- out-of-state patients receiving care in JHM;
- Maryland tertiary-care patients whose illnesses might otherwise have forced them to go out of state for treatment;
- nurses, therapists and senior staff recruited to Maryland to work in the Health System;
- students who would not otherwise have attended college in Maryland;
- out-of-state visitors participating in University events, conferences and seminars;
- Johns Hopkins retirees; and
- construction of new facilities.

The University's and Health System's on-going activities generated \$2.9 billion in net new income in Maryland. In providing medical care to Maryland patients, the Health System also expended an additional \$0.9 billion. Net new income does not include these expenditures because most of these Maryland patients would have been treated by other Maryland physicians and hospitals if Johns Hopkins did not exist, keeping their dollars in the state. What is included are the expenditures associated with treating out-of-state patients and Maryland patients with complicated illnesses who require the advanced diagnostic and treatment services (tertiary care) of a major academic medical center.

The major construction activity associated with expansion and modernization of Johns Hopkins' research and patient care facilities injected an additional \$203 million in new income, excluding the portion funded by State grants. Spin-off income accounts for \$4.0 billion in additional economic activity created as the Hopkins dollars are spent and re-spent in the state economy. As suppliers to Johns Hopkins pay their employees and purchase materials for the manufacture of the goods they provide to Hopkins, their expenditures support other Maryland businesses.



Table I-1 on the following page summarizes Johns Hopkins' generation of income for the Maryland economy.

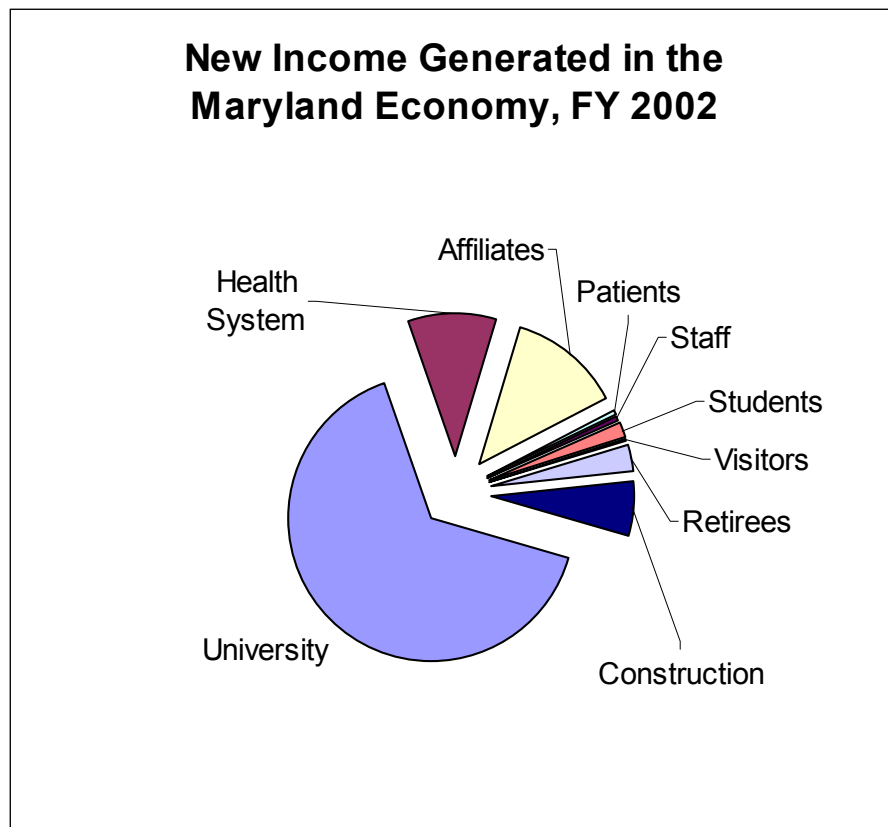


Table I-1: Maryland Income Generated by the Johns Hopkins Institutions, Fiscal Year 2002

Income Components	(millions of dollars)			
	Total Expenditures	New Income to Maryland	New Indirect Income	Total New Income
University Non-Construction Expenditures (a)	\$ 2,243.4	\$ 1,932.0	\$ 2,644.5	\$ 4,576.5
Health System Non-Construction Expenditures (b)	1,287.4	341.2	376.5	717.7
Affiliated Institutions' Non-Construction Expenditures	373.8	373.8	511.7	885.5
Out-of-State and Tertiary Care Patient and Companion Expenditures	17.7	17.7	17.9	35.6
Expenditures by Health System Staff from Out of State	NA (c)	23.3	20.9	44.1
Student Expenditures	65.8	60.8	50.3	111.1
Out-of-State Visitor Expenditures	17.3	17.3	17.4	34.7
Retiree Expenditures	99.7	99.7	90.4	190.1
Total Non-Construction Expenditures	\$ 4,105.2	\$ 2,865.8	\$ 3,729.6	\$ 6,595.4
University Construction Expenditures	\$ 129.2	\$ 124.1	\$ 136.8	\$ 260.9
Health System Construction Expenditures	74.0	73.5	80.9	154.4
Affiliated Institution Construction Expenditures	5.0	5.0	5.5	10.5
Total Construction Expenditures	\$ 208.2	\$ 202.6	\$ 223.2	\$ 425.8
Total Income Impacts	\$ 4,313.4	\$ 3,068.4	\$ 3,952.8	\$ 7,021.2

Notes: (a) New income excludes \$311.4 million in student wages, fellowships/stipends, graduate/postdoctoral tuition and fees, overseas salaries and travel, debt service principal payments and expenditures funded from State and local government grants and contracts.

Includes Hopkins-related Broadway Services, Inc. expenditures.

(b) New income includes only those expenditures attributable to net new income brought to Maryland from out-of-state and tertiary care patients.

Includes Hopkins-related Broadway Services, Inc. expenditures.

(c) Included in Health System expenditures.

Sources: Johns Hopkins University; Johns Hopkins Health System; U.S. Bureau of Economic Analysis; BAE, 2002.

The Johns Hopkins University

The Johns Hopkins University was founded in 1876 as the first true research university in the western hemisphere. It is an international center for both undergraduate and graduate study and research encompassing nine divisions (additional information on the divisions listed below may be found in Appendix A):

- the Krieger School of Arts and Sciences
- the Whiting School of Engineering
- the School of Medicine
- the School of Nursing
- the Bloomberg School of Public Health
- the Nitze School of Advanced International Studies
- the Peabody Institute
- the School of Professional Studies in Business and Education and
- the Applied Physics Laboratory.

Courses within the divisions are offered at facilities throughout the state. There are three major campuses and other locations in Baltimore City. There are also major campuses in Montgomery County, Howard County and Washington, D.C., as well as satellite locations in Baltimore, Harford, Howard and St. Mary's counties.

The quality of the education provided and research performed at Johns Hopkins University (JHU) has allowed the University to grow rapidly over the last two decades. The University's budget has almost quintupled from the 1982 base. In the last five years alone, University spending has increased more than 6 percent annually, three times the rate of inflation. With construction of new research facilities, partially funded by grants from the State of Maryland, the University has been able to expand its research efforts and compete more effectively for high-caliber researchers, faculty, students and federal research funding.

Since 1998, Johns Hopkins' grant funding has grown by 41 percent. The National Science Foundation

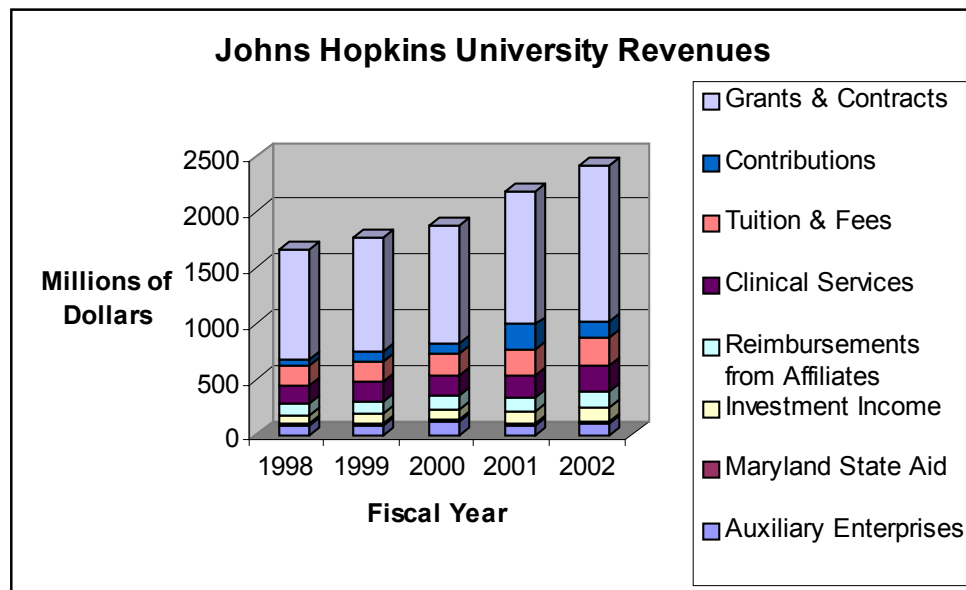


survey of federal funding for science and engineering in Fiscal Year 2000 showed Johns Hopkins as the leading educational institution with more than double the amount of federally-funded research than the second highest-ranking university, the University of Washington. For example, the Applied Physics Laboratory (APL) has built on its 60-year history with the U.S. Navy to earn a \$1.75 billion contract from the Naval Sea Systems Command for continued research and development and specialized engineering over the next five years. Over the last two decades, APL has diversified its research base to include major research efforts in space science and technology, biomedical engineering, homeland defense and sensor technologies.

Table I-2: Johns Hopkins University Revenues and Expenses, Fiscal Years 1998-2002

	Fiscal Year				
	1998	1999	2000	2001	2002
	(millions of dollars)				
Operating Revenues					
Tuition and fees	\$ 172.4	\$ 185.1	\$ 199.8	\$ 231.8	\$ 254.1
Grants, contracts and similar agreements	986.9	1,023.9	1,057.5	1,191.0	1,394.1
Clinical services	169.2	177.5	187.3	194.5	228.1
Reimbursements from affiliated institutions	99.6	109.4	123.4	132.5	159.3
Contributions	64.0	90.7	90.1	223.6	144.0
Investment income	69.9	82.5	91.6	109.8	124.3
Maryland State aid	13.6	14.0	15.5	17.7	19.3
Auxiliary enterprises, other	88.5	85.6	116.0	77.8	93.9
Total Operating Revenues	\$ 1,664.1	\$ 1,768.6	\$ 1,881.2	\$ 2,178.7	\$ 2,417.1
Operating Expenses					
Compensation and benefits	\$ 926.9	\$ 966.4	\$ 1,051.9	\$ 1,159.7	\$ 1,315.3
Contractual services	379.6	387.0	377.9	418.1	488.1
Supplies, materials and other	183.3	202.8	222.4	241.5	276.5
Depreciation, interest and travel	144.8	139.7	141.9	145.5	151.6
Total Operating Expenditures	\$ 1,634.6	\$ 1,695.9	\$ 1,794.2	\$ 1,964.8	\$ 2,231.5

Source: Johns Hopkins University



In Fiscal Year 2002, the University spent \$2.2 billion for faculty and staff salaries and wages, fringe benefits and the purchase of goods and services (including Hopkins-related expenditures by Broadway Services, Inc., which provides parking and maintenance services to the University and Health System). Of that total, \$1.9 billion in expenditures are net new to the Maryland economy, that is, they would not

otherwise have been spent in the state if Johns Hopkins did not exist. Excluded are expenditures funded by State and local governments, student tuition and wages, overseas expenditures and physician expenditures related to serving Maryland residents.

Students

Ranked as one of the top universities in the nation, Johns Hopkins University attracts students from around the world. International students make up 14 percent of the University's enrollment, excluding permanent residents. A direct survey of Johns Hopkins undergraduates and graduate students revealed



that 93 percent of the undergraduates and 92 percent of the graduate students who knew where they would have gone to college if they did not come to Johns Hopkins would not otherwise be attending college in Maryland. These students' local expenditures, which are net new to the Maryland economy, support retailers, landlords and a variety of service providers. Hopkins' 4,563 full-time undergraduates and 3,988 full-time graduate students brought \$60.8 million in new income into the Maryland economy. This

estimate is conservative because it does not include the local expenditures of part-time students, many of whom live in Washington, Pennsylvania or Virginia and spend money before and after attending classes. This analysis also excludes the expenditures of part-time Maryland students because their decisions to live in Maryland were most likely based on reasons other than their part-time enrollment.

Table I-3: Expenditures by Johns Hopkins University Students, Fiscal Year 2002

	Undergraduates	Graduate Students	Total
Number of Full-Time Students at Maryland Campuses	4,563	3,988	8,551
Percent Who Would Not Otherwise be Attending College in Maryland	93%	92%	93%
Average Expenditures*	\$4,420	\$11,450	\$7,700
Net New Expenditures	\$18,757,000	\$42,010,000	\$60,767,000

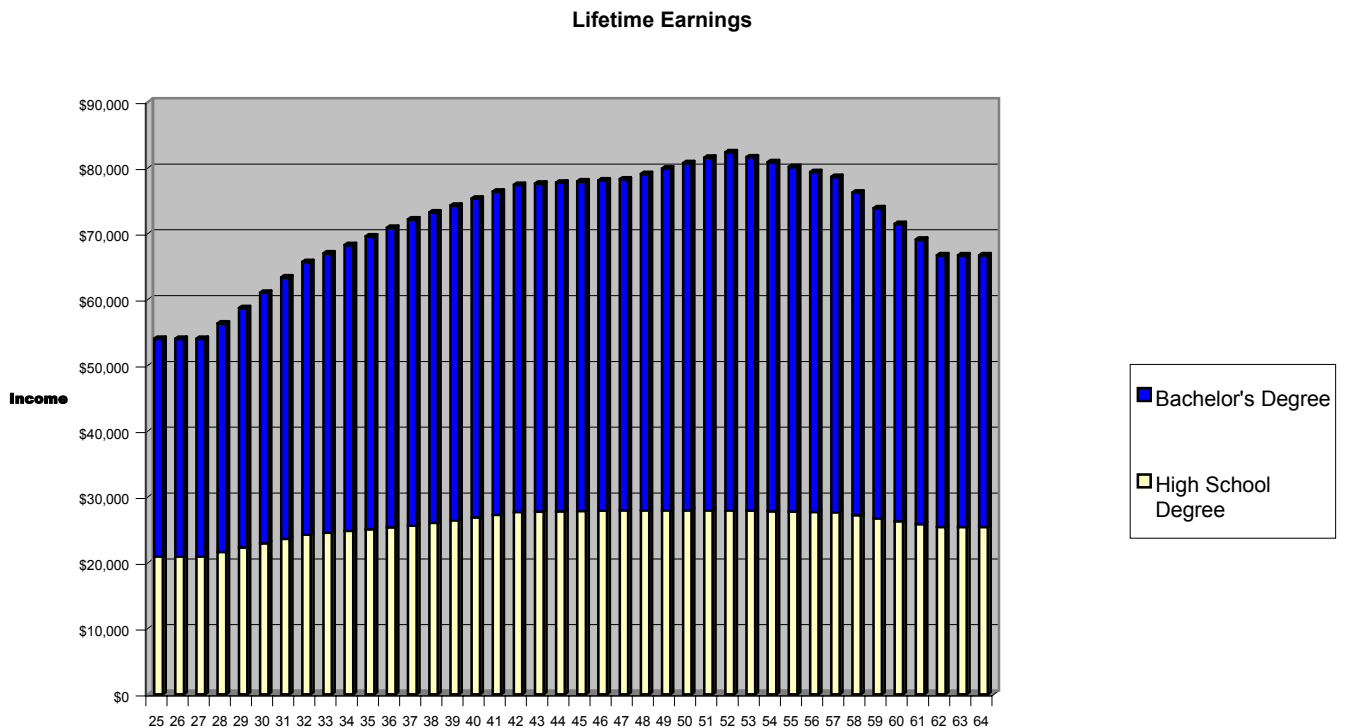
Note: *Room and board excluded for students living in University housing.

Sources: Direct Student Survey; Johns Hopkins University; BAE, 2002.

Personal Income

As a result of their education and training, Johns Hopkins University graduates enjoy significantly higher earnings over their lifetimes than if they had never gone to college. Their improved ability to find meaningful and well-paying employment also benefits the State of Maryland if only through higher income taxes from graduates who continue to live in the state. Earnings statistics from the U.S. Census Bureau indicate significant benefits from higher education. For example, the average 32 year-old with a four-year college degree had \$41,417 in total annual earnings in 1999 – 71 percent higher than the earnings of the average high school graduate with no college training. Over a lifetime, the incremental income attributable to a four-year college degree is just over \$800,000.

The University has identified 61,769 alumni still residing in Maryland. Given the incremental benefits of a Bachelor's degree, this would translate into billions in personal income for Maryland residents over their lifetimes. For alumni with advanced degrees, the incremental earnings are even higher. The enhanced earnings they enjoy as a result of their college education translate into greater contributions to the Maryland economy and higher State income taxes.



Out-of-State Visitors

The University's many schools, departments and centers sponsor a myriad of conferences, seminars, meetings and events throughout the year. The high quality of research and scholarship at Johns Hopkins draws participants from around the world. In addition to academic conferences, graduation, alumni and sporting events also bring thousands of visitors to Baltimore each year. Johns Hopkins hosted the Lacrosse World Cup competition for two days, attracting 7,000 visitors, including 1,750 visitors from out of state. Students and their parents touring prospective colleges and parents visiting their children once they are admitted brought millions of dollars to the state's hospitality sector. ABC-TV sent a film crew to Baltimore for several months to tape the series "Hopkins 24/7."

Summarized in Appendix B are some of the hundreds of events that brought visitors to Baltimore during Fiscal Year 2002. Overnight visitors are estimated to have spent \$160 per day while day visitors spent \$60 per day. This analysis focuses only on the dollars brought to the state economy by out-of-state visitors. Overall, the 196,000 Johns Hopkins visitors brought \$17.3 million in new income to Maryland. This estimate is conservative in that it does not include the dollars spent by visitors who extend their stay to spend time in Baltimore, Annapolis, the Eastern Shore or the mountains of Western Maryland or spent by accompanying spouses or family members.



Johns Hopkins Medicine

Johns Hopkins Medicine was created in 1995 to coordinate the linked activities of the Health System and the School of Medicine of the University. This alliance coordinates and serves complementary interests to ensure continued preeminence in education, research and patient care. The alliance also ensures that these distinct but interdependent corporations respond to the health care market in an integrated way.

Isolating the revenues specifically attributable to Johns Hopkins Medicine in Table I-4 documents the economic importance of Hopkins' medical activities. In Fiscal Year 2002, Johns Hopkins Medicine and its affiliates, employees, students, visitors and retirees spent \$3.0 billion. Of that total, \$1.9 billion was determined to be "net new" income that would not have been made if Johns Hopkins were not located in Maryland. With spin-off income, the entities that make up Johns Hopkins Medicine generated a total of \$4.4 billion in new income for the Maryland economy.

Johns Hopkins Health System

The Johns Hopkins Health System (JHHS) provides world-class health care to patients from Maryland and around the world. Though a separate and distinct entity from the University with its own budget, administration, staff and buildings, Johns Hopkins Health System shares many close ties with the University. The Johns Hopkins Health System hospitals provide staff privileges to the School of Medicine faculty, bringing together the best possible teaching faculty with facilities for medical instruction. In addition to three acute care hospitals – The Johns Hopkins Hospital, Johns Hopkins Bayview Medical Center and Howard County General Hospital – the Health System includes long-



term geriatric care at the Johns Hopkins Geriatrics Center, home care delivered by the Johns Hopkins Home Care Group and outpatient care at locations throughout Maryland, including the Johns Hopkins Outpatient Center across from Johns Hopkins Hospital, Johns Hopkins at Green Spring Station, White Marsh and Cedar Lane, and the 18 locations of the Johns Hopkins Community Physicians.¹ (Additional information located in Appendix A)

The Johns Hopkins Hospital has been recognized repeatedly as the best hospital in the country by a national study conducted by *U.S. News & World Report*. This year, the study identifies the top hospitals in 17 specialties. Points were assigned for the three top-ranked hospitals in each specialty. The Johns Hopkins Hospital led the nation's hospitals with 32 points in 16 specialties with first-place rankings in ear, nose and throat; eyes; gynecology; and urology. (The Mayo Clinic ranked second with 27 points in 14 specialties.) The Hospital includes world-

renowned centers such as the Brady Urological Institute, the Wilmer Eye Institute, the Sidney Kimmel Comprehensive Cancer Center and the Johns Hopkins Children's Center. Johns Hopkins Bayview Medical Center, located on the Bayview Campus in East Baltimore, is a community teaching hospital. The Baltimore Regional Burn Center at Bayview is a recognized international leader in the care of burn patients. Howard County General Hospital, added to Johns Hopkins Health System in 1998, is an acute-care medical center offering a full range of health care services.

Together, the many entities that make up the Johns Hopkins Health System spent \$1.3 billion in Fiscal Year 2002. If Johns Hopkins had not existed, some of the patients served would have been treated by other Maryland physicians. Therefore, the estimate of "net new income" in the Maryland economy excludes the expenditures associated with providing health services to these local residents.

¹ Locations include sites in Baltimore City and Anne Arundel, Baltimore, Carroll, Frederick, Harford, Howard, Montgomery, Prince George's and Washington counties.

Table I-4: Maryland Income Generated by Johns Hopkins Medicine, Fiscal Year 2002

Income Components	(millions of dollars)			
	Total Expenditures	New Income to Maryland (b)	New Indirect Income	Total New Income
School of Medicine Non-Construction Expenditures (a)	\$ 1,226.6	\$ 1,056.3	\$ 1,445.9	\$ 2,502.2
Health System Non-Construction Expenditures (b)	1,287.4	341.2	376.5	717.7
Affiliated Institutions' Non-Construction Expenditures	294.3	294.3	402.8	697.0
Out-of-State and Tertiary Care Patient and Companion Expenditures	17.7	17.7	17.9	35.6
Expenditures by Health System Staff from Out of State	NA (c)	23.3	20.9	44.1
Student Expenditures	11.3	10.4	8.6	19.0
Out-of-State Visitor Expenditures	2.2	2.2	2.2	4.4
Retiree Expenditures	54.0	54.0	49.0	103.0
Total Non-Construction Expenditures	\$ 2,893.5	\$ 1,799.3	\$ 2,323.7	\$ 4,123.0
School of Medicine Construction Expenditures	\$ 39.3	\$ 39.3	\$ 43.3	\$ 82.6
Health System Construction Expenditures	74.0	73.5	80.9	154.4
Affiliated Institution Construction Expenditures	5.0	5.0	5.5	10.5
Total Construction Expenditures	\$ 118.3	\$ 117.8	\$ 129.7	\$ 247.5
Total Income Impacts	\$ 3,011.8	\$ 1,917.1	\$ 2,453.4	\$ 4,370.5

Notes: (a) New income excludes \$170 million in student wages, fellowships/stipends, graduate/postdoctoral tuition and fees, overseas salaries and travel, debt service principal payments and expenditures funded from State and local government grants and contracts.

Includes Hopkins-related Broadway Services, Inc. expenditures.

(b) New income includes only those expenditures attributable to net new income brought to Maryland from out-of-state and tertiary care patients.

Includes Hopkins-related Broadway Services, Inc. expenditures.

(c) Included in Health System expenditures.

Sources: Johns Hopkins University; Johns Hopkins Health System; U.S. Bureau of Economic Analysis; BAE, 2002.

Johns Hopkins' reputation also attracts patients from around the U.S. and the world. In 2002, patients came from 126 foreign countries to be treated by Johns Hopkins physicians, involving 16,500 outpatient visits. Out-of-state patients accounted for 22.4 percent of the Johns Hopkins Hospital's billings in 2002, as shown in Table I-5.

Johns Hopkins Health System hospitals provide the most sophisticated level of tertiary care for the most serious illnesses. Given capacity constraints at the University of Maryland Medical Center, the only other major academic medical center in the state, many of the Maryland patients receiving tertiary care at Johns Hopkins Health System would otherwise have been forced to go out of state to Washington, D.C., Virginia or Pennsylvania for equivalent care. Tertiary care is defined as including high-mortality diseases, cases transferred from other hospitals, organ transplants, rare diagnoses and rare procedures (less than 60 occurrences statewide), few hospital procedures (performed at less than six hospitals) and burn unit cases.



These Maryland tertiary care patients accounted for an additional 17.3 percent of the Johns Hopkins Hospital's billings. At Bayview, 15.0 percent of billings were for out-of-state or tertiary care patients. Howard County General Hospital is more focused on Howard County residents, but it, too, had 2.1 percent of its patient billings from out-of-state patients. Applying these percentages to total expenditures by hospital (adding in the expenditures for support services provided by Broadway Services, Inc.) yields a total of \$341 million in net new income in the state economy in Fiscal Year 2002.

Table I-5: Johns Hopkins Health System Expenditures Attributable to Out-of-State and Tertiary Care Patients, FY 2002

	Johns Hopkins				
	Johns Hopkins Hospital	Bayview Medical Center	Howard County General Hospital	JHHS Total	Broadway Services, Inc. (a)
Percent of Total Revenues Attributable to:					
Out-of-State Patients	22.4%	4.0%	2.1%	16.1%	NA
Maryland Tertiary Care Patients	17.3%	11.0%	0.0%	14.2%	NA
Total Out-of-State and Tertiary Care	39.7%	15.0%	2.1%	30.3%	30.3%
Total Expenditures	\$ 740,795,000	\$ 276,474,000	\$ 95,849,000	\$ 1,113,118,000	\$ 11,912,607
Expenditures Attributable to Out-of-State and Tertiary Care Patients	\$ 294,096,000	\$ 41,471,000	\$ 2,013,000	\$ 337,580,000	\$ 3,613,000

Note: (a) One-half of Broadway Services, Inc. expenditures in accordance with JHHS's joint ownership with the University.

Source: Johns Hopkins Medicine; BAE, 2002.

Out-of-State Patients

By attracting patients from around the world, Johns Hopkins helps to support local hotels and bed & breakfasts that accommodate those patients and their companions. In-patients from out of state are typically accompanied by at least one family member or friend who finds private lodging. Many Maryland patients who live more than 100 miles away will travel to Baltimore on the day before their appointment and stay overnight in a hotel before admission the next morning. A 1996 study of Baltimore hotels conducted by PKF Consulting determined that Johns Hopkins visitors accounted for 73,100 room-nights in hotels and motels (two-thirds of which were patients and/or their companions), 30,700 room-nights in apartment hotels and 19,800 room-nights in subsidized accommodations, such as the Children's House at Johns Hopkins and the Hackerman-Patz House. (One group of visitors staying three nights in one hotel room represents three room-nights.) Based on an average of two guests per room and the growth in the number of Johns Hopkins patients since 1996, Johns Hopkins attracted patients and their companions who spent 253,300 room-nights in Maryland in Fiscal Year 2002. These patients and companions spent \$17.7 million in the state's hotels, restaurants, retail shops, taxis, gas stations, parking garages and other establishments.



Table I-6: Patient and Companion Expenditures, Fiscal Year 2002

	Johns Hopkins			
	Johns Hopkins Hospital	Bayview Medical Center	Howard Co. General Hospital	Total
Visitor Days	220,600	30,100	2,600	253,300
Expenditures	\$ 15,442,000	\$ 2,107,000	\$ 182,000	\$ 17,731,000

Sources: Johns Hopkins Health System; PKF Consulting; BAE, 2002.

Johns Hopkins Health System Staff

Many Johns Hopkins physicians, nurses, therapists and senior administrative staff have been recruited from around the country. Their presence in Maryland is a direct result of their employment at the Health System. A direct survey of Health System staff revealed that 17 percent of the Johns Hopkins Hospital and Johns Hopkins Bayview Medical Center senior administrators would not have lived in Maryland if not employed by Johns Hopkins. Among the physical and occupational therapists, 40 percent responded that they would not otherwise have lived in the state. Based on their average salaries, these staff members' expenditures added \$33.9 million to the Maryland economy. Those expenditures are discounted so as not to double-count the Health System expenditures in support of out-of-state and tertiary care patients, yielding \$23.3 million in net new income in the state economy.

This analysis excludes physicians at Johns Hopkins Hospital, because their salaries are included in the University's expenditures. While many Johns Hopkins University faculty and staff also have been

recruited from out of state, their salaries are already reflected in the estimate of the University's net new expenditures.

Table I-7: Expenditures of Health System Staff Living in Maryland, Fiscal Year 2002

	Johns Hopkins Hospital	Johns Hopkins Bayview Medical Center	Total
Physicians			
Number	(a)	54	54
Percent in Maryland as Result of JHM		50%	
Total Expenditures (in millions)	\$ -	\$ 1.1	\$ 1.1
Senior Administrative Staff			
Number	96	79	175
Percent in Maryland as Result of JHM	17%	17%	
Total Expenditures (in millions)	\$ 1.6	\$ 0.9	\$ 2.5
Nurses			
Number	1,919	712	2,631
Percent in Maryland as Result of JHM	17%	17%	
Total Expenditures (in millions)	\$ 19.5	\$ 7.1	\$ 26.6
Therapists			
Number	83	153	236
Percent in Maryland as Result of JHM	40%	40%	
Total Expenditures (in millions)	\$ 1.4	\$ 2.3	\$ 3.7
Total Expenditures by Staff Living in Maryland as Result of JHM (in millions)			
	\$ 22.5	\$ 11.4	\$ 33.9
Eliminate Overlap with JHHS Salary Expenditures (b)	39.7%	15.0%	31.4%
Net New Expenditures in Maryland (in millions)			
	\$ 13.6	\$ 9.7	\$ 23.3

Notes:

(a) Johns Hopkins Hospital physicians are employed by the Johns Hopkins School of Medicine.

(b) Excludes the portion of salaries already included as JHHS expenditures attributable to out-of-state patients or Maryland tertiary care patients.

Staff numbers in Full-Time Equivalents

Source: Employee survey; Johns Hopkins Health System; BAE, 2002.

East Baltimore Campus

Johns Hopkins' East Baltimore campus – composed of the School of Medicine, the Bloomberg School of Public Health, the School of Nursing, The Johns Hopkins Hospital, other Health System entities, Kennedy Krieger Institute and Howard Hughes Medical Institute laboratories – is a major economic force anchoring East Baltimore and providing an important job base for this portion of the city. Shown in Table I-8, the East Baltimore campus alone generated \$4.3 billion in new income for the Maryland economy.



Table I-8: Maryland Income Generated by the Johns Hopkins East Baltimore Campus, Fiscal Year 2002

Income Components	(millions of dollars)			
	Total Expenditures	New Income to Maryland (b)	New Indirect Income	Total New Income
University Non-Construction Expenditures (a)	\$ 1,446.5	\$ 1,245.7	\$ 1,705.1	\$ 2,950.8
Health System Non-Construction Expenditures (b)	774.2	296.4	\$ 327.1	623.5
Affiliated Institutions' Non-Construction Expenditures	141.9	141.9	194.2	336.1
Out-of-State and Tertiary Care Patient and Companion Expenditures	15.4	15.4	15.5	30.9
Expenditures by Health System Staff from Out of State	NA (c)	13.6	12.2	25.7
Student Expenditures	21.5	19.8	16.4	36.2
Out-of-State Visitor Expenditures	3.4	3.4	3.4	6.8
Retiree Expenditures	43.2	43.2	39.2	82.4
Total Non-Construction Expenditures	\$ 2,446.1	\$ 1,779.4	\$ 2,313.1	\$ 4,092.5
University Construction Expenditures	\$ 74.8	\$ 74.8	\$ 82.4	\$ 157.3
Health System Construction Expenditures	35.5	35.5	39.2	74.7
Affiliated Institution Construction Expenditures	5.0	5.0	5.5	10.5
Total Construction Expenditures	\$ 115.4	\$ 115.4	\$ 127.1	\$ 242.5
Total Income Impacts	\$ 2,561.5	\$ 1,894.8	\$ 2,440.2	\$ 4,335.0

Notes: (a) New income excludes \$170 million in student wages, fellowships/stipends, graduate/postdoctoral tuition and fees, overseas salaries and travel, debt service principal payments and expenditures funded from State and local government grants and contracts.

Includes Hopkins-related Broadway Services, Inc. expenditures.

(b) New income includes only those expenditures attributable to net new income brought to Maryland from out-of-state and tertiary care patients.

Includes Hopkins-related Broadway Services, Inc. expenditures.

(c) Included in Health System expenditures.

Sources: Johns Hopkins University; Johns Hopkins Health System; U.S. Bureau of Economic Analysis; BAE, 2002.

Johns Hopkins Bayview Campus

The Johns Hopkins Bayview Medical Center in eastern Baltimore was formerly the Baltimore City Hospitals. When the financial burden of supporting this institution became too great for the City, Johns Hopkins took it over in 1984, retaining an important health care resource. Since that time, activity on the Bayview campus has expanded substantially with the addition of the School of Medicine Asthma and Allergy Center, expansion of Bayview Medical Center itself, addition of the National Institutes of Health's new Center for Inherited Diseases Research and the current expansion of the National Institute on Aging and the National Institute on Drug Abuse. Also present on the Bayview Campus are several private biomedical firms, including Alkermes USP and FASgen, LLC.

The Health System, University and affiliated institution activities at Bayview injected \$638 million in new income into the Maryland economy in Fiscal Year 2002.



Table I-9: Maryland Income Generated by Johns Hopkins at the Bayview Campus, Fiscal Year 2002

Income Components	(millions of dollars)			
	Total Expenditures	New Income to Maryland (b)	New Indirect Income	Total New Income
University Non-Construction Expenditures (a)	\$ 63.8	\$ 55.0	\$ 75.3	\$ 130.3
Health System Non-Construction Expenditures (b)	332.1	42.7	\$ 47.1	89.8
Affiliated Institutions' Non-Construction Expenditures	146.3	146.3	200.3	346.6
Out-of-State and Tertiary Care Patient and Companion Expenditures	2.1	2.1	2.1	4.2
Expenditures by Health System Staff from Out of State	NA (c)	9.7	8.7	18.4
Student Expenditures	-	-	-	-
Out-of-State Visitor Expenditures	0.2	0.2	0.2	0.4
Retiree Expenditures	9.8	9.8	8.9	18.7
Total Non-Construction Expenditures	\$ 554.4	\$ 265.8	\$ 342.6	\$ 608.4
University Construction Expenditures	\$ -	\$ -	\$ -	\$ -
Health System Construction Expenditures	13.9	13.9	15.3	29.1
Affiliated Institution Construction Expenditures	-	-	-	-
Total Construction Expenditures	\$ 13.9	\$ 13.9	\$ 15.3	\$ 29.1
Total Income Impacts	\$ 568.2	\$ 279.7	\$ 357.8	\$ 637.5

Notes: (a) New income excludes \$57 million in debt service payments and expenditures funded from State and local government grants.

Includes Hopkins-related Broadway Services, Inc. expenditures.

(b) New income includes only those expenditures attributable to net new income brought to Maryland from out-of-state and tertiary care patients.

Includes Hopkins-related Broadway Services, Inc. expenditures.

(c) Included in Health System expenditures.

Sources: Johns Hopkins University; Johns Hopkins Health System; U.S. Bureau of Economic Analysis; BAE, 2002.

Retirees

After many years with the University or the Health System, many Johns Hopkins retirees choose to remain in Maryland following their retirement. Johns Hopkins is able to identify over 3,500 retirees still living in Maryland who draw their retirement or medical benefits directly from the Johns Hopkins Institutions. Given the popularity of portable retirement funds, most Johns Hopkins retirees no longer maintain a formal relationship with the University or Health System. The U.S. Department of Labor's Bureau of Labor Statistics conducts an annual Consumer Expenditure Survey. Households headed by an individual aged 65 or older average \$28,100 in annual expenditures. Johns Hopkins retirees from the University and Health System alone spent a \$100 million in Maryland in Fiscal Year 2002.

**Table I-10: Expenditures of Johns Hopkins Institutions Retirees
Living in Maryland, Fiscal Year 2002**

	Johns Hopkins University	Johns Hopkins Health System	Total
Number of Retirees Known to be Residing in Maryland	1,991	1,557	3,548
Average Annual Expenditures	\$28,100	\$28,100	\$28,100
Total Expenditures	\$55,947,100	\$43,751,700	\$99,698,800

Sources: Johns Hopkins Institutions; U.S. Department of Commerce; BAE, 2002.

Affiliated Institutions

The quality of Johns Hopkins' research and the partnerships it has developed over the years have attracted six distinguished research institutions to locate in Baltimore. These institutions spent \$373.8 million in Fiscal Year 2002.



Space Telescope Science Institute. Operated by the Association of Universities for Research in Astronomy, Inc., a consortium of universities including Johns Hopkins, the Space Telescope Science Institute (ST ScI) is primarily responsible for the scientific returns from the Hubble Space Telescope for the National Aeronautics and Space Administration (NASA). The Institute carries out daily observations and ensures that professional astronomers worldwide have access to the world's foremost observatory. ST ScI's Visitor Program brings more than 100 international astronomers to Baltimore each year for extended visits to utilize the Institute's research facilities and to work with ST ScI astronomers collaboratively.

Kennedy Krieger Institute. The Kennedy Krieger Institute, serving more than 10,000 children annually, works relentlessly to improve the lives of individuals with disorders of the brain, either of congenital onset or acquired through injury or illness. In addition to providing inpatient care in a 70-bed specialty pediatric hospital, the Institute has multiple day treatment, outpatient and home-based

services. The Kennedy Krieger Institute is particularly well-known for its strong interdisciplinary approach with many outstanding professionals from fields including medicine, psychology, education, physical and occupational therapy, audiology, speech and language therapy, as well as social work, child development, nutrition and nursing.

Howard Hughes Medical Institute. The nation's largest private biomedical research philanthropy, the Howard Hughes Medical Institute is a medical research organization whose scientists include many of the world's leaders in the fields of cell biology, genetics, immunology, neuroscience and structural biology. HHMI is headquartered in Chevy Chase and operates a network of laboratories and ancillary facilities at over 65 locations across the country. In Baltimore, HHMI is affiliated with the Johns Hopkins School of Medicine and the Johns Hopkins Hospital. Johns Hopkins faculty are key leaders in HHMI research. Only the expenditures of the Baltimore facility are included in this analysis.

Carnegie Institution of Washington, Department of Embryology. A pioneering organization for research in the physical and biological sciences, the Carnegie Institution of Washington operates its Department of Embryology in Baltimore with close research ties to the Johns Hopkins faculty. The Department focuses on the study of biological development in a number of organisms. Postdoctoral students perform full-time laboratory research. Many Carnegie faculty members hold adjunct appointments at the University.

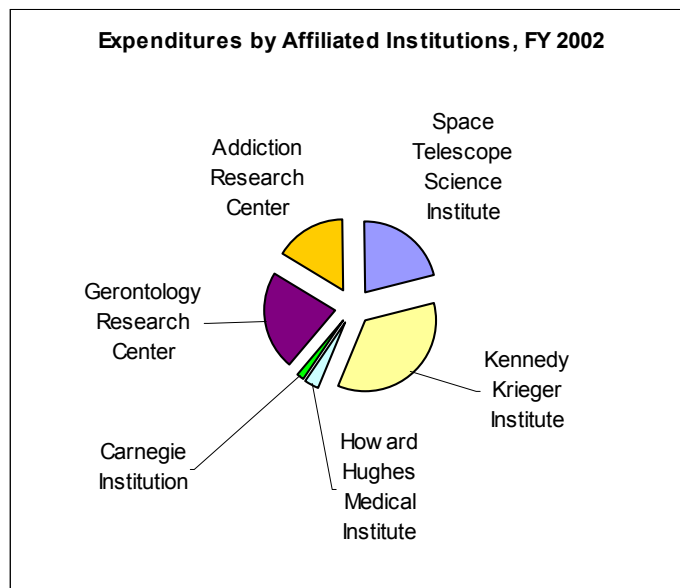
National Institute on Aging, Gerontology Research Center. The Intramural Research Program (IRP) of the National Institute on Aging (NIA) comprises ten scientific laboratories and a research program that includes the scientific disciplines of biochemistry, cell and molecular biology, structural biology, genetics, behavioral sciences, epidemiology, statistics, and clinical research, and medical disciplines such as immunology, endocrinology, cardiology, hematology, oncology, and gerontology. Medical problems associated with aging are pursued in-depth using the tools of modern laboratory and clinical research. The central focus of research is understanding age-related changes in physiology and the ability to adapt to environmental stress. This understanding is then applied to developing insight about the pathophysiology of age-related diseases. Most of the NIA IRP is based at the **Gerontology Research Center** at Johns Hopkins Bayview Medical Center in Baltimore. Other NIA intramural research is conducted at the Bethesda campus of the National Institutes of Health. This analysis considers only the program on the Bayview campus. A major new building for both the National Institute on Aging and the National Institute on Drug Abuse is planned for construction on the Bayview campus.

National Institute on Drug Abuse, Addiction Research Center. Located on the Johns Hopkins Bayview Campus, the Addiction Research Center is the intramural research program of the National Institute on Drug Abuse. The Center's mission is to "carry out a coordinated program of multidisciplinary research on the causes, hazards, treatment and prevention of drug abuse and addiction, the nature of the addictive process and the addictive liability of new drugs." Research includes basic studies of brain receptors, the synthesis of new pharmaceuticals, and clinical trials of potential behavioral and pharmaceutical treatments for drug abuse. It has been the nation's primary source of scientific knowledge concerning narcotic addiction and has served as a training ground for drug abuse and mental health researchers and administrators.

Table I-11: Non-Construction Expenditures by Affiliated Institutions, Fiscal Year 2002

Institution	Non-Construction Expenditures
Space Telescope Science Institute	\$ 79,573,357
Kennedy Krieger Institute	129,000,000
Howard Hughes Medical Institute	12,896,641
Carnegie Institution	6,029,281
Gerontology Research Center	85,000,000
Addiction Research Center	61,326,000
Total	\$ 373,825,279

Sources: Affiliated Institutions; BAE, 2002.



Construction Activity

As research activity expands and technology changes require different types of facilities, Johns Hopkins' physical plant is under continuous modernization and expansion. Over the last five years, the University and Health System, in conjunction with their partners, have invested \$778 million in construction in Maryland.

In Fiscal Year 2002, the University expended \$127 million for construction projects, the Health System spent \$73 million, and the affiliated institutions spent an additional \$5 million. These construction projects generated an additional \$223 million indirectly in spin-off income to construction material suppliers and other Maryland businesses.



**Table I-12: Income Generated by Construction Activity,
Johns Hopkins Institutions, Fiscal Year 2002**

	Direct Income (a)	Indirect Income	Total Income
Johns Hopkins University	\$ 115,136,265	\$ 126,822,596	\$ 241,958,861
Applied Physics Laboratory	9,000,000	9,913,500	18,913,500
Johns Hopkins Hospital	35,455,000	39,053,683	74,508,683
Bayview Medical Center	12,682,000	13,969,223	26,651,223
Howard County General Hospital	20,583,000	22,672,175	43,255,175
Johns Hopkins Managed Care & Other	4,736,000	5,216,704	9,952,704
Kennedy Krieger Institute	5,000,000	5,507,500	10,507,500
Total	\$ 202,592,265	\$ 223,155,380	\$ 425,747,645

Note: (a) Excludes construction funded by State and/or local governments.

Source: Johns Hopkins Institutions; Affiliated Institutions; BAE, 2002.

During the next 5 to 10 years, the University and Health System will require \$1.4 billion in new construction and major renovations to update its physical plant and position Johns Hopkins to qualify for federal grants. Key projects over the next five years include:

- Johns Hopkins Hospital Cardiovascular and Critical Care Tower (\$282 million)
- National Institutes of Health facility at Bayview (\$238 million)
- Johns Hopkins Maternal and Children's Hospital (\$181 million)
- School of Medicine Broadway Research Building (\$140 million)
- Cancer Research Building II (\$80 million)
- Phase I of JHH Campus Redevelopment (\$80 million)
- Applied Physics Laboratory Building 17 (\$65 million)
- Applied Physics Laboratory Building 21 (\$65 million)
- Bloomberg School of Public Health Teaching Additions #5 and #6 (\$50 million)
- School of Arts & Sciences Gilman Hall Renovation (\$42 million)
- School of Medicine Basic Science Research Building (\$39 million)
- San Martin Center – Carnegie Institute (\$29 million)
- Johns Hopkins at Eastern High School (\$27 million)
- Bayview Mason Lord Building Renovations (\$25 million)
- Montgomery County Campus Expansion (\$25 million)
- School of Arts & Sciences New Chemistry Building (\$15 million)
- Health System White Marsh Center (\$12 million)
- School of Nursing Building (\$10 million)
- Howard County General Hospital Renovations (\$5 million)

Beyond addressing directly the Institution's needs, the above-noted capital improvements will work to help stabilize and enhance the neighborhoods where they are situated, generate additional pedestrian activity, improve the streetscape, and bring new activities and investment into communities.

Indirect Income

The \$2.9 billion in direct expenditures by the Johns Hopkins Institutions and their affiliated institutions, staff, students, visitors and retirees generated an additional \$3.7 billion in spin-off income, supporting businesses and organizations throughout Maryland. After Johns Hopkins pays its employees and suppliers, those dollars remain in the economy as employees pay their rent, buy groceries and support their favorite charities. Businesses that sell supplies to the University and Health System buy materials to manufacture those supplies, hire workers and contract with other companies to deliver those goods. As each of these entities makes purchases, they create income for additional Maryland businesses. The U.S. Bureau of Economic Analysis (BEA) Regional Impact Modeling System estimates economic multipliers that measure the indirect, spin-off income created in the Maryland economy by university spending. For every \$1 spent by a college or university, another \$1.3688 is generated for other Maryland businesses, organizations and households.

The multipliers associated with students, visitors, staff and retirees depend on the mix of goods and services on which they spend their incomes. Appendix Tables C-1 through C-4 show the derivation of these multipliers.

Table I-13: Indirect Income Generated by Johns Hopkins Institutions, Fiscal Year 2002

Expenditures by	New Direct Income	Indirect Income	Total New Income
	(in millions)	(in millions)	(in millions)
University	\$ 1,932.0	\$ 2,644.5	\$ 4,576.5
Health System	\$ 341.2	\$ 376.5	\$ 717.7
Affiliated Institutions	\$ 373.8	\$ 511.7	\$ 885.5
Patients and Companions	\$ 17.7	\$ 17.9	\$ 35.6
Staff	\$ 23.3	\$ 20.9	\$ 44.1
Students	\$ 60.8	\$ 50.3	\$ 111.1
Visitors	\$ 17.3	\$ 17.4	\$ 34.7
Retirees	\$ 99.7	\$ 90.4	\$ 190.1
Total	\$ 2,865.8	\$ 3,729.6	\$ 6,595.4

Notes:

(a) Derivation of multipliers is shown in Appendix C.

Source: Johns Hopkins Institutions; Affiliated Institutions; U.S. Bureau of Economic Analysis; BAE, 2002.

Benefits by Local Jurisdiction

The economic activity generated by Johns Hopkins reaches every part of the state from the Eastern Shore to the mountains of Western Maryland. The University and Health System buy goods and services from businesses and organizations in every single county in the state. Table I-14 shows direct spending by the University, the Health System, affiliated institutions, students, staff, visitors and retirees by county for Fiscal Years 1990, 1999 and 2002.

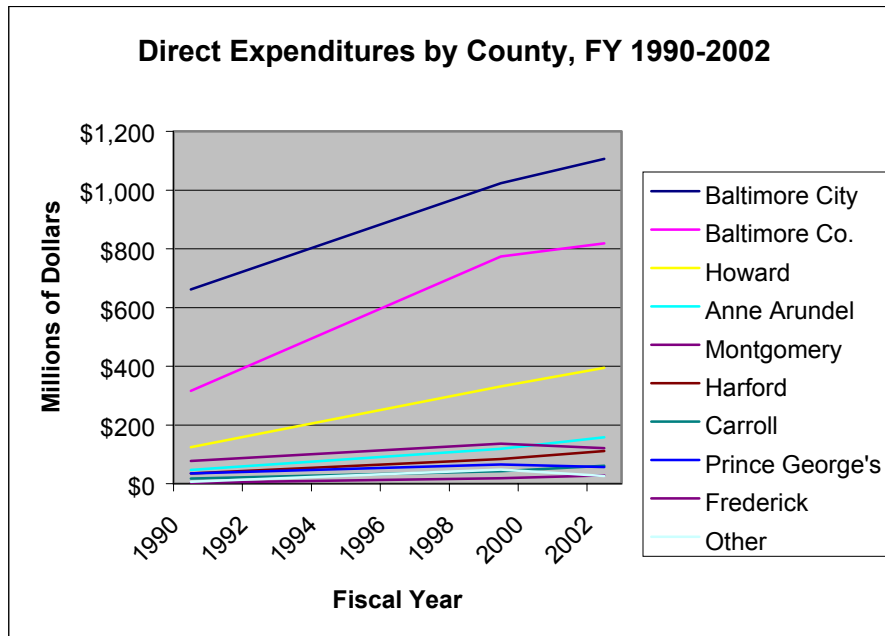
As one would expect, the bulk of the Johns Hopkins-related expenditures are within the Baltimore metropolitan area and the Washington suburbs. Of the \$2.9 billion in direct expenditures, 38 percent were made in Baltimore City and 28 percent in Baltimore County. Expenditures at the Applied Physics Laboratory and Howard County General Hospital contributed to \$395 million spent in Howard County, 14 percent of the Johns Hopkins total. In the three remaining jurisdictions in the Baltimore metropolitan area (Anne Arundel, Carroll and Harford counties), Johns Hopkins-related expenditures totaled \$329 million. Spending in the Washington suburbs was also significant – \$121 million in Montgomery County and \$57 million in Prince George’s County.

Table I-14: Direct Expenditures by Local Jurisdiction, Johns Hopkins Institutions, Fiscal Years 1990, 1999 and 2002

Local Jurisdiction	Direct Expenditures			FY 1990-2002
	FY 1990	FY 1999	FY 2002	Change
	(in millions)			
Anne Arundel County	\$ 46.4	\$ 118.3	\$ 157.9	240%
Baltimore City	662.1	1,023.1	1,106.1	67%
Baltimore County	315.7	773.8	818.5	159%
Carroll County	17.3	42.9	60.6	250%
Frederick County	3.6	18.4	28.6	694%
Harford County	34.9	83.4	110.8	218%
Howard County	123.9	330.9	394.8	219%
Montgomery County	76.9	136.1	120.8	57%
Prince George’s County	35.4	65.2	56.9	61%
All Other Counties	6.9	48.2	25.9	275%
Total Maryland	\$ 1,323.1	\$ 2,640.3	\$ 2,880.9	118%

Source: Johns Hopkins Institutions; Affiliated Institutions; BAE, 2002.

Johns Hopkins’ economic benefits for individual counties have grown substantially over the last 12 years. Direct expenditures for salaries, wages, goods and services more than tripled in Anne Arundel, Harford, Howard and Carroll counties from Fiscal Year 1990 to 2002.



Future Economic Activity

Based on the projections of University and Health System leaders, the Johns Hopkins impact on the Maryland economy is likely to grow 5.4 percent annually over the next five years to a Fiscal Year 2007 total of \$9.1 billion. The University's future plans are based on a 32-percent growth in the University's direct expenditures, a 4.8-percent increase in students, a 20-percent increase in visitors and a budgeted \$73 million for construction in Fiscal Year 2007. In the Health System, expenditures are projected to increase by 23 percent with a 5-percent increase in the number of patients, a 5-percent growth in the number of employees and a \$233 million construction budget.

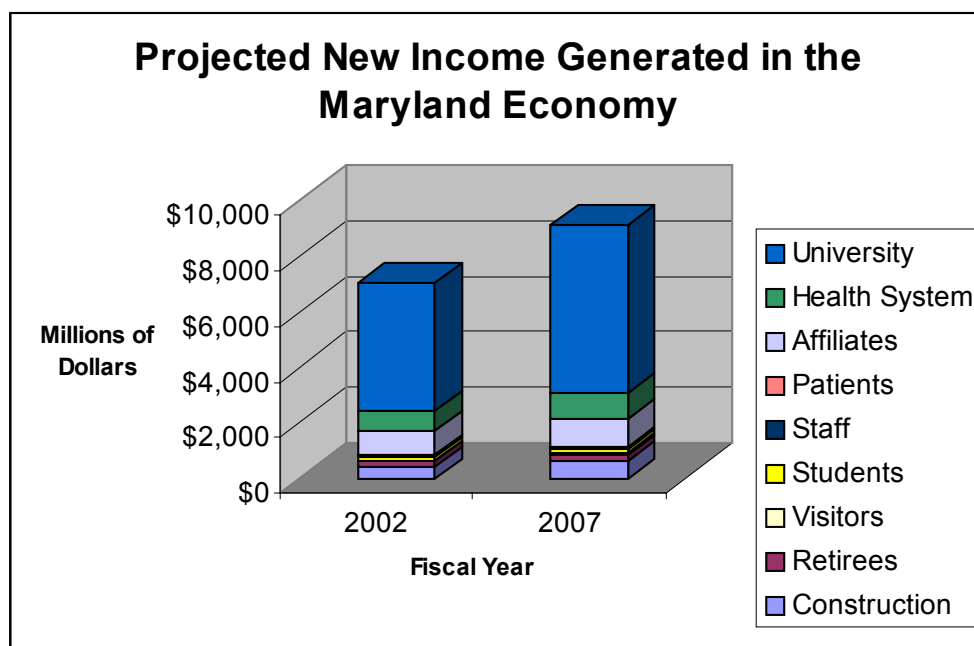


Table I-15: Maryland Income Generated by the Johns Hopkins Institutions, Projected to Fiscal Year 2007

Income Components	(millions of dollars)				
	Total Expenditures	New Income to Maryland	New Indirect Income	Total New Income	
University Non-Construction Expenditures (a)	\$ 2,968.0	\$ 2,556.0	\$ 3,498.7	\$ 6,054.7	
Health System Non-Construction Expenditures (b)	1,583.5	419.7	463.1	882.8	
Affiliated Institutions' Non-Construction Expenditures	433.4	433.4	593.2	1,026.6	
Out-of-State and Tertiary Care Patient and Companion Expenditures	21.6	21.6	21.8	43.4	
Expenditures by Health System Staff from Out of State	NA (c)	28.3	25.4	53.7	
Student Expenditures	80.0	73.9	61.2	135.1	
Out-of-State Visitor Expenditures	24.0	24.0	24.2	48.2	
Retiree Expenditures	121.3	121.3	110.0	231.3	
Total Non-Construction Expenditures	\$ 5,231.8	\$ 3,678.2	\$ 4,797.6	\$ 8,475.8	
University Construction Expenditures	\$ 73.2	\$ 73.2	\$ 80.6	\$ 153.8	
Health System Construction Expenditures	233.0	218.0	240.1	458.1	
Affiliated Institution Construction Expenditures	-	-	-	-	
Total Construction Expenditures	\$ 306.2	\$ 291.2	\$ 320.7	\$ 611.9	
Total Income Impacts	\$ 5,538.0	\$ 3,969.4	\$ 5,118.3	\$ 9,087.7	

Notes: (a) New income excludes student wages, fellowships/stipends, graduate/postdoctoral tuition and fees, overseas salaries and travel, debt service principal payments and expenditures funded from State and local government grants and contracts, as well as Clinical Practice Association expenditures attributable to care for Maryland patients.

(b) New income includes only those expenditures attributable to net new income brought to Maryland from out-of-state and tertiary care patients.

(c) Included in Health System expenditures.

Sources: Johns Hopkins University; Johns Hopkins Health System; U.S. Bureau of Economic Analysis; BAE, 2002.

II. Jobs Created for Marylanders

As Maryland's largest private employer, the Johns Hopkins Institutions provide a full range of jobs to Marylanders from custodians to nuclear physicists, medical technicians to brain surgeons. Direct employees within Maryland on the faculty and staff of the University, the Health System and their affiliated institutions total 44,281. Of that number, 73.7 percent (32,645) are "net new" or, in other words, would not exist in Maryland without Johns Hopkins, as shown in Table II-1.

The number of jobs at Johns Hopkins and those related to JHI expenditures has increased consistently over the years. Within Maryland, since 1999, more than 3,200 new jobs have been added to the Johns Hopkins Institutions payrolls, an average increase of more 1,000 new jobs each year. Meanwhile, jobs indirectly supported by Johns Hopkins increased from 47,723 to 50,775 for a total of 85,410 net new jobs in 2002 (Table II-2). In the next five years, Johns Hopkins plans to expand its employee base by 4,475 jobs across the Institutions. New Hopkins jobs combined with expected increases in expenditures translates to a projected job growth of 11.5 percent by Fiscal Year 2007.

It is important to note that Johns Hopkins-supported employees live in Baltimore and each of Maryland's 23 counties. The Johns Hopkins Institutions also affect employment throughout the state through spin-off jobs that play a vital role in the figures. Dollars spent by Johns Hopkins Institutions can pass through the hands and accounts of numerous businesses and people before they leave Maryland. This spin-off income supports auxiliary jobs in companies that do business with Johns Hopkins, its employees, students, etc. In this way, Johns Hopkins expenditures help sustain businesses and working people throughout the state, even those without an obvious connection to the institutions. Counting spin-off jobs supported by Hopkins-related spending, Johns Hopkins created more than 85,400 Maryland jobs in Fiscal Year 2002, including jobs in tourism, retail, construction and government. The Johns Hopkins Institutions supported one out of every 29 Maryland jobs.

Table II-1: Net New Jobs Generated by the Expenditures of the Johns Hopkins Institutions, Fiscal Year 2002

Institution/Expenditure Source	Total Direct Employment	Net New Direct Employment (a)	New Indirect “Spin-Off” Employment	Total Net New Jobs
Johns Hopkins University (b)	25,602	25,602	32,548	58,150
Johns Hopkins Hospital (b)	8,172	3,240	3,170	6,410
Johns Hopkins Bayview Medical Center (b)	3,372	510	410	920
Howard County General Hospital	1,754	40	-	40
Johns Hopkins Home Care Group	386	-	-	-
Johns Hopkins Community Physicians	724	-	-	-
Other Johns Hopkins Health System	1,018	-	-	-
Affiliated Institutions	3,253	3,253	7,997	11,250
Patients and Companions	NA	-	420	420
Staff Who Would Not Otherwise Live in Maryland	NA	-	450	450
Students	NA	-	1,290	1,290
Visitors	NA	-	410	410
Retirees	NA	-	2,000	2,000
Total On-Going Jobs	44,281	32,645	48,695	81,340
Construction	2,040	1,990	2,080	4,070
Total Jobs	46,321	34,635	50,775	85,410

Note: (a) Health System employment includes only the share of total jobs attributable to out-of-state patients and Maryland tertiary care patients.

(b) Includes Broadway Services, Inc. employees.

Sources: Johns Hopkins Institutions; Affiliated Institutions; U.S. Bureau of Economic Analysis; BAE, 2002.

Table II-2: Growth in Jobs Generated by Johns Hopkins Institutions' Expenditures Between Fiscal Years 1999 and 2002

Expenditure Source	Total Direct Employment			Net New Direct Employment			New Indirect Employment (a)			Total Net New Jobs		
	1999	2002	Change	1999	2002	Change	1999	2002	Change	1999	2002	Change
Total On-Going Jobs	40,872	44,281	8.3%	29,687	32,645	10.0%	43,523	48,695	11.9%	73,210	81,340	11.1%
Construction	2,170	2,040	-6.0%	1,900	1,990	4.7%	4,200	2,080	-50.5%	6,100	4,070	-33.3%
Total Jobs	43,042	46,321	7.6%	31,587	34,635	9.6%	47,723	50,775	6.4%	79,310	85,410	7.7%

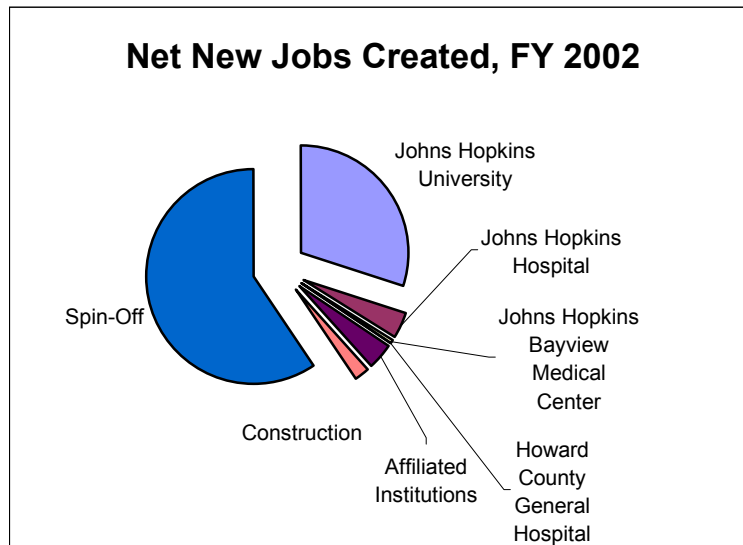
Note: (a) 2002 data reflect updated economic multipliers estimated by the U.S. Bureau of Economic Analysis.

Sources: Johns Hopkins Institutions; Affiliated Institutions; U.S. Bureau of Economic Analysis; BAE, 1999 and 2002.

Johns Hopkins Direct Employment

Summarized in Table II-1, the University, Health System and six affiliated institutions identified in Section I had a total of 44,281 employees in Maryland in Fiscal Year 2002. A portion of the Health System jobs are involved with providing health care to Maryland patients. If Johns Hopkins did not exist, these patients would receive care from other hospitals, which would employ many of the same nurses, therapists, dieticians and aides. Yet, of the total Hopkins-supported jobs, 32,645 are “net new”, meaning that they would not exist in Maryland if Johns Hopkins were not here.

The University had a total of 25,602 faculty and staff based in Maryland, excluding overseas staff and School of Advanced International Studies faculty and staff based in Washington, D.C. The Health System employed 15,426 workers, including 8,172 at Johns Hopkins Hospital, 3,372 at Johns Hopkins Bayview Medical Center and 1,754 at Howard County General Hospital. Included in these totals are Broadway Services, Inc. employees who provide services to Hopkins facilities. The six affiliated institutions that have located in Maryland as a result of their links to Johns Hopkins University and Johns Hopkins Health System had 3,253 employees in Fiscal Year 2002.



Spin-Off Jobs

All of the non-construction money spent by Johns Hopkins and its affiliates, employees, students, visitors and retirees supported almost 49,000 Maryland jobs outside of the University and Health System. Job multipliers estimated by the Bureau of Economic Analysis relate dollars in the economy to the number of jobs supported by those expenditures. For universities and research institutions in Maryland, every \$1 million in expenditures supports an estimated 30.1 jobs at the University and elsewhere in the state. These spin-off jobs are created by “net new” expenditures, that is, dollars brought into Maryland as a result of Johns Hopkins’ presence.

This spin-off touches all sectors of the economy across the state and includes jobs at companies directly receiving Johns Hopkins-connected dollars, such as waitresses in restaurants frequented by Johns Hopkins employees and students, clerks in local hotels hosting Hopkins visitors, truck drivers delivering goods to the University, and dentists treating Hopkins employees. Spin-off also includes the jobs supported by subsequent spending of those dollars.

Table II-3: Net New Jobs Attributable to Johns Hopkins Institutions, Fiscal Year 2002

	Net New Expenditures	Employment Multiplier (a)	Total Net New Direct and Indirect Jobs (b)
	(in millions)		
University	\$ 1,932.0	30.1	58,150
Health System	\$ 341.2	21.6	7,370
Affiliated Institutions	\$ 373.8	30.1	11,250
Patients and Companions	\$ 17.7	23.9	420
Staff Who Would Not Otherwise Live in Maryland	\$ 23.3	19.4	450
Students	\$ 60.8	21.2	1,290
Visitors	\$ 17.3	23.9	410
Retirees	\$ 99.7	20.1	2,000
Total	\$ 2,865.8		81,340

Note: (a) Expressed as jobs per \$1 million of expenditures. Derivations shown in Appendix B.

(b) Data may not add to the total due to independent rounding.

Sources: Johns Hopkins Institutions; Affiliated Institutions; U.S. Bureau of Economic Analysis; BAE, 2002.

Construction Jobs

The \$202.6 million in Hopkins-related construction activity in FY 2002 (not funded by State of Maryland grants) generated 1,990 construction jobs and 2,080 spin-off jobs in Maryland. This estimate is based on the Bureau of Economic Analysis jobs multiplier, which indicates that 20.1 Maryland jobs are created by every \$1 million in construction expenditures.



Minority Employment

The Johns Hopkins Institutions believe that diversity contributes to a vibrant and robust workplace. Of the total employment base, minority employees represent 29.6 percent in the University (Baltimore campuses), 16.2 percent in the Applied Physics Laboratory and 46.7 percent in the Health System. African Americans are the largest minority group with 15.3 percent of total employees in the University, 9.9 percent in the Applied Physics Laboratory and 40.6 percent in the Health System. Focusing on higher-level professional and managerial positions, 16.4 percent of the University's faculty, executives, managers and other professionals are members of minority groups. Minority employees are 23.9 percent of the Health System's physicians, administrators, nurses and therapists.

U.S. Black Engineer and Information Technology recently recognized the Applied Physics Laboratory for its diversity efforts, driven by the following commitment developed by the Laboratory's Diversity Working Group:

“The success of APL’s mission demands quality and versatility in its staff. To ensure that success, we must attract and retain a highly talented staff. Fundamental to the success of APL’s envisioned future is an environment that encourages creativity, is rich in diversity of thought, and promotes the inclusion of new ideas. This kind of environment can only exist if APL is a place where race, gender, religion, or other such characteristics do not define talent, and where our staff is distinguished by its diversity.”

Table II-4: Minority Employment, Johns Hopkins Institutions, Fiscal Year 2002

Race/National Origin	Percent of Employees		
	University (a)	APL	Health System
Total Employees			
African American	15.3%	9.9%	40.6%
Asian/Pacific Islander	12.1%	4.7%	4.1%
American Indian/Alaska Native	0.3%	0.2%	1.2%
Hispanic	1.9%	1.4%	0.8%
Caucasian	70.4%	83.8%	51.1%
Unspecified			2.1%
Total	100.0%	100.0%	100.0%
Managerial/Professional Employees (b)			
African American	5.5%	NA	15.6%
Asian/Pacific Islander	8.9%	NA	6.2%
American Indian/Alaska Native	0.2%	NA	1.3%
Hispanic	1.7%	NA	0.7%
Caucasian	83.6%	NA	73.8%
Unspecified		NA	2.3%
Total	100.0%	NA	100.0%

Note: (a) Baltimore campuses only.

(b) Includes faculty, executive, managerial and other professional staff at the University, and physicians, administrators, nurses and therapists in the Health System. Comparable data are not available for APL.

Sources: Johns Hopkins Institutions; BAE, 2002.

Jobs at Johns Hopkins Medicine

Johns Hopkins Medicine, formed by the School of Medicine and the Johns Hopkins Health System, itself supported 52,980 jobs in Fiscal Year 2002 as shown in Table II-5. Johns Hopkins Medicine, combined with the medically-related affiliated institutions, directly employed 28,532 persons. Their construction activity generated 1,150 net new construction jobs, and their expenditures supported an additional 34,935 spin-off jobs.

East Baltimore Campus

Focusing on the East Baltimore campus, the Schools of Medicine, Public Health and Nursing along with The Johns Hopkins Hospital, Kennedy Krieger Institute, Howard Hughes Medical Institute laboratories and portions of the Johns Hopkins Health System supported 52,503 jobs in Fiscal Year 2002. This figure includes 18,223 net new direct jobs in the institutions themselves, 1,130

construction jobs and 33,151 spin-off jobs in other Maryland businesses and organizations. (See Table II-6.)

Johns Hopkins Bayview Campus

On the Bayview Campus, the Johns Hopkins Bayview Medical Center, the Asthma and Allergy Center and other School of Medicine operations, the National Institute on Aging's Gerontology Research Center and the National Institute on Drug Abuse's Addiction Research Center employed 5,714 persons in Fiscal Year 2002. In addition, their expenditures supported 5,764 construction and other spin-off jobs for a total of 7,700 net new jobs, as shown in Table II-7.

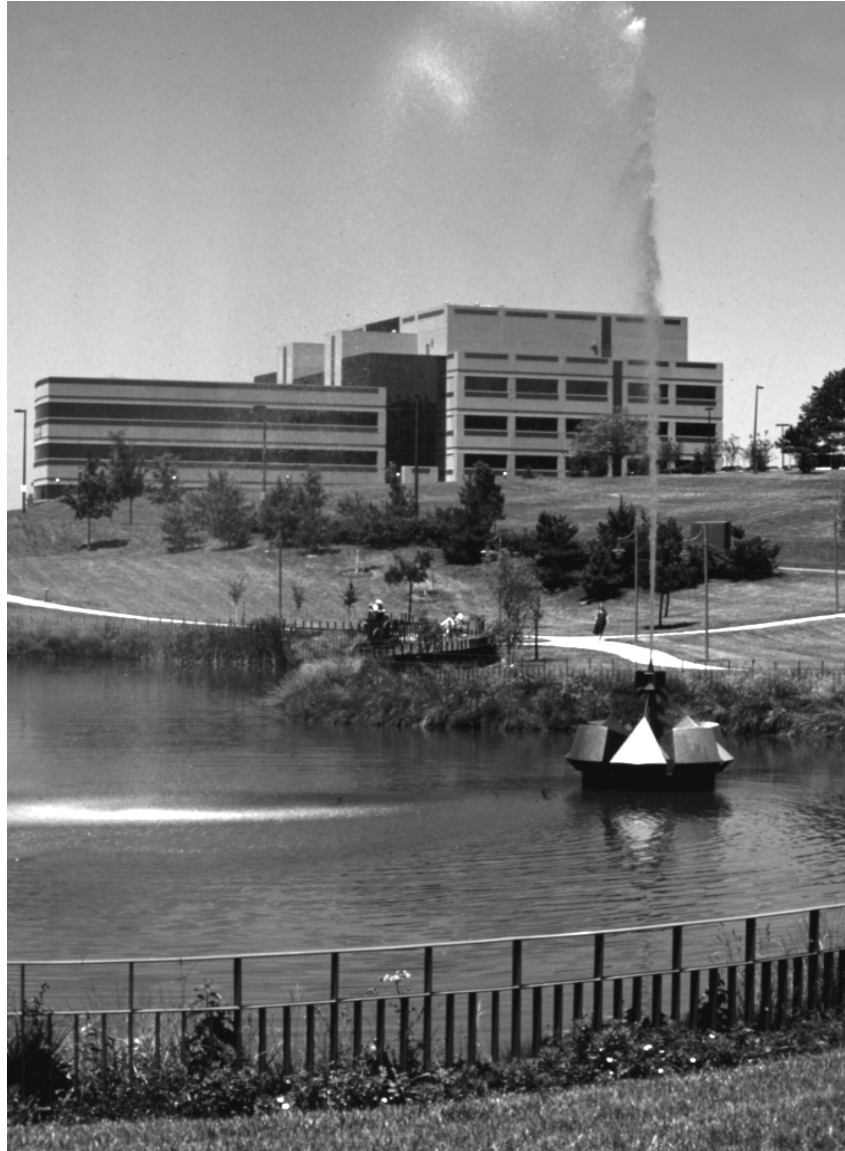


Table II-5: Net New Jobs Generated by Expenditures of Johns Hopkins Medicine, Fiscal Year 2002

Institution/Expenditure Source	Total Employment	Net New Direct Employment (a)	New Indirect Employment	Total Net New Jobs
School of Medicine (b)	10,248	10,248	21,543	31,790
Johns Hopkins Hospital (b)	8,172	3,240	3,170	6,410
Bayview Medical Center (b)	3,372	510	410	920
Howard County General Hospital	1,754	40	-	40
Johns Hopkins Home Care Group	386	-	-	-
Johns Hopkins Community Physicians	724	-	-	-
Johns Hopkins Health System	1,018	-	-	-
Affiliated Institutions	2,858	2,858	6,002	8,860
Patients and Companions	NA	-	420	420
Staff Who Would Not Otherwise Live in Maryland	NA	-	450	450
Students	NA	-	220	220
Visitors	NA	-	410	410
Retirees	NA	-	1,090	1,090
Total On-Going Jobs	28,532	16,896	33,715	50,610
Construction	1,160	1,150	1,220	2,370
Total Jobs	29,692	18,046	34,935	52,980

Note: (a) Health System employment includes only the share of total jobs attributable to out-of-state patients and Maryland tertiary care patients.

(b) Includes Broadway Services, Inc. employees.

Sources: Johns Hopkins Medicine; Affiliated Institutions; U.S. Bureau of Economic Analysis; BAE, 2002.

Table II-6: Net New Jobs Generated by Expenditures of Hopkins' East Baltimore Campus, Fiscal Year 2002

Institution/Expenditure Source	Total Employment	Net New Direct Employment (a)	New Indirect Employment	Total Net New Jobs
Schools of Medicine, Public Health and Nursing (b)	12,997	12,997	24,504	37,500
Johns Hopkins Hospital (b)	8,172	3,240	3,170	6,410
Johns Hopkins Health System	102	-	-	-
Affiliated Institutions	1,986	1,986	2,284	4,270
Patients and Companions	NA	-	370	370
Staff Who Would Not Otherwise Live in Maryland	NA	-	263	263
Students	NA	-	420	420
Visitors	NA	-	81	81
Retirees	NA	-	869	869
Total On-Going Jobs	23,257	18,223	31,961	50,183
Construction	1,130	1,130	1,190	2,320
Total Jobs	24,387	19,353	33,151	52,503

Note: (a) Health System employment includes only the share of total jobs attributable to out-of-state patients and Maryland tertiary care patients.

(b) Includes Broadway Services, Inc. employees.

Sources: Johns Hopkins Medicine; Affiliated Institutions; U.S. Bureau of Economic Analysis; BAE, 2002.

Table II-7: Net New Jobs Generated by Expenditures of the Johns Hopkins Bayview Campus, Fiscal Year 2002

Institution/Expenditure Source	Total Employment	Net New Direct Employment (a)	New Indirect Employment	Total Net New Jobs
School of Medicine (b)	591	591	1,069	1,660
Bayview Medical Center (b)	3,372	510	410	920
Other Johns Hopkins Health System	916	-	-	-
Affiliated Institutions	835	835	3,565	4,400
Patients and Companions	NA	-	50	50
Staff Who Would Not Otherwise Live in Maryland	NA	-	190	190
Students	NA	-	-	-
Visitors	NA	-	-	-
Retirees	NA	-	200	200
Total On-Going Jobs	5,714	1,936	5,484	7,420
Construction	140	140	140	280
Total Jobs	5,854	2,076	5,624	7,700

Note: (a) Health System employment includes only the share of total jobs attributable to out-of-state patients and Maryland tertiary care patients.

(b) Includes Broadway Services, Inc. employees.

Sources: Johns Hopkins Medicine; Affiliated Institutions; U.S. Bureau of Economic Analysis; BAE, 2002.

Geographic Distribution of Johns Hopkins Employees

Johns Hopkins employees live throughout the state – in Baltimore City and every Maryland county. Table II-8 summarizes the home locations of Johns Hopkins and affiliated institution employees for Fiscal Years 1990, 1999 and 2002. Baltimore City residents represent 35.5 percent of all Johns Hopkins and affiliated institution employees. Baltimore County is home to 14,953 employees – 34.3 percent of the total. An additional 4,717 employees, 10.8 percent, live in Howard County. Other Baltimore metropolitan area counties – Anne Arundel, Carroll and Harford – are home to 5,267 Johns Hopkins employees. In the Washington, D.C. metropolitan area, Montgomery County and Prince George's counties have attracted 1,687 and 787 Johns Hopkins employees, respectively.

The following data include only direct employees of the University, the Health System and affiliated institutions; however, spin-off jobs are spread throughout Maryland in a similar pattern.

Table II-8: Staff Residences by Local Jurisdiction, Johns Hopkins Institutions, Fiscal Years 1990, 1999 and 2002

Local Jurisdiction	Number of Staff			FY 1990-2002
	FY 1990	FY 1999	FY 2002	Change
Anne Arundel County	756	1,999	2,357	212%
Baltimore City	14,537	17,438	15,473	6%
Baltimore County	6,385	11,072	14,953	134%
Carroll County	407	765	849	109%
Frederick County	86	281	365	324%
Harford County	843	1,819	2,061	144%
Howard County	2,532	4,462	4,717	86%
Montgomery County	959	1,548	1,687	76%
Prince George's County	520	717	787	51%
All Other Counties	255	341	385	51%
Total Maryland	27,699 *	40,442	43,634	58%

Note: *Includes 419 jobs at Addiction Research Center and Gerontology Research Center not allocated by county.

Sources: Johns Hopkins Institutions; BAE, 2002.

With the growth of Johns Hopkins' employment, the number of employees living in Baltimore City has increased six percent from Fiscal Year 1990 to 2002. Concurrently, employee populations in suburban Baltimore jurisdictions have dramatically increased, more than doubling in Carroll and Harford counties and tripling in Anne Arundel County. With expansion of Johns Hopkins' Montgomery County Campus, the number of suburban Washington residents has increased by two-thirds over 12 years.



Future Employment

Shown in Table II-9, the University and Health System are planning to grow their employee bases by 14 and 5 percent, respectively, over the next five years. With continued growth in the number of employees, students and visitors, the total number of Maryland jobs supported by Hopkins-related expenditures will grow 11.5 percent to 95,260 jobs by Fiscal Year 2007.

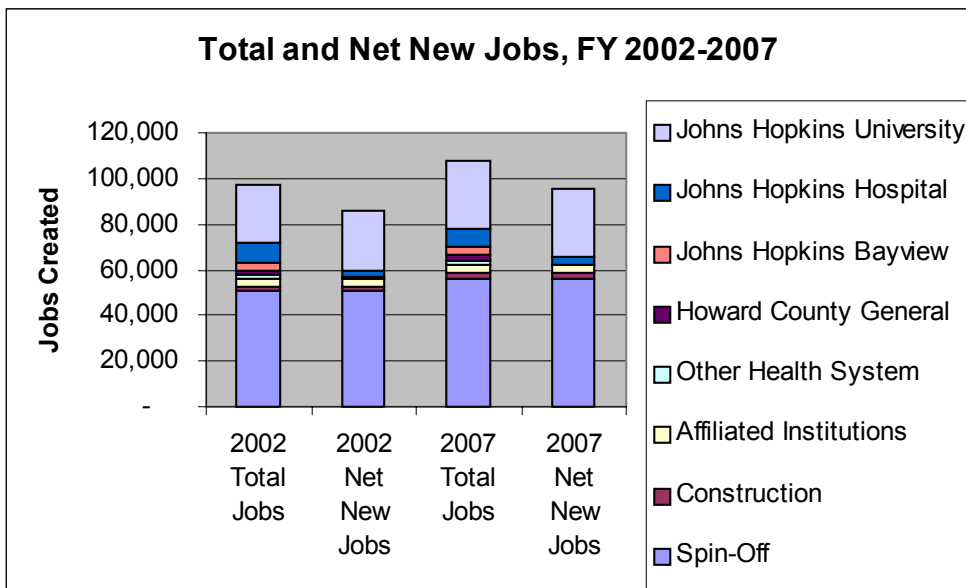


Table II-9: Net New Jobs Generated by Johns Hopkins Expenditures, Projected to Fiscal Year 2007

Institution/Expenditure Source	Total Employment	Net New Direct Employment (a)	New Indirect Employment	Total Net New Jobs
University	29,296	29,296	37,074	66,370
Johns Hopkins Hospital	8,590	3,410	3,330	6,740
Bayview Medical Center	3,540	530	420	950
Howard County General Hospital	1,840	40	10	50
Johns Hopkins Home Care Group	410	-	-	-
Johns Hopkins Community Physicians	760	-	-	-
Other Johns Hopkins Health System	1,070	-	-	-
Affiliated Institutions	3,250	3,250	8,000	11,250
Patients and Companions	NA	-	440	440
Staff Who Would Not Otherwise Live in Maryland	NA	-	470	470
Students	NA	-	1,350	1,350
Visitors	NA	-	490	490
Retirees	NA	-	2,100	2,100
Total On-Going Jobs	48,756	36,526	53,684	90,210
Construction	2,590	2,460	2,590	5,050
Total Jobs	51,346	38,986	56,274	95,260

Note: (a) Health System employment includes only the share of total jobs attributable to out-of-state patients and Maryland tertiary care patients.

Sources: Johns Hopkins Institutions; Affiliated Institutions; U.S. Bureau of Economic Analysis; BAE, 2002.

III. Partnership Between the State of Maryland and Johns Hopkins

The State of Maryland and Johns Hopkins are tightly linked as partners in economic development. Through its support of the Johns Hopkins Institutions, the State helps to fuel an economic engine while advancing education, research, and community outreach. In return, the State sees expansion of jobs and expenditures, draws investment and new business, and stimulates medical advancements.

Maryland has long recognized the importance of higher education to the state's economy and has provided financial assistance to public and private institutions throughout the state. Since 1970, the Sellinger Aid to Independent Colleges and Universities has been the State's mechanism to fund independent schools on a per student basis. At Johns Hopkins, these State contributions are invested into a cross section of programs including teacher preparation, diversity, student services and student aid. Over 60 percent of the Sellinger funds received are distributed to students in the form of financial aid. This is a vital program for Johns Hopkins to attract and retain the best and brightest students who, once they graduate, often take their first job in Maryland.

Johns Hopkins' ability to maintain its preeminence in medical and other research depends upon its ability to maintain and grow its physical plant in order to accommodate new and ongoing research programs. The jobs and economic activity associated with Johns Hopkins research depend upon its ability to compete for research grant funding. Successful research is a mixture of great minds, quality facilities and sufficient funding, and it is a continual competition to maintain such elements at an institution. Great minds seek to work where the facilities best accommodate their ideas. Facility configurations change with advancements in research techniques, and research capacity is tightly linked to the level of funding received. Grant funds go to institutions with all the necessary elements for success in place. Without capital investment from the State, Johns Hopkins' ability to attract and retain research leaders and to upgrade facilities would be constrained, and some funding would likely be lost to institutions in other states. Currently, Johns Hopkins is the leading recipient of research funds from the National Institutes of Health (NIH). Close on its heels are the University of Pennsylvania and the University of Washington. It is because of Johns Hopkins and its contributors' continued, diligent investment in staff, equipment and laboratories, along with researchers' progressive ideas, that Johns Hopkins has been able to attract and retain this extensive research grant support.



State support has primarily been in the form of capital funding. Over the last five years, the State of Maryland contributed directly and helped to leverage additional funds to go toward Johns Hopkins' \$778 million of construction activity. Among its many other projects, in January 2000, Johns Hopkins opened its newest medical research facility, the Bunting Blaustein Cancer Research Building, adding 200,000 square feet of new laboratories and offices. This new space provides facilities for research into a full range of cancers, including a cell and gene therapy processing facility that allows Johns Hopkins to manufacture vaccines for immunotherapy trials. The building now houses programs with \$65 million of research activity compared with research efforts totaling \$42 million per year at the Oncology Center prior to the opening of the Bunting Blaustein Cancer Research Building. The additional research laboratories of the Cancer Research Building allowed a three-year expansion of cancer-related research activity valued at roughly \$23 million, a 55-percent increase. This expanded research activity created:

- 690 Maryland jobs;
- \$31 million in spin-off income for Maryland businesses and organizations; and,
- most importantly, new approaches for treating cancers.

The State's \$20 million investment in this building coupled with \$24.7 million in private gifts and grants as well as a \$1.57 million federal grant and Johns Hopkins' \$12.7 million investment, made this expanded activity possible. The State's investment achieved a 270-percent annual return in new economic activity.

Investment and proven return draw additional investment. Tangible indications of State involvement are helpful in motivating private donors to provide additional support for Johns Hopkins research and, in some cases, the State's pledge was the key to securing substantial private commitments. New York philanthropist Sidney Kimmel contributed \$150 million to the Comprehensive Cancer Center based in part upon the State's financial commitment to the clinical facility and the Cancer Research Building.

It is important to underscore that these projects take commitments from multiple parties. It is also important to emphasize that Johns Hopkins invests in a variety of facilities to support the range of fields in which the Institutions excel. The State of Maryland has consistently been a contributor, among other valued supporters such as the federal government and private benefactors. Table III-1 illustrates the investments in several recent buildings that have received State support.



Table III-1: Contributions to JHI Projects, 1992-2002

Project	State Contributions	Johns Hopkins Contributions	Federal Contributions	Private Grants and Contributions	Total Cost
(Data in millions)					
Comprehensive Cancer Center (a)	\$26.5	\$82.8	-	\$39.2	\$150.0
Cancer Research Building (Bunting Blaustein)	\$20.0	\$12.7	\$1.6	\$24.7	\$59.0
Peabody Art Collection	\$9.5	-	-	-	\$9.5
Peabody Institute	\$3.0	-	-	\$23.8	\$26.8
Milton S. Eisenhower Library Renovation	\$2.2	-	-	\$2.7	\$4.9
Bloomberg School of Public Health Buildings	\$9.1	\$22.0	-	\$15.1	\$46.2
Krieger Hall and Maryland Hall Renovation	\$2.6	\$2.0	-	\$2.5	\$7.1
School of Nursing	\$2.5	\$7.9	-	\$8.0	\$18.4
Montgomery County Campus	\$3.0	\$4.9	-	-	\$7.9
Biomedical Engineering Institute	\$3.0	-	-	\$15.5	\$18.5
Chemistry Building	\$2.6	\$14.9	-	-	\$17.5
Broadway Research Building (b)	\$18.8	\$39.7	-	\$10.8	\$69.3
Total	\$102.8	\$186.9	\$1.6	\$142.3	\$435.1

Note: (a) An additional \$1.5 million State contribution was made in 1988.

(b) An additional \$5 million is expected from the State in 2003, project cost is expected to total \$140 million. \$69.3 million represents expenditures to date.

Source: Johns Hopkins Institutions

IV. Johns Hopkins' Economic Development Contributions

Johns Hopkins' role in the Maryland economy goes far beyond the dollars it generates and the jobs it supports through its expenditures. The Institutions also take an active role in the many components that contribute to the state's economic development. Johns Hopkins actions spur, attract and keep businesses in Maryland by creating commercially applicable innovations; educating entrepreneurs and others essential to a strong marketplace; investing in facilities to house start-up ventures; and providing support services such as consulting, industry analyses and participation on industry councils. In addition, Johns Hopkins develops and offers educational curricula targeted at technological industry needs in order to meet demands for a skilled workforce. Further, for Johns Hopkins, business development is coupled with approximately 200 community programs for neighborhood development.

Innovation

Since Johns Hopkins' founding in 1876, education and research have been inextricably linked. The University was founded in the belief that knowledge and an understanding of the underpinnings of that knowledge are best learned and understood through research. In their pursuit of knowledge, Johns Hopkins researchers continually discover and invent technologies that have commercial applications. Recent changes in the regulation of federally-funded research have enabled Johns Hopkins to intensify its efforts to encourage commercialization of such technologies. As a result, more and more inventions are being identified and marketed for business development. The Johns Hopkins Institutions have committed 30 full-time staff to support technology transfer, geared to moving discoveries from the academic laboratory into commercial use.

Development of technology to transfer starts with research and turns into patents. In Fiscal Year 2001, Johns Hopkins researchers executed 78 license and option agreements, received 360 invention disclosures, submitted 405 new patent applications and received 95 patents. Over the Fiscal Year 1997-2001 period, Johns Hopkins received 425 patents. Some of these technologies have been licensed and developed by start-up and existing Maryland companies.

Foundation for Maryland Business. At present, 45 start-up companies are known to have begun with Johns Hopkins technologies. Of those businesses, Maryland is home to the following 24 companies (more detailed descriptions follow for some of those listed):

- Accelera (Baltimore)
- Applied Thermodynamics (Hunt Valley)
- Atto Bioscience, Inc. (Rockville)
- Brassica Protection Products (Baltimore)
- Cardiocontinuum, Inc.
- Cardiologic Systems (Hanover)
- D-Fusion
- Discovery Software
- Dot 21, Inc.
- Equinox Corporation (Baltimore)
- FASgen (Baltimore)
- Gryphon Pharmaceuticals, Inc. (Baltimore)
- Guilford Pharmaceuticals, Inc. (Baltimore)
- Image Guided Technologies (Baltimore)
- InnoRX (Phoenix MD)
- LearnWare (Baltimore)
- MetaMorphix, Inc. (Baltimore)
- Molecular Diagnostic Systems, Inc. (Potomac)
- Reactive Nanotechnologies (Baltimore)
- Surgi-Vision, Inc. (Gaithersburg)
- Sphere/Guarded Profile
- Syntonics LLC (Howard County)
- VIRxSYS (Gaithersburg)
- VISICU, Inc.

Accelera is a leading provider of services for creation and electronic dissemination of high quality, custom-designed interactive multimedia courseware and presentations. It was founded in Baltimore by members of the largest computer-assisted learning group within the University. Accelera, a licensee of The Johns Hopkins University, operates Johns Hopkins Medical Video and Multimedia Services. The company has a strong relationship with Johns Hopkins Continuing Medical Education/Office of Funded Programs for accreditation and sponsorship services.

Applied Thermodynamics, located in Hunt Valley, started in 1994 as a developer of high-sensitivity microcalorimeters for biochemistry, biotechnology and pharmaceutical research. The company has developed MOLE, a general molecular graphics package for molecular modeling.

Atto Bioscience, Incorporated, located in Rockville, was founded in 1985 by Dr. Gary Brooker, Research Professor in the Johns Hopkins Department of Biology. Atto Bioscience focuses on two main products, the non-laser full-spectrum confocal microscopy, CARV™ and a fully automated cell biology workstation, Pathway HT. The workstation allows scientists to study the response of individual cells in real-time.



Brassica, located in Baltimore, licensed a Johns Hopkins University patent claiming an anti-cancer agent found in broccoli sprouts. The company is marketing Broccosprouts and Brassica Tea as anti-cancer health foods. Brassica Tea, which contains the antioxidant SGS™ (sulforaphane), extracted from broccoli, is in short supply due to unexpected nationwide consumer demand.

CardioLogic Systems, Inc., located in Hanover, is a manufacturer of Class III cardiovascular devices. The company has several patented devices including the centrifugal compression pump used in CPR vests.

Dot 21, Inc., founded in 1999, produces middleware for the embedded systems market. Middleware software moves information, or messages, from one place to another within a single system or between multiple systems. Dot 21 has licensing rights to the middleware used in several Navy programs.

Equinox Corporation, located in Baltimore, specializes in unique imaging system design concepts combining state-of-the-art sensor technology with computer vision and intelligent image processing.

Guilford Pharmaceuticals, Inc., located in Holabird Business Park in East Baltimore, licensed Johns Hopkins technologies and developed them into significant business lines. Guilford commercialized GLIADEL, co-invented by Johns Hopkins and MIT. GLIADEL generates about \$20 million in sales as a chemotherapy drug. Guilford continues to work towards FDA approval of its other products.

MetaMorphix, Inc. (MMI) is a biotechnology company focused on developing Growth and Differentiation Factors as effective new approaches for improving livestock production efficiency and novel products for enhancing animal health. MMI's current lead agricultural technology is based on Myostatin™, a highly specific regulator of skeletal muscle development discovered and characterized by MMI's scientific founder, Se-Jin Lee, M.D., Ph.D, of the Johns Hopkins School of Medicine. MMI currently holds rights to Celera's cattle genome and map of approximately 600,000 SNP (single nucleotide polymorphism). In June 2002, Caprock Cattle Feeders and Excel Corporation, both part of Cargill, Incorporated, announced they will provide \$10 million to MMI to support the development of innovative selection products for cattle.

Surgi-Vision, Inc. is developing the next generation in medical imaging technology – the Surgi-Vision Magnetic Resonance Imaging (MRI) Catheters. Surgi-Vision MRI products contain miniaturized imaging coils. These new imaging coils may be introduced into many different areas of the body to create enhanced magnetic resonance images with much higher resolution and unprecedented quality over traditional MR images. Opportunities exist for use in transesophageal, transrectal, transvaginal and gastrointestinal tract diagnosis and evaluation. The company is currently focused on the development, testing and prototype manufacture of its products.

Syntonics LLC, established in Columbia, is a space oscillator specialist that develops high performance time and frequency electronics. Syntonics uses technology developed by the Applied Physics Laboratory (APL) to build and sell ultrastable oscillators for commercial space enterprises. APL developed this technology for Navy navigation satellites, and it is now used in hundreds of Department of Defense and NASA space applications. In June 2002, Syntonics LLC received a development contract with the U.S. Navy for precision holdover timekeeping during global positioning system (GPS) signal outages and preliminary development for a portable antenna system for the Special Operations Command.

VIRxSYS is a Gaithersburg biotechnology company whose initial products will be based on research conducted at Johns Hopkins School of Medicine. VIRxSYS licensed Johns Hopkins University technologies that cover the use of novel gene therapy platforms composed of genetic vectors and, in some cases, associated payloads. In March of 2002, VIRxSYS completed development of its procedures and programs for Phase I Clinical Trials.

VISICU, Inc., is the producer of the eVantage System, used to monitor patients in an intensive care unit from a remote location. The system receives feedback from the equipment in the patient's room and this data is monitored by an office staffed by a doctor who specialized in intensive care and a critical care nurse to identify early warning signs of potential problems. VISICU, Inc. was founded by Dr. Michael Breslow and Dr. Brian Rosenfeld, who managed the adult critical-care department at Johns Hopkins Hospital for 15 years. Among their largest clients, VISICU, Inc. currently monitors 50 intensive care beds for Norfolk's Sentara Healthcare.

In addition to the input of technology, Johns Hopkins researchers and graduates have combined their educational background and their entrepreneurial spirit to start other Maryland businesses. For example, two senior post-doctoral students in cognitive neuroscience left Johns Hopkins University and started **CreditXpert Inc.** to better analyze financial information. CreditXpert Inc. pioneered credit content for the disclosure of credit scores, providing the first personalized credit analyses with consumer friendly credit scores.

Technology Real Estate. Johns Hopkins' technology real estate projects provide supportive locations for young technology businesses. The "incubator" concept accommodates the unique needs, in particular the scale, support services and costs, of start-up ventures. Facilities offer access to configurations appropriate to the technology, suitably sized space allotments, and interaction among organizations with like concerns to share experiential knowledge. Surrounding the Johns Hopkins Bayview Medical Center, Dome Corporation (a jointly owned subsidiary of John Hopkins University and Johns Hopkins Health System) developed the Bayview Research Campus to include a mix of Hopkins, Federal government and private business research operations. Located on the Bayview Medical Campus, the Alpha Center is a 25,000 square-foot business incubator devoted to nurturing start-up businesses. Its specialized laboratory facilities have attracted and supported several bioscience businesses. For example, **Chesapeake Biological Laboratories** was started in the Alpha Center and then "graduated" to Baltimore's Seton Business Park. **Brimrose**, a laser technology

graduate of the Alpha Center, now operates in White Marsh. **FASgen, LLC**, which creates innovative cancer and weight-loss treatments, has outgrown its space at the Alpha Center and plans to move into a larger space close to Bayview.

The Triad Technology Center, located on the Bayview Research Campus, also includes space for private businesses. **Alpharma**, a New Jersey producer of specialty generic pharmaceuticals, originally moved its research and development activities to the Triad Technology Center. Alpharma now operates production facilities in Baltimore County and a distribution center in Columbia. The Triad building recently was sold to a private group.

Johns Hopkins at Eastern (previously known as Eastern High School) recently entered into a partnership with the Baltimore Development Corporation to develop business incubator space to occupy the entire third floor of the building. As well, expansion plans on the Montgomery County campus in Rockville include 80,000 square feet of space for high-tech companies and government agencies.

Attracting and Enhancing Business in Maryland

Johns Hopkins' presence in Maryland makes the state more attractive to a variety of companies. Its visibility and reputation, industry support services, and educational opportunities for the local workforce are valuable resources to businesses in the area.

Visibility and Reputation. Johns Hopkins' excellence, especially in biotechnology and other fields of bioscience research, is world renowned, drawing global attention to Maryland through publication and citation of Johns Hopkins findings, press coverage and international affiliations.

The Johns Hopkins University was the second most-cited institution in multi-disciplinary fields from 1991 to 2001 with 1,210 papers and 116,038 citations, second only to Harvard University. Johns Hopkins ranked fourth behind Howard Hughes Medical Institute, Harvard and MIT in the Molecular Biology/Genetics Research and fourth in High Impact Papers in the Biosciences. Dr. Michael I. Miller, director of the Center for Imaging Science and professor of Biomedical Engineering and Electrical and Computer Engineering, received the highest increase in total citations in the field of Engineering for his paper titled "Deformable Templates Using Large Deformation Kinematics."

In addition to extensive scientific citations, many hear of Maryland through the press coverage generated by Johns Hopkins research and discoveries. Worldwide press clippings with reference to Johns Hopkins and television programs, such as ABC-TV's series, "Hopkins 24/7," help to keep Maryland in the public eye.

Visibility is not just a result of activities at home. Johns Hopkins has formal affiliations with 80 universities around the world and individual project relationships with many more institutions. Research and educational programs reach across the globe to raise international awareness of Johns Hopkins. For example, the School of Public Health conducts projects in 68 countries; and Ministers of Health from many nations, particularly in Africa and Asia, have received health policy training from Johns Hopkins. For the last 15 years, the University has maintained a campus in Nanjing specializing in Chinese and American studies. Other centers in Singapore, Bologna, Florence and Berlin also help to link Maryland with other nations. In addition to facilities overseas, Johns Hopkins University currently draws 14 percent of its students from abroad. The University has alumni in 151 countries and active alumni chapters in 17 nations.

Johns Hopkins' international reputation is a major advantage for Maryland in its development and recruitment of businesses. As Ioanna Morfessis, Executive Director of the Greater Baltimore Alliance, reports,

“Hopkins has enormous direct spin-off benefit with the research it sponsors and the technology that ends up in the marketplace. But most important is the fact that nobody else in the world but Maryland and Baltimore has Johns Hopkins. That is extraordinarily valuable. When you say ‘Maryland’ to someone [abroad], they may get a puzzled look on their faces, but when you say ‘Johns Hopkins’ there is immediate recognition.”

Industry Support Services



Proximity to Johns Hopkins and its Researchers. Many companies locate near Johns Hopkins precisely to have easy access to the faculty, students, graduates and facilities. For example, Human Genome Sciences, Inc., located in the University's Belward Research Park near Rockville in part to be close to Hopkins researchers. Qiagen, a German biotechnology company, also chose to locate in Maryland because of the proximity to Johns Hopkins and the National Institutes of Health.

Faculty Consulting and Research. Johns Hopkins faculty provide a wide variety of research and consulting services to area companies, including technology collaborations to improve products or processes. A number of private companies utilize the access to researchers' specialized expertise to help their companies excel and grow. For instance, in the bioscience field, companies like Human Genome Sciences take advantage of Johns Hopkins faculty as a consulting resource. Another example of collaboration is the computerized talent search developed by Sylvan Learning Systems and the Johns Hopkins University Center for Talented Youth.



Industry Sector Analyses. Johns Hopkins has produced analytical reports on various industry sectors in Maryland. Specifically, the Institute for Policy Studies studied and reported on the bioscience industry, the distribution industry, the telecommunications industry, and the non-profit sector. These reports are useful tools for businesses to evaluate Maryland as a place to locate. Additionally, this information provides information to policy makers and others in order to better understand the needs of these industries when devising policies geared at keeping and recruiting businesses to Maryland.

Industry Specific Projects. At times the Johns Hopkins Institutions identify specific industry needs, and where able, provide a support solution. For example, the Applied Physics Laboratory (APL) designed and manages a sensory industry website to connect firms providing sensory technology with companies in need of the technology. APL funds the site in order to promote the advances in sensory technology industry-wide.

Educational Opportunities for the Workforce

Johns Hopkins has an exemplary reputation as an educational institution and many Maryland businesses seek to hire Johns Hopkins graduates. Johns Hopkins alumni are working throughout the state. According to the Johns Hopkins Alumni Association, graduates are employed in Baltimore City and in each of Maryland's counties. Among the companies and organizations employing particularly large numbers of Johns Hopkins University graduates are:

- AAI Corporation
- Allied Signal, Inc.
- AT&T
- Baltimore Gas & Electric
- IBM
- Lockheed Martin
- Piper Rudnick, LLP
- Northrop Grumman

Johns Hopkins offers a variety of courses of study including both degree and non-degree programs. Over the years, programs of study have adapted to accommodate the evolution of education and to address the changing demands for workforce skills. For example, Johns Hopkins responded to the area's growth of the bioscience and telecom industries by developing specialized education curricula to train students in these fields. As well, part-time and non-degree courses have been added to the list of educational courses available at the Homewood campus in Baltimore and at locations throughout the state.

Continuing Professional Education. Johns Hopkins has established continuing professional education programs at its major campuses in Baltimore, Howard County and Montgomery County. As well, the University has extended accessibility to such programs into other areas such as St. Mary's and Harford counties in response to growing demand.

One of Johns Hopkins' most popular programs is the Part-Time Engineering Program of the Whiting School of Engineering, one of the largest in the country with 2,235 enrolled part-time in Fiscal Year 2002. The program offers degree and non-degree courses at Homewood, the Applied Physics Laboratory (APL), the Dorsey Center near BWI and the Montgomery County campus.

A number of area companies encourage employees to continue their education. Listed below are some of the companies whose employees are enrolled in the Part-Time Engineering Program:

- | | |
|---------------------------|---------------|
| • AAI | • Arinc, Inc. |
| • Acterna | • AT&T |
| • Armillaire Technologies | • BAE Systems |

- BGE
- Black & Decker
- Booz Allen & Hamilton
- Celera
- Ciena Corporation
- Cisco Systems
- Commerce One
- Conquest, Inc.
- Corvis Corporation
- Computer Sciences Corporation
- CTIS, Inc.
- DCS Corporation
- EMA
- General Dynamics
- General Electric Information Services
- Genuity, Inc.
- Honeywell Technology Solutions
- Hughes Network Systems
- IBM
- ITT Industries
- Lockheed Martin
- Lucent Technology
- Marriott International
- Northrop Grumman
- Orbital Sciences Corporation
- PricewaterhouseCoopers, LLP
- Raytheon
- RWD Technologies, Inc.
- SAIC
- SES
- Sprint Communications
- Swales Aerospace
- Telogy Networks, Inc.
- The Institute of Genomic Research
- TRW, Inc
- UPS
- Veridian
- Verizon

The Part-Time Engineering Program at the Montgomery County Campus started in 1988 in response to the need for accessible university programs as voiced by Montgomery County's technology business community. The program opened with 850 students from a few businesses. Johns Hopkins University was the first educational institution to commit to a major presence at the new Shady Grove Life Sciences Center and now plans to expand on the 35-acre campus in Rockville. Four buildings will be added to the site including a 130,000 square-foot building to house 50,000 square feet of classroom space and 80,000 square feet for high-tech companies and government agencies.

Johns Hopkins recently extended its reach into southern Maryland. The expansion of activity at Patuxent Naval Air Station attracted private contractors and generated a significant need for continuing technical education. The Part-Time Engineering Program responded and began offering classes at the Southern Maryland Higher Education Center in St. Mary's County.



In Harford County, Johns Hopkins offers classes at the Higher Education and Applied Technology center (HEAT) located near Aberdeen Proving Ground. In response to industry's need for additional Information Technology (IT) workers, Johns Hopkins committed to increase IT funding and programs so as to increase the number of Maryland IT graduates. Under the Maryland Applied Information Technology Initiative (MAITI) program, Johns Hopkins – in cooperation with the University of Maryland at College

Park and the Maryland Department of Business and Economic Development – is providing more funding to increase the number of faculty and the resources available.

Johns Hopkins has increased the accessibility of courses in technological fields by offering them at multiple locations as listed above. As well, in certain cases, Johns Hopkins has created customized programs of advanced engineering training for specific companies such as Northrop Grumman and Lockheed Martin, among other Maryland corporations.

In addition to technology programs, specialized business programs in the School of Professional Studies in Business and Education (SPSBE) include information technology, the business of medicine, management of change, marketing, organization development and human resources, real estate and facilitation skills for leading groups. Each year more than 2,000 companies reimburse their employees for courses taken in SPSBE. Such companies include the following:

- Addison-Darden, PC
- Aegon
- American Iron & Steel
- Avaya Communications
- Bioreliance
- BOMI Institute
- Communications Solutions, Inc.
- CONACYT
- Ford
- General Motors
- Genuity
- Institute of International Education
- IIT Research Institute
- Lockheed Martin
- Loral-Cyberstart
- Lucent Technologies
- Manganaro
- Merck
- Morningstar Systems, Inc.
- Pepco
- Raytheon
- Standard Technology Inc.
- Ullico
- United Technologies
- UT Learning Institute
- Verizon

Partnerships with the Business Community

Johns Hopkins is an active member and supporter of a number of interactive business organizations, including local Chambers of Commerce, the High Technology Council of Maryland, the Greater Baltimore Technology Council, and the Maryland Technology Alliance (a group of Maryland educational institutions and governments in support of Maryland innovation and technology). As well, Johns Hopkins works collaboratively with the Greater Baltimore Alliance to further the mission of marketing the Baltimore region to prospective businesses. Johns Hopkins executives have participated in recruiting visits to pitch the area to beneficial prospects, and Hopkins has agreed to participate in research projects helpful to the Alliance. In addition, Johns Hopkins partners with the Greater Baltimore Committee and the Downtown Partnership of Baltimore.

Johns Hopkins' Role in Neighborhood Development

Over the decades, Johns Hopkins has remained committed to Baltimore through continued expansion and reinvestment in its own facilities and in the surrounding communities. In the last ten years, John Hopkins University and Johns Hopkins Medicine have stepped up their involvement in the communities around Hopkins' East Baltimore, Homewood, Peabody and Bayview campuses. Beyond capital investment projects, Johns Hopkins is actively involved in the community as seen in its support of approximately 200 formal community-oriented programs and many other less structured initiatives. Such programs include providing off-campus services like security patrols and maintenance of public rights-of-way, providing technical and financial assistance to community-based organizations, delivering multiple health programs such as an intensive drug education and counseling program for drug-abusing women, community health screenings and mentoring high school students (described in greater detail in Section V). Johns Hopkins faculty and staff also serve as board and committee members for a wide range of entities. Also important to note, is the annual volunteer participation of more than 1,000 students from the Homewood campus in 51 programs aiding clients on and off campus.

Johns Hopkins has a perpetual list of building projects necessary to maintain and grow the Institutions. As students, faculty and staff utilize the surrounding areas, construction plans are increasingly designed to serve both the campus and the neighborhood. For example, the University is in the process of developing a new facility that will accommodate a full-service bookstore, deck parking, and a combination of retail, dining, dormitory rooms and/or office space in Charles Village. Upon completion, this project will serve to greatly enhance the greater Charles Village area as the cornerstone for the St. Paul Street Planned Unit Development (PUD). In the Mount Vernon section of Baltimore City, the Peabody Institute opened Maestro's Café and a bookstore on East Centre Street, renovating a substantial section of the formerly vacant property on that block. The Peabody Institute is also undertaking a major streetscape improvement program that is being planned with neighborhood involvement.

East Baltimore Development Project and Biotechnology Research Park. Backed by community leaders, Baltimore Mayor Martin O'Malley in 2002 initiated a collective revitalization strategy for 80 beleaguered acres around Johns Hopkins Hospital in East Baltimore to be anchored by a state-of-the-art biotechnology research park. The East Baltimore Development Plan invests \$200 million in the community to radically improve public safety, recreation and community services and increase open space. The development project includes up to 1,500 new and rehabilitated residential units, new green space, new jobs and new retail uses in East Baltimore.

At the core of this initiative is a 22-acre biotechnology park, which is expected to generate thousands of new jobs. The park is projected to offer biotech space to up to 50 companies, and Johns Hopkins has committed to leasing up to 30,000 square feet of lab space in the park. Equally important, the development will create new streets and block configurations, improved transit connections and mixed-income housing. Johns Hopkins and the Annie E. Casey Foundation have allocated resources to assist residents displaced by the new biotech park. The plan for the park – critical to generating investment in East Baltimore – is the result of a unique partnership among Baltimore City, the State of Maryland, Johns Hopkins, the Historic East Baltimore Community Action Coalition and the communities of East Baltimore.

HOPE VI Grant. Johns Hopkins Medicine played a key role in the 1999 HOPE VI grant that was awarded to The Housing Authority of Baltimore City. The commitment from Johns Hopkins to participate in the redevelopment of Broadway Homes (public housing) was a critical element in helping Baltimore to win a \$21.4 million grant from the U.S. Department of Housing and Urban Development. As a result of the grant, the community will replace aging public housing with new, affordable, mixed-income housing and a community center. A land swap between Baltimore City and Johns Hopkins will allow a larger community redevelopment project that respects and enhances the residential character of the Washington Hill Community. Construction of 132 rental units and 32 for-sale units began in August 2002. Johns Hopkins also committed \$1.5 million in direct funding and agreed to raise the remaining funds for the anticipated \$4 million cost to replace the branch of the Enoch Pratt Free Library near Dunbar High School. For Johns Hopkins, the land swap allowed the planned \$1 billion expansion of the Johns Hopkins Medical campus to move forward, including construction of two new patient care towers.

Live Near Your Work. Through the Live Near Your Work program, Johns Hopkins, the City and the State provide a total of \$3,000 in incentives to any Johns Hopkins employee who purchases a home in designated neighborhoods near the Johns Hopkins campuses. To date, Johns Hopkins has contributed \$270,000 in cash towards this program. Between 1998 and September 2002, 154 Johns Hopkins University employees have utilized the Live Near Your Work program, along with 107 at

Johns Hopkins Health System and 12 at Kennedy Krieger Institute. The University and Health System are the two most successful employer participants in this Smart Growth program.

HEBCAC. Johns Hopkins Medicine (JHHS and the School of Medicine), in partnership with the City of Baltimore, the State of Maryland and Kennedy Krieger Institute, has committed long-term operating funds to the Historic East Baltimore Community Action Coalition, Inc. (HEBCAC). HEBCAC is a non-profit community-based organization responsible for planning and implementing a comprehensive redevelopment of East Baltimore neighborhoods. The organization is involved in housing rehabilitation, employment training and placement, economic development, commercial revitalization and other related activities.

Johns Hopkins funded HEBCAC's development of a land use plan incorporating substantial community involvement for East Baltimore. The land use planning process identified the most appropriate areas for Johns Hopkins expansion as well as target areas for housing rehabilitation, housing development and commercial revitalization consistent with community needs and desires. Johns Hopkins then committed to bring all of its development plans, both on and off campus, to HEBCAC for community review and approval.

One of HEBCAC's most popular recent initiatives is the Historic East Monument Street Renaissance project. This project focuses on the beautification and restoration of Monument Street. The first voluntary clean up attracted 250 volunteers, many of whom were Johns Hopkins employees. The program also has a façade improvement grant program, where business owners may apply for dollar for dollar matches to their investment.

Johns Hopkins Security coordinates crime prevention efforts with Baltimore City Police and HEBCAC. In recent years, crime has dropped 30 percent in the community surrounding the Johns Hopkins East Baltimore campus due to these cooperative efforts. Johns Hopkins University, Johns Hopkins Hospital and the Baltimore City Police Department created a **Child Development/Community Policing Program** focused on assisting children touched by violent crime. The program now occupies 2,100 square feet of space near the Hospital's East Baltimore operations.



Johns Hopkins Bayview Medical Center has a major impact on the east side of Baltimore City and County. Bayview is a pro-active member of the community. All Bayview senior management staff are required to be part of at least one community group and key staff serve on the executive committees of several community groups.

The S.E. Emergency Needs Network program provides food and funds for prescriptions to disadvantaged patients of the Medical Center and the community at large. The program is funded by Bayview Medical Center staff contributions.

Southeast Community Development Corporation. The Southeast Community Development Corporation (CDC) focuses on revitalization of the business corridor in Southeast Baltimore. Among other programs, the Southeast CDC offers a 50-percent matching grant program to area business for façade improvements. As a partner with the Southeast CDC, Johns Hopkins provides on-going operational and project-based support. Each year, the Southeast CDC brings together residential and business neighborhoods at the Highlandtown Fall Festival. Johns Hopkins is a corporate sponsor of this event that draws 3,000 visitors.

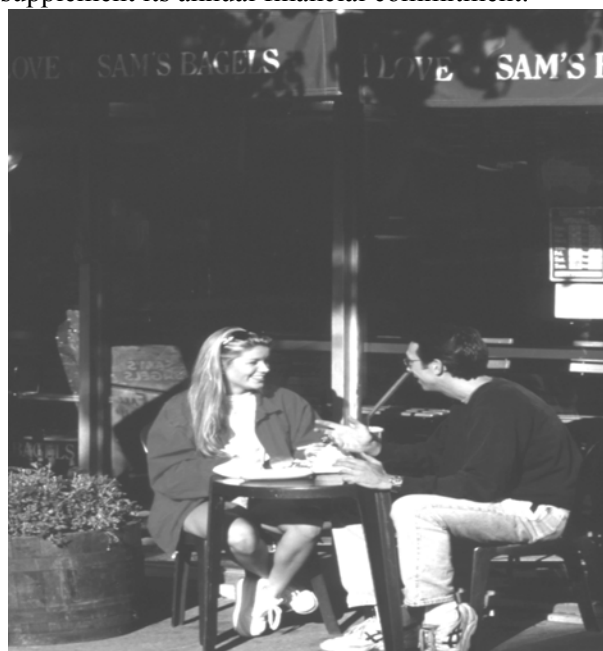
Greektown Community Development Corporation. The Greektown CDC was founded in 1998 as a volunteer organization and received funding in 2001 as a Community Development Corporation. Johns Hopkins Bayview Medical Center officials supported the Greektown CDC from the onset with financial and organizational assistance.

Among the Greektown CDC's programs is its public safety initiative. In 2000, violent crime surged by 24 percent in Greektown. Implementation of the CDC public safety initiative that included the addition of two officers to patrol the area (on foot and on bike) during the evenings, resulted in a 38 percent drop in violent crime in 2001. Similar improvements are expected to continue for years to come.

Greater Homewood Community. The University is a member and key financial supporter of the Greater Homewood Community Corporation, a non-profit umbrella organization bringing together area institutions and 40 neighborhoods near the Homewood Campus. Johns Hopkins provides technical assistance, leadership and student support to supplement its annual financial commitment.

Charles Village Community Benefits District. Johns Hopkins has been instrumental in the Charles Village Area improvement activities through the Charles Village Community Benefits District (CVCBD). The University has lent its support to the District since its inception in 1994. University involvement has included contributing critical bridge funding for the start-up of the Management Authority (the district's governing body), providing significant cash contributions and technical assistance, serving as an active board member, and adding a new security post that primarily serves the off-campus area of Charles Village. Johns Hopkins works directly with the CVCBD security staff to coordinate patrols and coverage of the community surrounding the University.

St. Paul Street PUD. As part of its commitment to improving the local community, the University participated in a two-year effort to revitalize the nearby 3100 St. Paul Street commercial block into a college community oriented shopping district. Additional areas for commercial development were incorporated into a Planned Unit Development (PUD) that are designed to attract small-scale retail entrepreneurs. Johns Hopkins primed the revitalization pump by investing \$18 million in the



Homewood Apartments renovation, a mixed-use project containing 124 apartments, 36,000 square feet of office space and 20,000 square feet of retail space. Several new businesses have moved into the space. Johns Hopkins University remains an active participant on the PUD Committee. Through these efforts, Hopkins is helping to improve the Charles Village retail area and working to create an environment for additional retail expansion.

Johns Hopkins at Eastern. Through the Dome Corporation (a JHU-JHHS joint venture), Johns Hopkins restored the former Eastern High School building with an investment of more than \$31 million. Johns Hopkins and Johns Hopkins-affiliated tenants occupy 186,000 square feet of the 230,000 square-foot structure. In addition, the new 44,000 square-foot Emerging Technology Center Incubator is scheduled to open its doors in 2003, taking over the third floor of the building. The incubator is the result of a joint effort among Johns Hopkins, the Maryland Economic Development Corporation and the City of Baltimore. Bringing this formerly vacant and deteriorating building back into productive use improves the neighborhood by serving as an important activity anchor for the entire Waverly neighborhood.

Mt. Vernon Cultural District. The Johns Hopkins' Peabody Institute and the George Peabody Library are prominent landmarks in the Mt. Vernon neighborhood. Through active leadership in and financial support of the Mt. Vernon Cultural Association, representatives from Peabody work with other area organizations to help elevate Mt. Vernon as a cultural and tourist destination. In Fall 2001 Peabody began a \$26.8 million capital renovation to raise the stature of this facility. Among other elements, the improvements are designed to facilitate interaction between the Peabody Institute and the surrounding neighborhood by providing a new entrance to the concert hall. The Institute has also renovated four formerly vacant buildings on Centre Street and a townhouse on Charles Street. Also, in cooperation with the community, City and State, the Institute is embarking on a multi-block comprehensive streetscape improvement project to integrate with other recent area streetscape improvements. The properties on Centre Street where the renovations are complete now contain office space, Maestro's Café with a coffee bar and music store, and additional space that may be used for a new commercial venture.



Volunteer Programs. Through its undergraduate student volunteer programs, Johns Hopkins University students contribute important services to various communities and organizations. A multitude of programs provide service in tutoring, community cleanup, coaching, homebuilding and many other types of activities. Many of these programs are offered at off-campus locations to be more accessible to the clients. Depending on whether the labor is valued at minimum wage or market rate value, the contribution from the Homewood campus is between \$500,000 and \$750,000 annually from 1,000+

students in 51 student-directed programs, 90 percent of which are in Baltimore City. In addition to student involvement, Johns Hopkins' faculty, staff and retirees are also active in volunteer service to the community. The Office of Faculty, Staff and Retiree Programs works to match volunteers with organizations and activities that need support.

V. Health Care Contributions

The establishment of a University, Medical School and Hospital, under the Johns Hopkins name, created a blueprint for a medical establishment that tightly links components of medical practice, teaching and research. In 1876, Johns Hopkins set a foundation to fulfill a mission: to create a learning, training and caring environment where the quest for new knowledge would continuously yield more effective and more compassionate care for all. These sentiments permeate the Institutions today and they remain a driving force behind Hopkins' leadership position.

For twelve years running, *U.S. News & World Report* has named The Johns Hopkins Hospital the Number One hospital in America. Following that lead, the other divisions of the Johns Hopkins Health System provide the highest level of health care to Marylanders through multiple venues. Johns Hopkins health care excellence is world renowned, attracting patients and researchers from across the country and around the globe. However, its home is Maryland. Facilities, outreach programs and partnership affiliations exist across the state reaching out to all populations.

The Johns Hopkins Health System treats patients at facilities across Maryland including three hospitals and an extensive network of outpatient locations available in Baltimore City and Anne Arundel, Baltimore, Carroll, Frederick, Harford, Howard, Montgomery, Prince George's and Washington counties. Johns Hopkins facilities house critical care centers vital to the statewide trauma system including the Adult Trauma Center, Eye Trauma Center, and the Pediatric Trauma Center at the Johns Hopkins Hospital as well as the Adult Trauma Center and the Baltimore Regional Burn Center at the Johns Hopkins Bayview Medical Center. Medicaid patients across the state benefit from Johns Hopkins' disease management expertise through the Priority Partners managed care system. As well, Johns Hopkins affiliations with Suburban and Kent & Queen Anne's Hospitals enable the sharing of knowledge and experience as well as adapting effective medical strategies into new settings.



Care for all sometimes includes care for those that cannot afford the costs of medical attention. Johns Hopkins Hospital provides more charity care than any other hospital in Baltimore; in Fiscal Year 2002, Johns Hopkins Medicine provided \$144.3 million in uncompensated care to Marylanders.

In addition to patient care, Johns Hopkins is also in the forefront of developing new and improved techniques for the treatment and prevention of illnesses. Recent advances include the first successful treatment for sickle-cell anemia, new sight-saving procedures for disorders of the eye, nerve-sparing surgery for prostate cancer, and new detection, treatment and prevention techniques for colon and other cancers.

Johns Hopkins Medicine, the Bloomberg School of Public Health and the School of Nursing each conduct outreach programs geared to improving the health of Maryland residents. Through various funding resources including State and federal support for some programs, and scores of faculty and staff volunteer hours, Johns Hopkins shares its expertise to assist community-based efforts to prevent and fight disease. Public awareness programs such as the “Never Shake a Baby” campaign and training programs such as the Safe Sitter course empower citizens with knowledge, while programs such as WIC and Healthcare for the Homeless impart health services at low or no cost to those in need.

Statewide Health Care Delivery

Johns Hopkins Hospital. The Johns Hopkins Hospital, flagship of Hopkins Medicine, is an academic medical center with 977 acute care beds. Within this world-renowned institution are a number of centers devoted to specialized medical services. Listed below are a few.

Brady Urological Institute. The Brady Urological Institute of Johns Hopkins Hospital is dedicated to providing state-of-the-art medical and surgical care in all aspects of adult and pediatric urology.

The Wilmer Eye Institute. For more than 75 years, Johns Hopkins’ Wilmer Eye Institute has earned international regard. The Institute provides a full spectrum of care – from routine and preventive to specialty services – by ophthalmologists who are consistently ranked by their peers as among the finest in the world. The Wilmer Eye Institute also delivers 24-hour care for eye injuries as a designated eye trauma center within the Maryland Institute for Emergency Medical Services System. In addition to Wilmer’s Eye Care Pavilion at Johns Hopkins Hospital, Institute faculty see patients in Baltimore and Anne Arundel counties as well as other sites in Baltimore City.

Johns Hopkins Children's Center. Founded in 1912 as the children’s hospital of the Johns Hopkins Medical Institutions, the Johns Hopkins Children’s Center



offers one of the most comprehensive pediatric medical programs in the country, from performing emergency trauma surgery to finding causes of and treatments for childhood cancers to delivering a child's clean bill of health. With recognized Centers of Excellence in 20 pediatric sub-specialties, including cardiology, transplant, psychiatric illnesses and genetic disorders, Children's Center physicians, nurses and staff provide compassionate care to more than 90,000 children each year.

Johns Hopkins Children's Center has been home to the statewide dedicated pediatric trauma center since 1973 and has cared for thousands of children during this time. During FY 2000, the facility treated almost 1,000 critically injured and ill children and more than 5,000 seriously injured and ill children from every jurisdiction in Maryland.

In addition to providing direct care, Johns Hopkins provides frequent training and educational programs for local medical staff, emergency medical technicians, nurses, community physicians and other hospital providers. Hospitals statewide access the Trauma Center's specially equipped ambulance, staffed with members of the Johns Hopkins Pediatric Trauma team, who go to the community hospitals and transport critically injured or seriously ill children to the Johns Hopkins Pediatric Trauma Center.

Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins. Since its inception in 1973, the Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins has been dedicated to better understanding human cancers and finding more effective treatments. One of only 41 cancer centers in the country designated by the National Cancer Institute (NCI) as a Comprehensive Cancer Center, the Kimmel Cancer Center has active programs in clinical research, laboratory research, education, community outreach, and prevention and control. The Johns Hopkins Kimmel Cancer Center is the only such NCI Comprehensive Cancer Center in Maryland.

The Kimmel Cancer Center at Johns Hopkins encompasses a wide spectrum of specialty programs for both adults and children coping with cancer, including bone marrow transplantation and new drug development. Additionally, those at high-risk for breast, ovarian, colon and other cancers, may seek information about early detection, prevention and genetic counseling through a comprehensive genetics service.

The Center also offers complete family and patient services that include a Cancer Counseling Center, survivors and palliative care programs, and two residences for patients traveling from out-of-town to receive treatment.

Johns Hopkins Bayview Medical Center. Johns Hopkins Bayview Medical Center has a long and distinguished history of service and medical excellence. It is one of the oldest health care organizations in continuous service on the East Coast. Bayview is a full-service teaching hospital containing more than 700 beds and is home to one of Maryland's most comprehensive neonatal intensive care units, a sleep disorders center, an area-wide trauma center, the state's only regional burn center, and a geriatrics center that enjoys a national reputation in the field of aging. Two of the hospital's specialized treatment centers are identified below.

Baltimore Regional Burn Center. Housed at Johns Hopkins Bayview Medical Center, the Baltimore Regional Burn Center provides a comprehensive, nationally recognized program of care for patients with burn injuries. The facility focuses on returning patients to their highest level of function and includes the physical, psychological, social and vocational aspects of their lives.

To meet this goal, the Burn Center uses a team approach, applying the expertise of various specialties to the many interrelated problems associated with burn injuries. Directed by physician burn specialists, the team includes nurses, a nurse practitioner, physical and occupational therapists, a nutritionist, social workers and psychologists, a parenteral nutritionist, respiratory therapists and a child life specialist. The Burn Center also conducts educational outreach programs on burn prevention.

Geriatrics Center. Also housed at Johns Hopkins Bayview Medical Center is the Geriatrics Center (JHGC), a 255-bed skilled nursing facility and chronic care hospital. The Geriatrics Center provides long-term care, sub-acute care, chronic medical, ventilator, rehabilitation services and outpatient care. JHGC differs from many other nursing homes in that it is staffed by experts in geriatric medicine. There is a geriatrician (a doctor who specializes in diseases of the elderly) assigned to every unit.

Howard County General Hospital. Howard County General Hospital is a 187-bed comprehensive acute-care medical center specializing in women's and children's services, surgery, cardiology, oncology, orthopedics, gerontology, psychiatry, emergency services, and community health education. Last year, the hospital admitted more than 12,000 patients; performed nearly 15,000 surgical procedures; delivered more than 3,000 babies; and treated more than 57,000 patients in the Emergency Department.

Johns Hopkins Community Physicians. Johns Hopkins Community Physicians is a wholly-owned member of Johns Hopkins Medicine, providing Hopkins-quality primary health care at 18 convenient medical centers in communities across Maryland.



Priority Partners. The Johns Hopkins Health System and the Maryland Community Health System (MCHS) are co-owners of Priority Partners, a Medicaid Managed Care Organization. It is a unique collaboration between a major academic medical center and a federally-qualified community health network, which built on Johns Hopkins' long tradition of care to low-income populations. MCHS comprises eight federally

qualified community health centers in Baltimore, Denton, Rockville, Brandywine, West River and Princess Anne. This statewide network provides care to 116,000 persons dependent on Medicaid. Johns Hopkins' participation brings its expertise in disease management and care management to improve the quality of care and health outcomes to Medicaid enrollees.

Keswick Multi-Care Center. In May 2001, Johns Hopkins University and Bayview Physicians allied with Keswick Multi-Care Center in Baltimore. Through the arrangement, a Hopkins physician serves as the Keswick Executive Medical Director and is responsible for clinical teaching and research conducted at Keswick. In addition, Hopkins arranges for physician services to residents of the Keswick Nursing Home. In September 2002, the center launched "Johns Hopkins at Keswick," a primary care clinic on the Keswick campus geared toward younger patients.

Hospital Affiliations. In 1996 Johns Hopkins Medicine (JHM) and Montgomery County's Suburban Hospital joined forces to promote accessible, affordable, patient-centered care through the health care facilities and professionals of both hospitals. Arrangements were made to enhance the specialty care in otolaryngology, diabetes education, and oncology at Suburban to serve patients.

The Johns Hopkins Listening Center at Suburban Hospital provides pre- and post-operative speech pathology services for children who receive cochlear implant operations by specialists at Johns Hopkins Hospital (JHH). As well, Johns Hopkins provides a Diabetes Education Program, modeled after a similar program that has been in place at JHH for more than 15 years.

In oncology, JHM, Suburban and members of Suburban's Medical Staff collaborated on the development of a model cancer center for the prevention, early diagnosis and delivery of care to cancer patients in Montgomery County and the northwest sector of Washington, D.C. Within the oncology department, Suburban opened the Suburban Breast Center. It is the only comprehensive center for breast health in Montgomery County, where patients receive state-of-the-art screening, diagnostic and treatment services, education and wellness programs from a supportive, multidisciplinary staff. Through the Hopkins affiliation, patients who are at an unusually high risk for developing breast cancer, or who require specialized treatment protocols have direct access to risk assessment testing and leading edge clinical trials.

In addition to Suburban Hospital in Bethesda, Johns Hopkins and Kent & Queen Anne's Hospital on Maryland's Eastern Shore have also collaborated to enhance their operations. The affiliation provides Kent & Queen Anne's Hospital improved access to Hopkins' specialized health care services and resources. Kent & Queen Anne's Hospital was given the opportunity to participate in Hopkins' Employee Health Plans and Priority Partners.

Community Involvement

Cigarette Restitution Fund. Maryland's disproportionately high number of cancer victims compelled the State's leaders to establish the Cigarette Restitution Fund (CRF) and designate a significant portion of funds received from the nation's cigarette manufacturing companies for cancer prevention and control. The CRF program utilizes a multi-pronged approach, including smoking-cessation programs, crop conversion assistance for tobacco farmers, cancer research, prevention, education, screening and treatment, to counter the effects of tobacco use and cancer on the citizens of Maryland. In recognition of Johns Hopkins' preeminence in research and cancer care, the State of Maryland has partnered with the Institutions, funding research on cancers particularly prevalent and deadly in the state.

In addition, Johns Hopkins received a Public Health Grant through Maryland's CRF for a cancer prevention, education, screening and treatment program in Baltimore City. Because minority and hard-to-reach populations have disproportionately high cancer incidence and mortality rates, Johns Hopkins has brought this grant into the communities that have been hardest hit, furthering partnerships with inner-city clergy and community organizations to bring cancer education and screening to area residents.

Although the program has been in existence only three years, Maryland's partnership with Johns Hopkins has already yielded a high return on investment. Philanthropist Sidney Kimmel cited the CRF program and the State's commitment to funding cancer research as being instrumental in his decision to award Johns Hopkins an unprecedented \$150 million gift to continue the quest to conquer cancer.

Urban Health Council. The development of effective community health programs takes input from the community. In May 1999, a consortium of 150 community residents, local leaders, City officials, and Johns Hopkins faculty and staff met and prepared the Urban Health Initiative, calling for a major transformation in thinking and practice, buttressed by a deep institutional commitment to urban health, guided by a solid partnership with the community. The Council set three priority action recommendations to:

- Establish an Urban Health Institute at Johns Hopkins that works “*in full partnership with the community* to facilitate and stimulate coordinated efforts”.
- Focus on substance abuse as the primary health concern.
- Promote the redevelopment and revitalization of East Baltimore.

Urban Health Institute. The Urban Health Institute was established by the Urban Health Council to marshal the resources of the Johns Hopkins Institutions, in partnership with the communities of East Baltimore, to improve the health and well being of its residents. The Institute set three primary goals:

- “To support capacity-building within the East Baltimore community and strengthen East Baltimore community organizations so that meaningful and sustained partnerships with Johns Hopkins faculty, staff, and students can develop.
- To view the Johns Hopkins Health System as the community hospital for East Baltimore with accountability to our local communities in the care that is provided and the outcomes achieved.
- To encourage and support faculty, staff, and students in the pursuit of academic and service careers in the study and promotion of urban health.”

The Institute utilizes the unique resources of urban communities – churches, community centers, neighborhood associations, schools and others – through partnerships and grant funding to address the health disparities in urban America. Its first community grants included funding for the Amazing Grandmothers and three similar programs to fight substance abuse in East Baltimore.

The following is merely a **sample** of Johns Hopkins’ other health care programs that benefit the community (listed by population).

Mothers and Babies

Breast-Feeding Promotion Strategies for Urban W.I.C. Women. This Bloomberg School of Public Health program is designed to increase breast-feeding rates among 400 African-American women in Baltimore City.

Program Evaluation. Bloomberg School of Public Health (BSPH) faculty are currently evaluating federally funded programs, such as Healthy Start, that work directly with poor women to reduce the city’s high rate of infant mortality. In collaboration with the Baltimore City Health Department, Healthy Start’s neighborhood centers provide “one-stop” shopping for pregnant women and new mothers. Faculty continue to analyze results to determine what interventions lead to better outcomes.

Maternal and Child Community Health Science Consortium. This is one of three federally funded initiatives in the country charged with exploring new approaches to



community-based problem solving. It is a six-year old partnership between the BSPH and the Baltimore City Health Department to improve the health of women, infants and children in the city. The Consortium develops measures and provides services to practitioners, community members and researchers. It offers start-up grants to encourage new and innovative approaches to improving maternal and child health outcomes.

WIC. A senior member of the BSPH founded the Maryland Women, Infants and Children Program for nutritionally at-risk mothers and children. Subsequently, this program became the model for the national WIC program. WIC is a Federal program designed to improve the nutritional status of Women, Infants and Children by providing nutrition education. Income-eligible women are also supplied with milk, eggs, peanut butter, beans, dry cereal and cheese. The Hopkins program serves 4,000 Baltimore City women and children at eight locations.

Screening. At four clinics in East Baltimore, BSPH faculty conducted a screening program to identify women with bacterial vaginosis, an asymptomatic infection implicated in premature birth. This is one of many screening programs in which the faculty participate.

“Never Shake a Baby” Campaign. This program is designed to heighten the awareness of and decrease the incidence of Shaken Baby Syndrome by means of education and communication. Run by the Johns Hopkins Health System Corporate and Community Services Office of Community Health, this is a statewide coalition of health care professionals to increase public awareness of this preventable injury.

Johns Hopkins Teenage Parent and Child Clinic (TAC). The Teenage Parent and Child Clinic at Hopkins provides hospital-based comprehensive primary care for adolescents. Last year, 538 teenagers and 652 babies were served in East Baltimore through the Division of Pediatrics and Adolescent Medicine.

Community Chats. The Johns Hopkins Health System (JHHS) provides speakers from the Johns Hopkins Medical Institutions to community organizations and groups free of charge. Topics focus on physical and emotional health of adults and children. The program serves Baltimore City and Baltimore County and is funded by the JHHS Office of Community Health.

Martin Luther King, Jr. Early Head Start.

This is a federally funded program through which Johns Hopkins Hospital provides comprehensive educational and social services to children and families. It is a community-based program active in outreach and follow-up. Each year, the program serves approximately 185 children aged 0-3; 6-10 pregnant women;



and 10-15 teenage mothers. Once enrolled children reach age three, they are referred to Head Start. In addition, the program annually trains 35 child-care providers through a 90 clock-hour course in child development, earning graduates of the program a national Child Development Associate certification. The program pays a stipend during their training.

Maternity Center East. This is a community-based women's health center, which, in the last year, provided comprehensive maternal health services for 430 mothers and 800 gynecological patients. (About 115 adolescents made 850 visits for prenatal care last year in the Center's Adolescent Program.)

Set for Life. This is a parenting program for parents with children under the age of three. The program includes classroom group work and cultural exposure to sights throughout the city. About 10 families participate in each class.

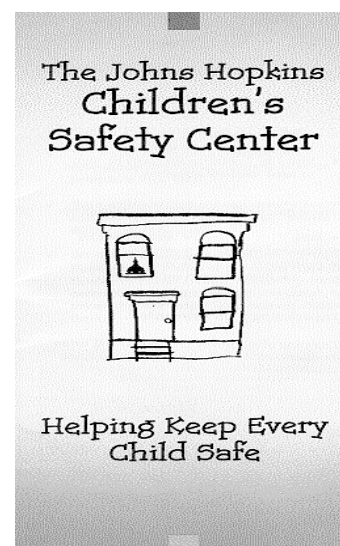
Safe Babies. This program provides the mother of every baby born at Bayview Medical Center with a "Safe Babies kit," which includes a smoke detector, a baby bath thermometer and other burn prevention devices and materials. Approximately 1,000 families are served each year.

Children and Adolescents

Center for Adolescent Health Promotion and Disease Prevention. As part of the Bloomberg School of Public Health, this unique resource for Maryland's youth-serving organizations was established in 1993 and is one of 14 federally funded prevention research centers and the only one dedicated to adolescent health. Its mission is to promote healthy behaviors in adolescents and reduce their risk of disease by reducing violence, unsafe sexual practices, teen pregnancy, tobacco and other substance use. Two community advisory boards, one in Baltimore and one on the Eastern Shore, provide direction for the Center's research, training and information dissemination activities. Board members are drawn from public and private agencies and organizations in Maryland. The Center assists local community organizations with technical assistance, program evaluation, needs assessments and staff training.

Injury Prevention Center. BSPH faculty are developing programs that enhance parents' ability to prevent falls, burns and poisoning injuries to infants and toddlers. This Center has 17 full-time faculty members and is the first multi-disciplinary resource for injury prevention. In addition to other work, they evaluate safety-teaching programs in schools and work with citizens to promote safety in their own neighborhoods.

Burn Prevention Education. In addition to patient care, the Baltimore Regional Burn Center (BRBC) also runs community burn prevention education programs. A Baltimore City firefighter works for the Center as burn prevention coordinator. Educational materials such as brochures and fact sheets are created and distributed, and the coordinator teaches burn prevention to elementary school children. The goal is to educate teachers and children about safety measures to avoid being burned and about recognizing and treating burn injuries. As well, the program strives to decrease the number of burn injuries among children in the Greater Baltimore area. As of



November 2002, the Burn Prevention Coordinator visited 13 schools and spoke with 833 students. Funding from a Kiwanis grant supports the in-school presentation program while funds from the Baltimore Regional Burn Center Community Fund cover the cost of informational brochures.

Johns Hopkins Center for Childhood Asthma in the Urban Environment. The Asthma Center focuses on understanding chemical exposures in East Baltimore and other urban environments that contribute to disease in children and adults in order to develop prevention and treatment strategies. The Center actively involves the community to translate research findings into information that is useful in advocacy, prevention, and community building. Through the activities of the Asthma Center, school-based interventions and educational services once provided by the Oliver Community program are provided to schools within the center's target service area.

Safe Sitter. The Johns Hopkins Health System Office of Community Health offers an intensive 13-hour injury prevention training program to children 11 to 13 years old. The goal is to better prepare baby sitters in an effort to reduce the number of accidental and preventable deaths among children.

Community-Oriented Policing Services (COPS). This award-winning program, designed by the faculty of the Bloomberg School of Public Health, recognizes that police officers are usually the first on the scene when a child is exposed to violence. Officers from the Eastern District are trained to deal with traumatized children and to provide them with access to on-call mental health professionals.

Community Psychiatry School Mental Health Program. A school-based program that provides psychiatric consultation and intervention to school-aged and adolescent children, this program is offered at selected secondary schools in the community.

Pediatric HIV/AIDS Program. This program provides comprehensive health care for high-risk and HIV-infected children. Community activities include a community advisory board, home visitations and active follow-up.

KidsGo Program. The School of Nursing provides health screenings and immunizations for uninsured children who wish to go to camp, Head Start programs and after-school programs. At peak times, as many as 200 uninsured children are seen in a week.

The Ark. Johns Hopkins Children's Center works with the Ark Homeless Shelter to provide free school admission screenings and physical exams for homeless children given by Johns Hopkins medical staff.

Children and Adolescent Mental Health Center. A community-based health center, the Children and Adolescent Mental Health Center provides services to 400 to 500 children, adolescents and families per month, including psychotherapy, consultation/medication, and consultation with schools and other agencies.

East Baltimore Mental Health Partnership. This program developed a system to integrate community agencies in their care of 1,600 East Baltimore children and adolescents with serious emotional disorders. The Bloomberg School of Public Health, the Johns Hopkins Hospital, the School of Medicine and the School of Professional Studies partnered with the Baltimore City Departments of Health, Social Services and Juvenile Justice and the Baltimore

City Public Schools to provide prevention, early intervention and treatment services in homes, schools and other community-based settings for children, adolescents and families.

Food Re-Education for School Health. Bayview Medical Center staff provide teacher training and resource materials for use in teaching good heart health to 3rd and 4th graders. The lessons cover good nutrition, healthy exercise habits and smoking prevention messages to promote cardiac disease prevention. Approximately 14 schools participate in the program each year. A similar program, Healthy Eating, Activity and Recreation for Today's Scouts (HEARTS) reaches Girl Scout and Boy Scout troops with good health lesson. It also offers CPR training and other programs customized to the Scout's format.

Johns Hopkins Adolescent Clinic. This hospital-based comprehensive primary health care clinic provides health services for 3,000 East Baltimore adolescents.

Community Nursing Outreach Program.

This School of Nursing Program provides "gap" services for East Baltimore residents of all ages with a special emphasis on children. Physical exams are provided for children to gain access to day care, preschool, Head Start, after-school programs and sports. Other services include immunizations, health education, counseling, screenings, first aid, health



assessments, minor sick care and referrals for comprehensive primary care. The program also coordinates WIC re-certification, vouchers and an emergency food pantry. On an annual basis, approximately 60 students and faculty from the School of Nursing spend 12,000 volunteer hours in 40 different programs. Among the community sites, Rutland Transitional Housing Program in East Baltimore; Hillside Park Apartments in West Baltimore; St. Bernadine's School in West Baltimore; and Cherry Hill in Southwest Baltimore are operated by the School of Nursing.

AIDS Buddies. Johns Hopkins University students provide support services at the Don Miller House – a hospice for adults – and the Chara House – a hospice for children.

Germ Busters. Johns Hopkins University students give dramatic presentations on health and wellness issues to Barclay School students.

Adults

CURE/ Heart, Body, and Soul, Inc. This program is a partnership between Johns Hopkins Medicine and the Clergy United for Renewal in East Baltimore (an ecumenical group of clergy). The program assesses and identifies high-risk individuals who may have potential problems related to chronic diseases. Screening and health education services are designed to link people to on-going primary care. Community activities include health screenings in churches, schools, community centers, the program's prevention center, and commercial sites.

The Wellness Center at Rutland.

This program is a partnership of Heart, Body, and Soul, Inc., the Wald Community Nursing Center, and the Johns Hopkins Health System Corporate and Community Services Office of Community Health. It provides access to exercise equipment, fitness training, health screenings, nutrition and weight loss instructions, and aerobics to community residents.



Legs for Life. The Johns Hopkins Hospital Cardiovascular Diagnostic Lab provides free screenings for community residents. This annual event screens for the following health conditions: peripheral vascular disease (PVD); abdominal aortic aneurysm; and carotid artery stenosis.

Community Breast and Cervical Cancer Screening Treatment and Diagnostic Program.

The Health System provides no-cost mammography screening, clinical breast exams, PAP smears and follow-up treatment and diagnostic services to East Baltimore residents. The screening portion of the program, which includes exams, PAP smears and mammography, is funded by Johns Hopkins, Avon and other grant programs while the treatment and diagnostic services, such as biopsy or ultra-sound, are funded separately by the Maryland Health Services Cost Review Commission. The program is available to lower income women. In the past year the program provided these services to an estimated 3,000 to 3,500 Baltimore City residents.

Health Care for the Homeless. For four hours per week, nurse practitioners at the Health Care for the Homeless Clinic provide health care to patients.

Community Psychiatry: Homeless Outreach Services Team (HOST).

The Homeless Outreach Services Team provides community support and treatment services to help homeless clients secure housing, engage with treatment, and live in a more normal, interdependent way in their communities. HOST provides 75 homeless adults suffering from mental illness with intensive case management services and psychiatric treatment services.

Community Psychiatry PATCH. The PATCH (Psychogeriatric Assessment and Treatment in City Housing) Program provides psychogeriatric nursing services and psychiatric care to severely mentally ill elder individuals living in Baltimore City public housing.

American Red Cross Blood Drives. The Red Cross Blood Services of the Greater Chesapeake and Potomac Region is responsible for ensuring that a safe, reliable, cost-effective blood supply is available at all times for patients in over 80 hospitals throughout Maryland, Washington, D.C., and Northern Virginia. More than 1,100 volunteer donors are needed daily to meet the blood needs of local patients. Johns Hopkins has taken an active role to help the Red Cross meet its demand for blood products. Blood drives are held numerous times a year

at various locations such as the Homewood and East Baltimore campuses, Peabody Institute and the Applied Physics Laboratory.

The Wilmer Institute Community Outreach

Committee. A multidisciplinary committee within the School of Medicine, Dana Center for Preventive Ophthalmology supports a community-based vision screening and treatment program for East Baltimore. In partnership with CURE/Heart, Body, and Soul, Inc., the committee continues its support of the Sight and Soul Program (using lay workers to screen for preventable eye disease and to provide enabling services) to bridge the gaps of health disparities.



Interaction Community Outreach Programs. Fourteen community programs and organizations receive volunteer assistance from Bloomberg School of Public Health faculty, students and staff at community health fairs, shelters, family support centers, etc.

Community Health Action Project (CHAP). CHAP is a community-directed initiative funded by Bayview to lower the incidence of heart disease in the community. Three teams of community members and hospital staff work to educate the community about stress management, smoking prevention, nutrition and physical activity.

The Keswick Project. Johns Hopkins University students provide companionship and diversion for terminally ill persons at the Keswick Nursing Home.

United Students for Veterans Health. Johns Hopkins University students provide companionship and diversion for veterans at the Homeless Veterans Center and to those living in area nursing homes.

Adult Flu Shot Campaign. Johns Hopkins Health System Corporate and Community Services Office of Community Health provide free influenza virus vaccinations for area adults.

The ALIVE Study. For more than 10 years, the ALIVE Study has examined the behavior patterns of 3,000 injecting drug users in Baltimore to understand what puts them at risk for HIV infection and how best to change their behavior. Access to sterile needles, for example, emerged as a strategy to prevent HIV transmission and led to Baltimore's needle exchange program begun in 1994. This continuing study offers opportunities to understand how to engage hard-to-reach populations and offers injection drug users access to treatment. This highly acclaimed effort to deal with Baltimore's dual public health crises of drug abuse and AIDS now involves 22 faculty collaborators and 11 NIH grants.

The Welch Center for Prevention, Epidemiology and Clinical Research. This Center was formed as an interdisciplinary collaboration of the Johns Hopkins Schools of Medicine, Public Health and Nursing. Studies focus on the causes of chronic disease, such as heart disease, kidney disease, diabetes, high blood pressure, depression and cancer, in Maryland residents and works with clinicians to develop prevention approaches for those at highest risk. The Center also develops strategies to optimize the delivery of health care for Maryland residents and the nation.

The Johns Hopkins Center in Urban Environmental Health. This Center focuses on understanding chemical exposures in East Baltimore and in other urban environments that contribute to disease in children and adults, in order to develop prevention strategies to improve public health. The Center established the Community Outreach and Educational Program to translate research findings into prevention strategies for community use.

InterAction. Begun in 1988, this student volunteer organization has developed a network of more than 30 community organizations in East Baltimore that students serve throughout the year. An annual symposium brings students together with community leaders.

Horizon Foundation. Funded from the proceeds of the Johns Hopkins acquisition of Howard County General Hospital, the Horizon Foundation is dedicated to improving the health of Howard County residents.

VI. Support for Primary and Secondary Education

Education is a life-long endeavor. While Johns Hopkins is known as a higher education institution, it is committed to enabling education over a lifetime. K-12 education is a city, county and statewide matter – one in which Johns Hopkins takes an active role. The Johns Hopkins Education Forum, a university-wide committee, exists to advise University President Brody on challenges of school reform, and the school's actual and potential roles in addressing those challenges. Currently, Johns Hopkins is engaged in over 500 programs that touch the lives of students, teachers and administrators in Baltimore City and each of Maryland's 23 counties. In Baltimore City alone, John Hopkins programs partner with at least 110 of the approximately 180 schools in the public school system.

Johns Hopkins instructs professional educators through a variety of degree and teacher training programs and reaches students through participation in outreach programs. Keeping true to the school's research component, Johns Hopkins also researches education techniques and strategies to best enable educational achievement for gifted children and for kids with special needs.

Even though Johns Hopkins does not have a freestanding School of Education, three divisions within Johns Hopkins play key roles in the University's K-12 enterprise – the Graduate Division of Education within the School of Professional Studies in Business and Education; the Center for Social Organization of Schools; and the Center for Talented Youth. Joining the effort, Johns Hopkins' Schools of Advanced International Studies, Arts and Sciences, Engineering, Medicine, Nursing, Public Health, the Peabody Institute, the Applied Physics Laboratory, the Institute for Policy Studies and portions of the Health System are also actively involved in the K-12 arena. Overall, Johns Hopkins' K-12 initiatives address contemporary needs in areas such as teacher education, performing arts education, research and evaluation, school-to-work transition, professional development, policy analysis, special education, site-based leadership, gifted and talented education, school reorganization, teaching the disadvantaged, education reform and community service. A few of Johns Hopkins' K-12 activities and collaborations are described below.

Graduate Division of Education, Johns Hopkins School of Professional Studies in Business and Education

The Graduate Division of Education leads and supports efforts to enhance opportunities for all children and adults to maximize their educational potential primarily, though not exclusively, through graduate programs. A variety of course structures and focus areas are available to education students to accommodate schedules and study preferences. In 2002, 160 teachers received their Master's degrees from the Johns Hopkins School of Professional Studies in Business and Education.

The Graduate Division of Education also participates in programs that contribute to the design and implementation of regional and national educational reforms including policy formation and research activities. A number of these programs involve close



partnerships with primary and secondary schools throughout the region. Listed below are some of the programs that the Graduate Division of Education offers or in which the school participates.

Aspiring Leaders Program. Designed to prepare a new generation of principals committed to school improvement and high student achievement, the program in the School of Professional Studies delivers an 18-credit sequence of course work, seminars and modules to 25 Baltimore City teachers and administrators to help them meet the requirements for a Maryland school administrator's license.

Beginning Principals Mentoring Program. In this program, the Graduate Division of Education provides first- and second-year Baltimore school principals with an in-depth year-long internship and a mentor principal to guide novice principals through their induction years. The program supports monthly meetings for mentoring teams, electronic mentoring and peer coaching through both an Electronic Learning Community and at school sites.



Urban School Counseling Program. This unique master's degree in school counseling is designed to train counselors to meet the needs of urban youth and families.

Counseling At-Risk Youth. This post-graduate certificate program in counseling provides advanced clinical training to master's-level tenured counselors enabling them to facilitate therapeutic change in at-risk youth, improve student achievement, and provide an enhanced, safe and orderly learning environment.

Special Education School Immersion Project. This program in the School of Professional Studies delivers graduate studies to special education instructional assistants recruited and hired by the school districts.

Early Childhood Special Education. Responding to the critical shortage of qualified and certified special education teachers for young children, a federally funded grant enables two classes of 20 students each to complete a 39-hour graduate curriculum comprised of academic and clinical experiences.

Project SITE SUPPORT (HEA Title II). The U.S. Department of Education funds the SITE SUPPORT program, which recruits, trains and mentors teachers for Baltimore's highest needs schools. Johns Hopkins partners with Morgan State University, the University of Maryland, Baltimore and Baltimore City Public School System to develop teachers' technology competencies and evaluation systems to review teacher candidates' portfolios.

Teach For America - MAT Program. Johns Hopkins participates in the Teach for America program, which each year selects a corps of almost 2,000 individuals, trains them together during summer programs, places them as full-time, paid teachers in urban and rural public schools, and coordinates a support network to help them succeed during their first two years as teachers and beyond. Approximately 60 corps members are assigned to teach in Baltimore schools and participate in a school-based Master of Arts in Teaching program.

Teach Baltimore MAT Program. College students from other institutions of higher education come to the Baltimore metropolitan area each summer to tutor Baltimore students

through the Teach Baltimore MAT program. For two summers, these college juniors tutor students in reading and mathematics and participate in an accelerated version of the Johns Hopkins' Master of Arts in Teaching program. Following graduation, the Baltimore City Public School System hires these tutors as teachers.

Professional Immersion MAT (Pro MAT) Cohort. Johns Hopkins University and Montgomery County Public Schools partner to recruit, train and support teachers to fill vacancies in high-need county schools. The program recruits and trains candidates with strong academic backgrounds and experience working in schools as a substitute or instructional assistant. The candidates work for a full school year as long-term substitutes and complete coursework to obtain a masters degree in teaching.

Professional Development Schools. Johns Hopkins University's Graduate Division of Education, Towson University, University of Maryland, College Park and Bowie State University are collaborating to establish comprehensive *Professional Development Schools* for the preparation of teachers, teacher development and the improvement of teaching and education. These activities are funded in part by the State of Maryland.

Professional Development School (PDS)/SIMAT Program. Maryland's Redesign for Teacher Education program requires students to participate in a year-long teaching internship and complete a defense of a performance-based portfolio under the Professional Development School's (PDS) SIMAT program. Students with strong academic backgrounds and a positive disposition towards teaching are supported through continuing development of PDS.

PAR Training – School and Classroom Behavioral Management. This training program provides a process-based, operational model in which teams of teachers, school administrators and related personnel collaborate within a prescriptive workshop format and develop plans and strategies to deal with troubling student behavior. Through the process, school building-based teams learn to design and implement their own unified plan of action.

Goals 2000. Johns Hopkins plans and develops school-community-family partnerships to improve school performance in this federally funded initiative aimed at enhancing school success. The goals of the partnership are to reduce suspensions and behavioral problems as well as to improve grade performance and attendance for at-risk youth.

Inclusive Education. This School of Professional Studies program prepares general and special educators to teach students with disabilities in general education settings. The program places heavy emphasis on translating research into practice. Courses of study include extensive work applying techniques and strategies to support students with disabilities in the least restrictive environment.

Improving Personnel: Children with High-Incidence Disabilities. In partnership with Prince George's County Public Schools, Johns Hopkins University recruits and trains special educators to serve mild to moderately disabled youngsters in grades 1-12. The project's goal is to recruit and train 40 beginning special educators over a period of four years.

Master's Project for Professionals Working with Emotionally Disturbed Youth. Fifteen individuals are selected to upgrade their skills in working with students identified as having severe emotional disturbances.

Preparing Teachers of Students with Severe Disabilities. This federally funded project provides training for 30 professionals who need full qualification to teach students with severe disabilities.

Self-Management Toward Independence for Students with Disabilities. This federally funded research project is designed to develop and refine an instructional sequence that educators can employ to teach their students with disabilities to self-manage more of their own behaviors.

Special Education Leadership Conferences. In partnership with the U.S. Department of Education, Graduate Division of Education faculty plan, organize and conduct national conferences that focus on the development of exemplary special education leaders for the next century. Conference participants include the project directors of leadership grants awarded by the Office of Special Education for the prior three years.

Technology to Educate Students with Autism. The Center for Technology in Education works with school personnel and parents to promote new uses of technology as behavioral and instructional supports for young children with autism.

School Improvement Using Technology. The Center for Technology in Education works with schools to collaboratively develop and implement a technology-based strategy for teachers, parents and other school leaders to streamline and enhance the school improvement planning process.

School-Wide Team Research and Learning to Promote Inclusion. The Center for Technology in Education works with schools to implement a new cooperative learning technique that effectively integrates technology into the instructional cycle. The new strategy, Team Research and Learning, provides a framework for investigation across content and grade levels.



Technology Challenge Grant. The Baltimore Learning Communities is a multi-faceted program that uses distance learning, interactive TV and the Internet to connect schools to homes, places of work and the community at large. It provides extensive professional development training for teachers and extends a wide range of new educational opportunities to students in Baltimore City middle and high schools.

Maryland Assistive Technology Network (MATN). The Center for Technology in Education established and now supports the MATN, a group of expert assistive technology providers from across the state charged with staying up to date on the latest assistive technology policies, practices and devices.

Middle School Reading Assistance Project (MSRAP). Johns Hopkins Center for Reading Excellence created the MSRAP project to provide targeted technical assistance to ten

“reconstitution eligible” middle schools within Baltimore City. The project seeks to improve student’s performance in reading and related subject areas through mentoring and professional development for teachers and assessment and direct services for students.

Even Start Project. In an effort to address family literacy, this project promotes early and emergent literacy skills for young children prior to entering school.

Reading Institute. The Graduate Division of Education, the Center for the Social Organization of Schools, the Kennedy Krieger Institute and the Maryland State Department of Education are currently exploring the possibility of establishing a Reading Institute to address the major reading issues being faced in Maryland and nationally. Particular emphasis is to be given to providing leadership in teacher training, technical assistance to schools, direct service to children and parents, and reading research and development activities.

Center for Social Organization of Schools, School of Arts and Sciences (CSOS)

The Center for Social Organization of Schools was established in 1966 as an educational research and development center at Johns Hopkins University. The Center maintains a full-time staff of sociologists, psychologists, social psychologists, and educators who conduct programmatic research to improve the education system, as well as full-time support staff engaged in developing curricula and providing technical assistance to help schools use the Center’s research. Much of the Center’s



work is geared toward two primary objectives: to develop scientific knowledge about how schools affect their students; and to use this knowledge to develop better school practices and organization. Under the CSOS umbrella, a number of projects are underway. Identified below are a few examples.

Center for Research on the Education of Students Placed at Risk [CRESPAR].

The Center is conducting a major effort to transform education for students placed at risk, especially by supporting a talent development model of school organization and instruction. CRESPAR efforts focus on research and development of effective programs at all grade levels and maintain their fidelity to the idea that every student can meet high standards of measurable educational outcomes.

Success for All and Roots and Wings. Founded initially as part of CSOS, the Success for All and Roots and Wings initiatives are comprehensive restructuring programs designed primarily for elementary schools use in serving disadvantaged students. Success for All focuses on reading, writing and language arts, while Roots and Wings focuses on mathematics, science and social studies. Baltimore’s Dr. Bernard Harris, Dallas Nichols, Sr., and Harriet Tubman schools are involved in these initiatives, along with 26 others in the State of Maryland and more than 1,500 schools throughout the nation. The components of Success

for All are now part of the Success for All Foundation, established as a stand-alone entity in 1998.

Talented Development Middle and High Schools. This comprehensive reform model focuses on organizational changes to assist students by creating small learning communities within schools, instructional innovations to give additional time and carefully designed catch-up materials. The program provides teacher support systems to help with quality implementation. This model has been adopted successfully by several middle and high schools in Anne Arundel and Frederick Counties as well as in Baltimore City.

Center on School, Family and Community Partnerships. CSOS's Center on School, Family and Community Partnerships helps schools design and implement comprehensive programs of school, family and community partnership initiatives. The Center uses an action team approach and research-based framework covering six major types of involvement: parenting; communicating; volunteering; learning at home; decision making; and collaborating with the community. In Maryland, over 250 elementary, middle and high schools in at least 10 school systems are members of the Center's National Network of Partnership Schools. About 170 of the participating schools are in the Baltimore City Public School System.

Research Institute. Currently, CSOS and the Baltimore City Public School System are collaborating to secure private funding for a joint Research Institute that will allow in-depth, longitudinal research on factors affecting student achievement in Baltimore. Research conducted through the Institute would provide the School System useful data to consider as policy decisions are made about curricula and instruction.

Center for Talented Youth (CTY)

Center for Talented Youth is a comprehensive initiative for pre-collegiate education improvement and reform in the U.S. and abroad. CTY conducts an international talent search and offers intensive academic summer programs and distance-learning course work for selected students. The Center also works with schools and other organizations throughout the world to create the optimal education environment to advance learning for students with a broad range of abilities. In addition, the Center



conducts research, teacher training; and makes available an extensive array of related publications upon request. In Maryland, CTY's primary Talent Search Outreach Programs reach about 1,300 elementary and middle school students.

Also within Maryland, CTY is involved in a number of specific projects such as an evaluation of the effectiveness of the music program at Tench Tilghman Elementary School. CTY staff serve as volunteer tutors at Margaret Brent Elementary School and consult with the principal of Laurence Paquin Alternative High School on curriculum and technology. A CTY staff member sits on the advisory board for the International Baccalaureate

Program at Kenwood High School. CTY professionals provide evaluation and consultation services for an Abell Foundation-funded science project that serves Baltimore Polytechnical High School, Roland Park Middle School, Robert Poole Middle School and Southeast Middle School. Reaching out to Baltimore area science teachers, CTY also identifies participants for paid summer internships at Johns Hopkins' School of Engineering.

Other Efforts at Johns Hopkins

Peabody Preparatory of the Peabody Institute. Founded in 1894, the Peabody Preparatory is the pre-college complement to the Peabody Conservatory. Like the



Conservatory, the Preparatory has a dual mission: to provide a broad-based performing arts education to all who are desirous of high quality performing arts study; and to provide an accelerated curriculum for talented pre-professional musicians and dancers. The Peabody Preparatory Outreach Program in Barclay, Coleman, Tench Tilghman and

Ashburton public elementary schools in Baltimore City provides a holistic educational approach through music. The program allows music to serve as the vehicle for teaching other things – socialization, cultural knowledge, development of self-esteem, the understanding of one's actions and their consequences, the concept of sharing, and so on. The program makes formal training at the Peabody available to children who might not otherwise be able to afford it. The National Guild of Community Schools of the Arts designated the Peabody Preparatory Outreach Program as a national model.

Maryland's Tomorrow Statewide Dropout Prevention Program. The Institute for Policy Studies (IPS) is a social science policy research arm of Johns Hopkins. In addition to analytical research, IPS is the home of Maryland's Tomorrow Statewide Dropout Prevention Program for at-risk high school students, funded by the State of Maryland. Now in its 13th year, the goal of the program is to reduce the number of high school drop outs and increase the number of students that successfully go on to post-secondary education or employment. The program is distinguished by its emphasis on collaboration among the education system, the employment training system and the business community. The program operates in every school district in Maryland and, in Baltimore, Frederick Douglass, Forest Park, Northern, Patterson, Southern and Southwestern High Schools are Maryland's Tomorrow Schools.

School of Nursing Fieldwork. Each year the School of Nursing's 150 senior-level undergraduate students complete a seven-week clinical experience in community health nursing at Baltimore's St. Bernadine's School and Patterson Park High School that involves physical assessment, health screening, referrals and health education. Senior students also assist the Baltimore City Health Department with its School-Based Hepatitis-B Vaccination Demonstration Project in the following elementary schools: Cecil; City Springs; General

Wolfe; Commodore John Rogers; Matthew A. Henson; Henderson; Thomas G. Hayes; Charles Carroll of Carrollton; Cherry; Carter G. Woodson; Patapsco; Highlandtown; Frankford; Arlington; and Dr. Martin Luther King, Jr. At the master's level for the pediatric nurse practitioner program, 15 students per year complete the clinical portions of three academic courses in a variety of settings, including Lakeland, Curtis Bay and St. Bernadine's schools.

Prevention Intervention Research Center. The goal of the School of Public Health's Prevention Intervention Research Center, a joint program of the City of Baltimore, Baltimore City Public Schools and the Department of Mental Hygiene, is to promote self-esteem, high achievement and reaching one's full potential, while preventing dropout, mental disorders, drug abuse and violence. The program is based on extensive studies of children's first grade experience – how they behave, feel about themselves and how they learn. Effective intervention strategies are developed and implemented to identify and remediate behavior patterns in the first grade that could lead to problems with drugs, delinquency and depression years later.

Community Relations and Volunteer Services (CRVS), Homewood Student Affairs. An integral component of life on the Homewood Campus, CRVS was established to meet the increasing interest in community service on the part of the students at the University. The mission of CRVS emphasizes the value of service with others, rather than the commonly accepted concept of service to others and the CRVS initiatives promote an educational process where both client and volunteer benefit from the interaction and reciprocal learning.

The Tutorial Project is one of the most well-known service programs on campus and in the community. It provides a warm, supportive one-to-one tutorial environment to assist elementary school children throughout the Baltimore City Public School System who are experiencing academic difficulties.



Teach Baltimore is run entirely by college students and recent graduates. The mission of Teach Baltimore is to create high quality summer learning opportunities for all students in Baltimore City. The program attempts to reverse low student achievement and high dropout rates through a specially designed and innovative education program, taught by trained students. It has engaged hundreds of Johns Hopkins students and has raised more than \$1 million in cash and services. Teach Baltimore and the Division of Education in the School of Professional Studies offer a special accelerated Masters of Education Program at no cost to Johns Hopkins students who will agree to work two summers for Teach Baltimore in Baltimore City schools. Barclay School tutorial, George Washington Elementary School Tutorial, and the Margaret Brent School Tutorial programs provide one-on-one tutorial assistance after school for first-to-fifth grade students.

Barclay School Tutorial and George Washington Elementary School Tutorial provide one-on-one tutorial assistance after school for first- to fifth-grade students. The Margaret Brent Orchestra and Ballet are long-standing cultural enrichment programs organized by Johns Hopkins undergraduate students. The Johns Hopkins chapter of the National Society of Black Engineers works with middle and high school students to prepare for careers in engineering and technology.

Dunbar-Hopkins Health Partnership. A collaboration involving Dunbar Senior High School, the Johns Hopkins Hospital and the Johns Hopkins University (Arts and Sciences, Medicine, Nursing, Professional Studies in Business and Education, Public Health, and Center for the Social Organization of Schools) started in 1986. The Dunbar-Hopkins Health Partnership encompasses more than 30 separate educational initiatives with 900 Dunbar students participating in the program. Over the past 15 years Johns Hopkins has invested an estimated \$2 million in financial support to the program.

The goal of the initiative – to prepare Dunbar High School students for admission to college and for a variety of health profession careers – is realized through mentoring, internships, special seminars, visiting scholars and faculty, field experiences, scholarships, summer work experiences, and consultation on curriculum planning, faculty development, grant writing, information technology, public relations and evaluation. In addition, Johns Hopkins and Dunbar staff in the Partnership are working to upgrade the curriculum and standards of the high school by raising the admission standards and incorporating more rigorous programs at the high school level. In 2004, Dunbar expects to open its new high-tech high school complete with advanced laboratory and high tech space to match the advances in curriculum.

The program is successfully working to prepare students for college and to guide some toward health care professions. Among the many that have gone through the Dunbar-Hopkins Health Partnership, a number have continued on to Johns Hopkins University for higher education after graduating from Dunbar. Some students received **PricewaterhouseCoopers/Johns Hopkins Hospital Achievement Scholarships**, available to cover tuition for any Dunbar High School student who is admitted to and attends Johns Hopkins University. One graduate of Dunbar High School who completed his Masters in Public Health from Johns



Hopkins University now works for the Baltimore City Health Department, focusing on community-based public health initiatives. Other students who completed the Dunbar-Hopkins Health Partnership Summer Job Internships secured jobs with the Navy and T. Rowe Price.

Maryland Space Grant Consortium. Established in 1989, the National Space Grant College and Fellowship Program consists of 52 partnerships funded by NASA to encourage cooperative university, government and industry interdisciplinary research, training and public service aerospace programs; to promote science, mathematics and technology education; and to recruit and train women and minorities for aerospace careers. One of the partnerships is the Maryland Space Grant Consortium. Its membership of seven institutions includes the Johns Hopkins University and its Applied Physics Laboratory (APL). The consortium offers several programs including the **Space Science Internship Program** that offers elementary and secondary science teachers an internship consisting of three months of graduate coursework on earth and planetary science, three months of training in the use of direct satellite technology, and one month of research experience.

Mathematics, Engineering, Science Achievement Program (MESA). Sponsored by the Applied Physics Laboratory, Morgan State University, the University of Maryland, College Park, local schools and businesses throughout Maryland, the Mathematics, Engineering, Science Achievement Program (MESA) is designed to encourage academic excellence in the areas of mathematics, engineering science and technology among under-represented groups. It serves 150 elementary, middle and high schools in Baltimore City and 15 counties. During the 2001-2002 school year, slightly over 65 percent of program participants were African American, 26 percent were Caucasian and the balance were represented by several other ethnicities/races. Over half of the attendees were female.

Other Applied Physics Lab Programs.

APL sponsors science research internships with middle school and high school students working one-on-one on a science project with a member of the APL staff. As well, APL places two teachers in eight-week summer internships through the Maryland Educators Summer Research Program. Further, the Lab coordinates and supports the Howard County Public School System's Student Learning Conference for all mentor students from eight high schools. APL scientists often act as guest speakers in local schools and as judges for school science fairs.

In recognition of its "immeasurable contributions to this school system and the children of this county," the Howard County Public School Board of Education awarded APL with the 2002 Friends of Education Award.



Johns Hopkins Summer Pre-College Program, School of Arts and Sciences. Academically talented high school students take college-level classes and earn college credit, on either a residential or non-residential basis, in one of the following programs: American Government/Pre-Law; Art History; College Preview; Computer Applications; Creative Writing; Medical Science; Physics and Astronomy; or Intensive English Language/American Culture (non-credit).

Johns Hopkins University Material Research Science and Engineering Center (MRSEC). One of 26 in the nation, the Johns Hopkins University Material Research Science and Engineering Center (MRSEC), operated by the Whiting School of Engineering, is a National Science Foundation-funded center supporting interdisciplinary materials research and

education. The Johns Hopkins University MRSEC runs extensive educational outreach programs on materials research for high school students, teachers and undergraduate students. High school student one-month summer internships at MRSEC provide high school students with an in-depth exposure to a research environment. The program accepts students each summer from high schools in the greater Baltimore area. Seven physics and chemistry teachers from area high schools also participate in a summer internship program, which exposes teachers to new scientific advances that they take back to their classrooms.

Johns Hopkins Health System Tutorial and Academic Programs

After-School Tutorial Programs. Supported by grants from the Johns Hopkins Health System, after-school tutorial programs at Dr. Bernard Harris, Sr. Elementary School, Madison Square Elementary School and Mildred Monroe Elementary School provide supplemental instruction four days per week for approximately 160 students.

Summer Tutorial Program. During the summer, the Health System supports a tutorial program at Dr. Bernard Harris, Sr. Elementary School. The program provides students in grades two through five with tutorial instruction in reading and mathematics for six weeks in the summer. Approximately 40 students are served.



Academic Basketball Camp. At Madison Square Recreation Center, a fun and educational summer camp program is sponsored for children aged 7 to 12 in East Baltimore.

Project RAISE II. This youth mentoring program works to decrease the dropout rate and improve the life chances of high-risk, inner-city public school students. Johns Hopkins employees volunteer to provide one-on-one mentoring to 60 students attending Dunbar Middle School.

Alternative Career Programs. Johns Hopkins sponsors the Alternative Careers program targeting high school students who are exploring career possibilities in the health care field. The program is conducted on three occasions each involving a full day of activities exposing students to and educating them about the great diversity of essential occupations in the health care field.

Bond to Bond. This youth mentoring program serves 50 to 150 Baltimore City high school students. It is a partnership of Dunbar High School, the Institute of Notre Dame, Tench Tilghman Elementary School, the Johns Hopkins Hospital and the Johns Hopkins University School of Medicine. Activities include one-on-one mentoring, lecture series, job shadowing and adopt-a-class programs.

VII. Public Service, Educational, Cultural and Community Contributions

The Johns Hopkins Institutions take seriously their role as neighbor in communities throughout the state. Previous sections of this report have described the comprehensive contributions made by Johns Hopkins to the economy, health care and education. This section illustrates a mix of additional contributions made by the Johns Hopkins Institutions. From sporting and musical events to assisting populations on the margin, Johns Hopkins contributes to community improvement, culture and civic life throughout the state.

Listed below is a sampling of the diverse activities in which the Institutions and Johns Hopkins faculty, staff and students are involved.

Programs for Under-Represented Minorities

Johns Hopkins' commitment to opening educational and employment opportunities for minorities and women is well demonstrated by a number of specific efforts to recruit and support Johns Hopkins students from under-represented minority groups.

Graduate Degrees for Minorities in Engineering and Science Program (GEM).

The Graduate Degrees for Minorities in Engineering and Science Program (GEM) provides fellowships to American minorities under-represented in engineering and science (African-Americans, Native Americans, Mexican Americans and Puerto Ricans). The GEM consortium is made up of 75 universities and 81 corporate and research laboratory members among which are the Applied Physics Laboratory (APL) and the Whiting School of Engineering (WSE). Under GEM's Master's fellowship, each employer member commits to provide \$25,000 per year and an engineering summer employment assignment for at least two GEM students. The commitment covers the students' years from program admission to completion of their Master's degrees. The Whiting School provides tuition fellowships, stipends and health insurance to GEM Master's and Doctoral students. The GEM program was originated at APL, and APL supports national teleconferences on graduate work in engineering and in the physical sciences.

Project Prime. In a collaboration of seven colleges led by Morgan State University, the Johns Hopkins School of Professional Studies works with Baltimore City public schools to recruit and inspire minorities into education. Activities include campus visits, education career days, teacher support and curriculum design.

Leadership Development Program for Minority Managers.

The Division of Business and Management at the School of Professional Studies runs this 10-month, 15-credit graduate-level certificate program for early-to-mid-career minority professionals and managers. The program emphasizes enhancement of management and leadership skills; development of a comprehensive career and life plan; acquisition of analytical and financial management tools; and exploration of success strategies for minority managers. Participants may apply the credits received toward



the Masters of Business Administration (MBA) offered by the School of Professional Studies in Business and Education (SPSBE). This program has graduated a total of 408 students.

Hodson Achievement Scholarships. Johns Hopkins University awards 15 full grants to enrolling freshmen from minorities under-represented at Johns Hopkins. These are need-based scholarships with no work-study requirements for the first two years.

Minority Fellowships for Graduate Students. Johns Hopkins University provides 10 two-year fellowship/stipends to incoming graduate students from under-represented minority groups.

National Achievement Scholars. The National Achievement Scholars program, sponsored by the National Merit Scholarship Corporation, provides scholarships to minority students based on academic merit. In recent years over 40 Johns Hopkins students have received these scholarships.

Small and Disadvantaged Business Utilization Program. This program encourages Johns Hopkins procurement, whenever possible, to purchase from small, minority-, veteran-, and women-owned business, as well as from enterprises located in disadvantaged communities.

Women, Leadership and Change Program. Johns Hopkins University sponsors a 9-month, 15-credit graduate certificate program for women managers. The program centers on developing women as leaders and agents of change within organizations

Adult Education, Career Development and Employment

Johns Hopkins operates a number of organizations and programs designed to assist a cross section of people with workplace skills. From basic career skills and educational qualifications to advanced computer training, a variety of programs address the needs of diverse populations.

Adult Computer Education (ACE). Johns Hopkins University students teach community members in Waverly and Barclay the basics of computing including Windows applications and exploring the Internet.

Computer Job Skills Class. Individuals seeking employment in an office setting are given one-to-one tutoring in WordPerfect and Lotus 1-2-3 in the Johns Hopkins University Tutorial Project computer lab.

Adult Education Cooperative. Johns Hopkins University students are matched one-to-one with clients of the Safe and Smart Center (community development program office) to help with GED preparation.

The Jail Tutorial. Johns Hopkins University students provide GED assistance as well as other adult education services to inmates of the Baltimore Detention Center.

Center for Learning and Health. The Center for Learning and Health is a clinical research unit established in 1996 by the University's Department of Psychiatry. The center serves low-



income adults in Baltimore City with a history of substance and alcohol abuse. This population typically includes heroin and cocaine addicts who failed repeated attempts at recovery. The Center developed the Therapeutic Workplace treatment program that provides monetary incentives to promote abstinence. Over the past four years the program posted a 40-percent success rate.

Maryland Center for Arts and Technology, Inc. (MCAT). Training for East Baltimore residents will also be provided by the Maryland Center for Arts and Technology, a new nonprofit corporation located on the Johns Hopkins Bayview Medical Center campus. MCAT focuses on developing work and education skills to improve individuals' work habits and life skills. The Center has contracts with Johns Hopkins, Commercial Credit and others to provide technology-intensive training for back-office jobs such as accounting and billing.

Johns Hopkins Welfare to Work and Employee Training

At Johns Hopkins, as with many employers, hiring policies require potential employees to have a requisite level of experience and skills. Recognizing that certain situations like reliance on welfare make it difficult to acquire work skills outside the workplace, Johns Hopkins developed training programs to reach such hard-to-employ populations in Baltimore City. These programs allow participants to learn skills applicable to employment and, for some participants, to learn while they earn through a progressive internship. Skill enhancement courses are also available for former welfare recipients to further advance their careers.

Work Matters Grant. Through the Work Matters Grant, Johns Hopkins partners with Civic Works, a local non-profit, to enroll students in a training and career program. Participants begin with work on a community service project managed by Civic Works. Civic Works assesses the participants to determine their individual training needs and then places them in the appropriate training in the Johns Hopkins Skills Enhancement.

Service Excellence Training Program. This program reaches out to former welfare recipients referred from the Department of Social Services or the Baltimore City Mayor's Office of Employment Development. Referred participants' skills are assessed by Civic Works and those eligible join the Johns Hopkins Hospital internship program. Program participants are paid for their hours as interns in the hospital. Johns Hopkins provides a job coach to assist with the internship and to help ensure permanent job placement. During the three-month internship, participants may take classes through the Skills Enhancement Program. Those participants who successfully complete the program begin Hospital Orientation as regular employees at higher salaries. The program helped 47 participants gain employment in 2001 and expects 57 new hires in 2002.

Skills Enhancement Program. This program allows workers and former welfare recipients the opportunity to take classes to improve basic skills. The program provides refresher courses in GED preparations, medical terminology and basic computer classes. Students may take several classes over a long period of time in order to improve their skills and advance their career.

Volunteer and Community Activities

Johns Hopkins faculty, staff and students donate money and countless hours of volunteer time to charitable organizations throughout the community. Some of the organized efforts to serve the community are described below.

United Way of Central Maryland Campaign. The Joint University/Health System/Applied Physics Lab in-house payroll deduction-supported campaign solicits contributions and pledges from faculty and staff that are distributed to non-profit organizations providing critical health and human welfare services in the community. The 1998 campaign raised \$1.7 million, a figure that grew to over \$2.2 million in 2001. Johns Hopkins faculty, staff, retirees and students volunteer in various capacities as solicitors, coordinators, members of allocation panels and Board members.

Community Service Internship Program. The Community Service Internship Program was created by The Johns Hopkins University Alumni Association to provide valuable learning experiences for students and to foster relationships between the University and its surrounding communities. The program encourages and funds students to create their own unique community service projects or design their own ventures within existing volunteer organizations.

Safe and Smart Center. Several years ago, Johns Hopkins provided the resources needed to redesign 3333 Greenmount Avenue, which provides space for several Johns Hopkins University outreach programs, as well as community meeting space and a post for the Northern District Police. The Center has been honored by the Neighborhood Design Center for its contribution to the surrounding neighborhoods.



Community Conversations. For more than three decades, the University has hosted six Community Conversations breakfasts each year. Each breakfast features a prominent speaker who discusses important and timely topics pertinent to the city and surrounding communities. In all, over 700 persons, representing communities, all levels of government, nonprofit entities, foundations, businesses and Johns Hopkins faculty, staff and students are invited to attend these breakfasts. The event serves to facilitate conversation, ideas and ways in which the city and region can work together to continuously help to make Baltimore a safer, stronger and more vibrant place in which to live, work and play.

Kids' Safety Day. Kids' Safety Day is a crime prevention awareness campaign affiliated with McGruff, the Crime Fighter Dog. The event employs Child-Identify (Polaroid photo and fingerprint cards) efforts to provide parents/guardians with identification information of their child(ren) in the event they are injured or abducted. Johns Hopkins Medicine is an active participant in this program, which serves approximately 600 children annually.

Greek Organizations. All of the JHU fraternities and sororities are involved in community service philanthropic activities. The Interfraternity Council sponsors community clean-up programs providing hours of service. In addition, each fraternity and sorority supports a national service project. Examples include the following:

- Phi Mu supports the American Heart Association.
- Alpha Phi supports the Ronald McDonald House project.
- Sigma Alpha Mu sponsors Bounce for Beats for the American Heart Association.
- Phi Kappa Psi raises money for Santa Claus Anonymous and raised money to buy computers for a local elementary school.
- Alpha Delta Phi sponsors an annual Academic Bowl for local high schools.
- Delta Upsilon sponsored a voter registration drive in Charles Village.

Holiday Projects. Each year during the holiday season, the Adopt-A-Family Agency Program collects gifts, clothing and food to distribute to families and agencies identified as “in-need” by the Baltimore City Department of Social Services. Each Christmas season, the School of Professional Studies staff conducts at least one community service project (and in some years several) in conjunction with one or more community agencies. Many other divisions and departments participate in holiday programs that assist disadvantaged persons directly and/or support organizations that serve such individuals and families.

Hands to the Homeless. Johns Hopkins University students volunteer their time at Christopher Place (men’s shelter) and Brown Memorial Church Shelter (family shelter) to serve meals and provide support services.

NAACP Youth Chapter. The NAACP Youth Chapter was formed as a special project of the Black Student Union and Alpha Kappa Alpha Sorority, Inc. during the 1987-88 school year. It has now developed into the largest college chapter in Maryland, sponsoring educational and leadership programs on the Homewood Campus. In addition, the NAACP Youth Chapter established a Back-to-School, Stay-in-School Program, working with middle school age youngsters.

Cultural Activities

The Peabody Institute and Johns Hopkins’ other divisions share many cultural endeavors with the community at large. Most events are open to the public, often at no charge.

Peabody Prep. Peabody Preparatory School is one of the largest and most active community music schools in the country. The Prep offers instruction in a variety of



instrumental, vocal and dance classes to those studying with a view to a professional career or simply for their own enjoyment. Over 3,000 children and adults are enrolled in the Prep, which operates facilities in Downtown Baltimore, Towson, Annapolis, and

Howard County. As well, the Prep's Elderhostel program for senior citizens is the nation's second largest program attracting over 4,300 participants per year.

Peabody faculty serve as board members in virtually all of the major musical organizations in the Baltimore region. As well, Peabody students, faculty and graduates perform in nearly every musical ensemble in the city.

Musical Performances/Theater Performances/Theatre Hopkins. All performances presented by Theatre Hopkins, the Hopkins Symphony Orchestra and the Shriver Hall Concert Series are open to the public including guest performances at the Symphony and Theatre Hopkins. The Choral Society, Hopkins Band, Barnstormers and the Gospel Choir hold regular performances, which are generally free to all. The Barnstormers have opened their dress rehearsals to local school groups, and the Gospel Choir regularly sings at local churches. The Hopkins Symphony Orchestra performs chamber concerts for community groups, while the Choral Society performs each Christmas at a local nursing home. In addition, the Symphony makes available free tickets for its orchestral concerts to senior citizens, The Arc of Baltimore, Chimes and Baltimore City elementary school children.

Concerts and Recitals. Each year, the Peabody Institute presents about 80 major public concerts during the concert season and about 500 in-house and community service recitals. These include concerts and performances by the Peabody Symphony Orchestra and the Peabody Opera Theatre. Peabody also conducts special events for Baltimore City schools, hospitals, senior citizens homes and recreational centers.

Musician Referral Service. This referral service matches the public with advanced graduate students and Peabody alumni who perform music for all occasions. More than 1,000 referrals are made each year.

Office of Special Events, Educational Events and Services. Through the Office of Special Events, the University presents numerous lectures, workshops, panel discussions, and performances designed to enrich the cultural life of the University and the Baltimore metropolitan community.

Guest Artist Series. The ticketed Guest Artist Series typically presents three musical, dramatic, or dance performances in the academic year, drawing primarily from culturally diverse audiences of seniors and 'baby-boomers.' Usually events are held on a Saturday or Sunday. Special student, staff, and senior ticket rates and general admission tickets are available. The 2001-2002 season included performances by an a cappella ensemble *The Lyric Consort*, brass quintet *Bay Street Brassworks*, and international opera star *Simon Estes*.



Wednesday Noon Series. This free, non-ticketed, open-to-the-public series presents 18-19 free lectures and performances annually and is heavily attended by the community including culturally oriented senior citizens, middle and secondary school students and other members of the public. Highlights of the 2001-2002 series include *Journeys to the Heart of Baltimore*, a lecture by Baltimore Sun columnist Michael Olesker; *The Lyric Spanish Guitar*, a performance by prize-winning guitarist Gustavo Them; *Stem Cell Research*, a lecture by Johns Hopkins

authority Dr. John C. Gearhart; and *From Africa to America*, a performance by the Stephanie Powell Dance Ensemble.

Endowed Lectures. The Frank R. Kent Memorial Lecture, the G. Harry Pouder Memorial Lecture, and the George Huntington Williams Memorial Lecture present such speakers of national and international stature as Leon Uris, Joyce Carol Oates, Larry McMurtry, Richard Ford, Ted Koppel, Antonin Scalia, David Halberstam, and many others.

Milton S. Eisenhower Symposium. Organized by undergraduates, this series features lectures, discussions, films and other presentations on a single theme presented throughout the fall.

Martin Luther King, Jr. Memorial Events. The Student Council and the Black Student Union present a memorial lecture to commemorate Dr. King's birthday. The annual celebration of the life of Dr. King at the East Baltimore Medical Campus has featured such honored guests as Bishop Tutu, Rosa Parks and many members of the King family, including Coretta Scott King. Martin Luther King, Jr. Community Service Awards are presented to Johns Hopkins employees at this event.

Open Night at the Institute. Once a month, the Space Telescope Science Institute opens its doors, inviting the public to a free lecture on a different cosmic topic. The lectures are held at 8 p.m. the first Tuesday of every month in the Space Telescope Science Institute auditorium.

Departmental Lectures. In addition to organized program series, there is a multitude of lectures, programs and symposia organized by each department throughout the Institutions. Many of these are open to the general public.

Enrichment Programs. In addition to its degree programs and for-credit courses, the School of Professional Studies' Odyssey program offers non-credit courses for personal and professional development. The Odyssey liberal arts courses combine classroom instruction with community field study. Panel discussions and lecture series give students a rare opportunity to hear and question noted journalists, diplomats, scholars, scientists and other key figures on cutting-edge developments in their fields. Odyssey draws upon local talent and explores social and historical aspects of the region. The program partners with area institutions (Lyric Opera, Maryland Science Center, Baltimore Museum of Art, etc.) and develops courses and lecture series that speak to minority/special populations. Classes are held on the Homewood campus and in downtown Baltimore.

Spring Fair. The Fair is an annual three-day event held on the University's Homewood Campus, which attracts 90,000 to 100,000 participants. The weekend offers food, crafts, games and entertainment that both the University and local community can participate in and enjoy.

Sports and Recreation Activities

The University operates extensive athletic and student activities programs, designed to maximize student participation and involvement. The University also has hosted numerous collegiate and non-collegiate athletic activities at University facilities, most of which are open to spectators. Johns Hopkins supports additional community sports programs on and off campus.

Athletic Center Sponsored Programs. The Athletic Center hosts the following programs:

- NCAA Lacrosse playoffs;
- Summer Sports Camps: fencing, field hockey, football, soccer, and lacrosse camps and clinics for players and coaches;
- MIAA High School Lacrosse playoffs;
- Special Olympics for mentally and physically handicapped individuals;
- STX Lacrosse Classic, a lacrosse tournament showcasing some of Maryland's finest young lacrosse talent;
- United States Women's Lacrosse Association competition;
- Men's World Lacrosse championship;
- Maryland High School Lacrosse Showdown;
- Summer Athletic Program, a portion of the summer when the facility is open to staff, faculty, students, alumni, the community and their families for a membership fee; and
- Summer Day Camp including soccer, lacrosse, drama, swimming, arts and crafts and various field trips throughout the Baltimore area.



East Baltimore Sports Program. This program run by students from the Johns Hopkins School of Medicine sponsors free sports clinics for elementary school children from East Baltimore. Sports include softball, basketball, karate, dance, gymnastics, volleyball, soccer, tennis, football and lacrosse.

Sports Leagues. The Health System sponsors summer leagues in East Baltimore for high school basketball, youth baseball and adult basketball.

Service to State and Local Government

University faculty and other technical experts donate countless hours of professional information services to the State of Maryland and the City of Baltimore. Their expertise is applied to economic, social and other public policy issues.

The University and Health System also sponsor orientations for new elected officials. Pulling speakers from Hopkins and beyond, Johns Hopkins develops targeted sessions to help new leadership better understand the complexities of various issues and to recognize Johns Hopkins as a resource available to government leaders.

Appendices

Appendix A. Johns Hopkins Institutions

The Johns Hopkins Institutions' beginnings date to incorporation in August 1867 by Johns Hopkins, a Quaker merchant and financier who made much of his fortune investing in the Baltimore and Ohio Railroad. The Johns Hopkins University and The Johns Hopkins Hospital were established with Mr. Hopkins' \$7 million bequest, which was divided equally between the two corporations after his death in 1873.

The Johns Hopkins University

The Johns Hopkins University opened in 1876 as the first American university oriented toward graduate education and research. Its visionary leaders maintained that American education needed a high intellectual super-structure to top off its system of broad public education. At Johns Hopkins, they brought together all the key elements of the research university in America: a creative faculty given the freedom and support to pursue research, fellowships to attract the brightest students, graduate education emphasizing original work in laboratory and seminar, and scholarly publication.

The University has eight academic divisions: the Zanvyl Krieger School of Arts and Sciences, the Whiting School of Engineering and the School of Professional Studies in Business and Education, based on the Homewood campus in north Baltimore; the School of Medicine, the Bloomberg School of Public Health and the School of Nursing in east Baltimore; the Peabody Institute, a music conservatory based in downtown Baltimore, which also has a large preparatory department with campuses in Anne Arundel, Baltimore and Howard Counties; and the Paul Nitze School of Advanced International Studies in Washington, D.C. with branches in Bologna, Italy and in Nanjing, China.

Johns Hopkins has developed major continuing education centers in downtown Baltimore, in Howard and Montgomery Counties, and in Washington, D.C. The University also operates a research facility, the Applied Physics Laboratory, in Howard County.

Zanvyl Krieger School of Arts and Sciences. Founded in 1876, the mission of the Krieger School of Arts and Sciences is the creation of new knowledge through research and scholarship, following a rigorous strategy of selective excellence. Integrated into this mission is the education of undergraduate and graduate students through immersion in the process of discovery, instilling in them the highest standards of intellectual achievement and an abiding commitment to self-initiated learning and discovery. Exceptional program in the Krieger School include: the Far Ultraviolet Spectroscopic Explorer (FUSE), developed for NASA by Johns Hopkins; the Zanvyl Krieger Mind/Brain Institute, an interdisciplinary research institute devoted to the study of neural mechanisms of higher mental function; the Materials Research and Engineering Center (MRSEC), an interdepartmental center dedicated to the study and manipulation of bulk matter at atomic distances; and the Program in Molecular Biophysics, a joint doctoral program that draws from a number of departments in the Krieger School and the School of Medicine.

Whiting School of Engineering. Founded in 1912 and reestablished in 1979, the Whiting School of Engineering provides its students with an educational environment that fosters a lifetime ability to create and apply new knowledge and to contribute to their professions. Through research in science and engineering, the faculty adds to the body of knowledge, imparting enthusiasm to and instilling creativity in its students. The School maintains an infrastructure to ensure excellence in traditional degree programs and continuing professional education. The reputations of the Whiting School's undergraduate and graduate programs are among the best in the nation, ranking 14th and 24th, respectively, in the 2001-2002 *U.S. News & World Report* survey. The same survey ranked the

Department of Biomechanical Engineering No. 1, while the Department of Geography and Environmental Engineering earned a fifth place ranking. The Part-Time Programs in Engineering and Applied Sciences are among the largest programs of their kind in the U.S.

School of Professional Studies in Business and Education. Founded in 1909 as College Courses for Teachers, the School of Professional Studies in Business and Education (SPSBE) identifies and responds to the lifelong educational needs of professionals in the Washington-Baltimore region and beyond. Offering graduate programming in business and education, as well as undergraduate study, the School combines academic innovation and excellence with flexible part-time and full-time formats and convenient class locations at five campus centers in the Baltimore metropolitan area. Full-time SPSBE faculty are complemented by outstanding part-time faculty drawn from the region's corporate, education, government and nonprofit sectors.

School of Medicine. Opened in 1893, the School of Medicine provides international leadership in the education of physicians and medical scientists, in bio-medical research, and in the application of medical knowledge to patient care. The interdependence of teaching, research and patient care is as fundamental to medical education today as it was more than 100 years ago when Johns Hopkins became the first medical school in the United States to integrate these functions. Johns Hopkins has ranked first among the nation's medical schools for a decade in the amount of research money awarded through the peer-reviewed mechanism of the National Institutes of Health. Noteworthy discoveries, inventions and innovations include restriction enzymes to cut DNA; algorithms to predict three-dimensional structure of proteins based on DNA sequence; linkage between a particular gene mutation known as p53 and various forms of colon cancer, cell surface marker to separate stem cells from other cells in bone marrow for cancer treatment, first continuous culture of normal human brain cells; techniques to image receptors in the brain; gene mapping; and first isolation and cultivation of human embryonic germ cells.

Bloomberg School of Public Health. Founded in 1916, The Johns Hopkins Bloomberg School of Public Health is dedicated to providing global leadership in advancing health and preventing disease through cutting-edge laboratory and field research; translation of research insights into effective policies and programs; and education and training of future generations of health scientists and professionals. The first institution of its type in the world, the Bloomberg School of Public Health became the international model, combining laboratory and field health research with the training of health leaders. Routinely cited as the No. 1 school of public health by surveys such as *U.S. New & World Report*, it remains the world leader in health education and research. The School uniquely integrates laboratory, quantitative and social sciences to provide a multidimensional approach to the discovery and application of new knowledge to prevent disease and improve health. Besides attracting considerably more competitive research support than any other school of public health, the Bloomberg School has received \$100 million for the Hopkins Malaria Research Institute, as well as substantial funding from the Bill and Melinda Gates Foundation for population and reproductive health, micronutrient research and measles vaccinology.

School of Nursing. Founded in 1889 as a hospital-based diploma school and in 1983 as a division of the University, the mission of the School of Nursing is to provide leadership to improve health care by educating nurses who will set the highest standards for patient care, exemplify scholarship, be sensitive to changing societal needs for nursing care, generate knowledge through research, and provide a positive and innovative force in the evolution of the nursing profession and the health care system. The School's graduate program and the community health nursing program were ranked fifth and second in the nation, respectively, by *U.S. News & World Report*. Pioneering multidisciplinary research has focused on asthma, breastfeeding, cardiovascular health promotion, domestic violence, geriatrics, hypertension, pain and symptom management in oncology, post-traumatic stress in children,

recovery post-cardiac bypass, skeletal muscle atrophy and recovery, psychoneuroimmunology, and substance abuse.

Peabody Institute of the Johns Hopkins University. Founded in 1857 and affiliated with The Johns Hopkins University in 1977, the Peabody Institute trains professional musicians. In recent years, Peabody faculty, students and alumni have achieved top-place wins in the following: BMI Awards; Chopin International Piano Competition in Warsaw; Fulbright Scholarships; Grammy Awards; Gramophone Award; Guggenheim Award; Marguerite Long-Jacques Thibaud Violin Competition in Paris; Metropolitan Opera Regional and National Auditions; Paganini International Violin Competition; Prix du Monde; Prix de Rome; Queen Elisabeth of Belgium Competition, Seaver Conducting Prize; Tchaikovsky International Competition in Moscow, Van Cliburn Competition, and White House Command Performances. The Preparatory, popularly known as the Prep, has a two-fold mission: to offer gifted children and adolescents the opportunity to realize their highest potential; and to provide an education in music and dance to all members of the community who desire it, regardless of age, professional intention or previous training. Approximately one-third of the Prep's 2,000 students are adults.

The Paul H. Nitze School of Advanced International Studies. Founded in 1943 and affiliated with The Johns Hopkins University in 1950, the Paul H. Nitze School of Advanced International Studies provides graduate training to men and women planning careers in public, private and non-profit sectors. Its mission is 1) to provide a professional education that adheres to the highest standards of scholarship and is at the same time relevant to contemporary problems in international affairs; 2) to conduct scholarly research that addresses the concerns of the United States and its public and private institutions in their relations with the governments and institutions of other countries, and to disseminate the research findings to a broad audience concerned with foreign relations; and 3) to offer mid-career educational opportunities to professionals in a variety of fields.

Applied Physics Laboratory. The core purpose of the Johns Hopkins University Applied Physics Laboratory (APL), founded in 1942, is to enhance the security of the nation through the application of science and technology. The Laboratory is firmly committed to space science and technology and other challenging areas that are also synergistic with its core purpose. In addition, the Laboratory carries on important work in areas such as biomedicine and education that are synergistic with the University as a whole. The Laboratory's heritage has been characterized by a long-term relationship with the Navy. While this relationship continues today, the Defense Department's emphasis on joint capabilities requires the integration of systems and assets from all the military services. The Laboratory's perspective and activities have been extended and broadened to serve its sponsors in these areas as well. Its space science and engineering activities include the Comet Nucleus Tour (CONTOUR), a Discovery Program planetary mission to study comets. In biomedical research, development and engineering, APL developed a new imaging technology for identifying cancerous tumors and determining the effectiveness of anti-tumor drugs.

Johns Hopkins Medicine

Johns Hopkins Medicine brings together the physicians and scientists on faculty at Johns Hopkins School of Medicine with the organizations, community physicians and professionals of The Johns Hopkins Health System to offer a full spectrum of activities in research, teaching and patient care. For more than a century, Johns Hopkins has been recognized as a leader in patient care, medical research and teaching. Today, Johns Hopkins Medicine is known for its excellent faculty, nurses and staff specializing in every aspect of medical care.

Johns Hopkins Health System

Johns Hopkins has built a reputation for excellence unsurpassed by any health care institution in the world. Pioneers in their fields, Hopkins clinicians and scientists have been responsible for many of the last century's major discoveries and innovations in patient care. Hopkins is equally committed to its communities, providing primary care to children and families, chronic care to seniors, and a range of rehabilitation services, occupational and environmental health programs, as well as health promotion, disease prevention and home care services. The Johns Hopkins Health System includes three acute-care hospitals and programs for local, national and international patient activities.

Johns Hopkins Hospital. The Johns Hopkins Hospital, flagship of the Hopkins health system, is an academic medical center with 977 acute care beds. Within this world-renowned institution are a number of centers devoted to specialized medical services. Listed below are a few.

Brady Urological Institute. The Brady Urological Institute of Johns Hopkins Hospital is dedicated to providing state-of-the-art medical and surgical care in all aspects of adult and pediatric urology.

The Wilmer Eye Institute. For more than 75 years, Johns Hopkins' Wilmer Eye Institute has earned international regard. The Institute provides a full spectrum of care – from routine and preventive to specialty services – by ophthalmologists who are consistently ranked by their peers as among the finest in the world. The Wilmer Eye Institute also delivers 24-hour care for eye injuries as a designated eye trauma center within the Maryland Institute for Emergency Medical Services System. In addition to Wilmer's Eye Care Pavilion at Johns Hopkins Hospital, Institute faculty see patients in Baltimore and Anne Arundel counties as well as other sites in Baltimore City.

Johns Hopkins Children's Center. Founded in 1912 as the children's hospital of the Johns Hopkins Medical Institutions, the Johns Hopkins Children's Center offers one of the most comprehensive pediatric medical programs in the country, from performing emergency trauma surgery to finding causes of and treatments for childhood cancers to delivering a child's clean bill of health. With recognized Centers of Excellence in 20 pediatric subspecialties including cardiology, transplant, psychiatric illnesses and genetic disorders, Children's Center physicians, nurses and staff provide compassionate care to more than 90,000 children each year.

Johns Hopkins Children's Center has been home to the statewide-dedicated pediatric trauma center since 1973 and has cared for thousands of children during this time. During FY 2000, the facility treated almost 1,000 critically injured and ill children and more than 5,000 seriously injured and ill children from every jurisdiction in Maryland.

In addition to providing direct care, Johns Hopkins provides frequent training and educational programs for local medical staff, emergency medical technicians, nurses, community physicians and other hospital providers. Hospitals statewide access the Trauma Center's specially equipped ambulance, staffed with members of the Johns Hopkins Pediatric Trauma team, who go to the community hospitals and transport critically injured or seriously ill children to the Johns Hopkins Pediatric Trauma Center.

Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins. Since its inception in 1973, the Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins has been dedicated to better understanding human cancers and finding more effective treatments.

One of only 41 cancer centers in the country designated by the National Cancer Institute (NCI) as a Comprehensive Cancer Center, the Kimmel Cancer Center has active programs in clinical research, laboratory research, education, community outreach, and prevention and control. The Johns Hopkins Kimmel Cancer Center is the only such NCI Comprehensive Cancer Center in the state of Maryland.

The Kimmel Cancer Center at Johns Hopkins encompasses a wide spectrum of specialty programs for both adults and children coping with cancer, including bone marrow transplantation and new drug development. Additionally, those at high risk for breast, ovarian, colon and other cancers, may seek information about early detection, prevention and genetic counseling through a comprehensive genetics service.

The Center also offers complete family and patient services that include a Cancer Counseling Center, survivors and palliative care programs, and two residences for patients traveling from out-of-town to receive treatment.

Johns Hopkins Bayview Medical Center. Johns Hopkins Bayview Medical Center has a long and distinguished history of service and medical excellence. It is one of the oldest health care organizations in continuous service on the East Coast. Bayview is a full-service teaching hospital containing more than 700 beds and is home to one of Maryland's most comprehensive neonatal intensive care units, a sleep disorders center, an area-wide trauma center, the state's only regional burn center, and a geriatrics center that enjoys a national reputation in the field of aging. Two of the hospital's specialized treatment centers are identified below.

Baltimore Regional Burn Center. Housed at Johns Hopkins Bayview Medical Center, the Baltimore Regional Burn Center provides a comprehensive, nationally recognized program of care for patients with burn injuries. The facility focuses on returning patients to their highest level of function and includes the physical, psychological, social and vocational aspects of their lives.

To meet this goal, the Burn Center uses a team approach, applying the expertise of various specialties to the many interrelated problems associated with burn injuries. Directed by physician burn specialists, the team includes nurses, a nurse practitioner, physical and occupational therapists, a nutritionist, social workers and psychologists, a parenteral nutritionist, respiratory therapists and a child life specialist. The Burn Center also conducts educational outreach programs on burn prevention.

Geriatrics Center. Also housed at Johns Hopkins Bayview is the Johns Hopkins Geriatrics Center (JHGC), a 255-bed skilled nursing facility and chronic care hospital. The Geriatrics Center provides long-term care, sub-acute care, chronic medical, ventilator, rehabilitation services and outpatient care. JHGC differs from many other nursing homes in that experts in geriatric medicine staff it. There is a geriatrician (a doctor who specializes in diseases of the elderly) assigned to every unit.

Howard County General Hospital. Howard County General Hospital is a 187-bed comprehensive acute-care medical center specializing in women's and children's services, surgery, cardiology, oncology, orthopedics, gerontology, psychiatry, emergency services and community health education. Last year, the hospital admitted more than 12,000 patients; performed nearly 15,000 surgical procedures; delivered more than 3,000 babies; and treated more than 57,000 patients in the Emergency Department.

Johns Hopkins Home Care Group. Johns Hopkins Home Care Group offers a range of services and products for adults and children throughout central Maryland. A network of subcontracted providers extends that care throughout the entire state.

The staff of nurses, physical, occupational, and speech therapists, home health aides and social workers provides direct home-based patient care, family education and interdisciplinary care management. Patient care is focused on achieving the highest possible level of patient independence, health status and quality of life. In addition, the Johns Hopkins Home Care Group furnishes a complete line of durable respiratory equipment and supplies, home infusion therapy and pharmaceuticals.

Community Physicians. Johns Hopkins Community Physicians is a wholly-owned member of Johns Hopkins Medicine and provides Hopkins-quality primary health care at 18 convenient medical centers in communities across Maryland.

Outpatient Center. The staff of the Johns Hopkins Outpatient Center focuses on meeting the patient's medical needs, paying special attention to fulfilling his or her personal needs. The Center provides one point of contact for out-of-town patients, helping them to identify the appropriate physician or specialist to see, coordinate multiple medical appointments and arrange second opinions. For international patients, medical record review, language interpretation, cost estimates and assistance with travel arrangements are also offered.

Green Spring Station. More than 200 physicians on the Johns Hopkins faculty also practice at this convenient Baltimore County campus. They include internists and pediatricians, as well as specialists in cardiology, dermatology, endocrinology, gastroenterology, neurology, oncology, ophthalmology, orthopedics, otolaryngology, plastic surgery, psychiatry, physical medicine and rehabilitation, rheumatology, surgery, urology and women's health. Special services include radiology, laboratory services, a sports medicine group, an outpatient rehabilitation facility, a medical and radiation oncology center, weight management center, audiologists, and Patient First, a walk-in urgent care center open from 8 a.m. to 10 p.m., 365 days a year.

White Marsh. In July 2000, Johns Hopkins at White Marsh opened its doors, providing residents of the northeast Baltimore corridor easy access to Hopkins-quality care. The 50,000 square-foot primary and specialty care facility created a new Hopkins hub and offers one-stop shopping for a variety of medical needs. On-site, patients have access to the following services: primary care in adult medicine, geriatrics and pediatrics; specialty care in cardiology, dermatology, general surgery, plastic surgery, ophthalmology, OB/Gyn, orthopedic surgery, urology and podiatry; laboratory services; consultation with experts from The Wilmer Eye Institute; and radiological testing. The July 2000 opening marked the completion of Phase I of the White Marsh project. Phase II, now under development, will add more services and specialty programs in the coming months.

Cedar Lane. Johns Hopkins at Cedar Lane recently opened to bring previously unavailable specialty care to Howard County, including interventional cardiology and pediatric specialties like cardiology, gastroenterology, ophthalmology and orthopedics. Cedar Lane also works closely with Howard County General Hospital (part of the Johns Hopkins family) and other Howard County physicians to ensure that Columbia area residents receive the highest quality care possible.

Appendix B-1: Visitor Expenditures, Johns Hopkins Institutions, Fiscal Year 2002

Entity/Type of Event	Total Expenditures per Event Type	Number of Visitors	Number of Out-of-State Visitors	Total Visitor-Days	Out-of-State Visitor-Days
University-Wide					
Board of Trustee Meetings	\$ 26,600	489	166	489	166
Advisory Councils	\$ 19,200	120	120	120	120
Development, Alumni Relations	\$ 480,000	4,000	1,000	12,000	3,000
Alumni Association Events					
Legacy Reception	\$ 9,600	77	60	77	60
Host Family Reception	\$ 3,200	110	20	110	20
Evergreen Rare Book	\$ -	52	-	52	-
Senior Alums @ Evergreen	\$ -	109	-	109	-
Host Family Spring Social	\$ 1,100	36	7	36	7
Sky Surveys Lecture	\$ -	39	-	39	-
Camelot Evergreen	\$ -	64	-	64	-
Pygmalion Club Brunch	\$ -	60	-	60	-
Shakespeare @ Evergreen	\$ -	60	-	60	-
Alumni Council Meetings	\$ 89,600	150	80	1,050	560
Homecomings/Reunions	\$ 820,800	3,044	1,520	12,176	6,080
Office of Special Events					
Commencement	\$ 660,000	5,500	4,125	5,500	4,125
Freshman Orientation	\$ -	1,100	-	1,100	-
Arts & Science & Eng. Diploma	\$ 720,000	6,000	4,500	6,000	4,500
Wednesday Noon Series	\$ 20,400	12,771	128	12,771	128
Guest Artist Series	\$ 2,000	784	8	784	8
G. Harry Pouder Memorial Lecture	\$ 1,700	1,087	11	1,087	11
Albert Schweitzer Gold Medal	\$ 1,100	717	7	717	7
Department of Athletics					
Lacrosse World Cup	\$ 560,000	7,000	1,750	14,000	3,500
Lacrosse Play Off	\$ 200,000	5,000	1,250	5,000	1,250
Consultant Visit	\$ 1,300	4	4	8	8
Men's Lacrosse	\$ 603,000	20,100	5,025	20,100	5,025
Women's Lacrosse Finals	\$ 720,000	9,992	6,000	9,992	6,000
Football	\$ 375,000	5,000	1,250	25,000	6,250
Men's/Women's Basketball	\$ 300,000	2,500	625	60,000	15,000
Other Johns Hopkins Sports	\$ 15,000	3,000	750	3,000	750
Misc. Outside Events	\$ 10,000	1,000	500	1,000	500
Dep't: Microbio. & Immunol./Hygiene					
Auto-immune/Rose	\$ 1,600	20	5	40	10
Malaria Conference	\$ 9,600	240	30	480	60
Rozeboom Symposium	\$ 200	30	1	30	1
Polk Symposium	\$ 600	10	2	20	4

Prospective Students	\$ 10,800	30	20	120	80
Seminars/Lectures	\$ 9,600	25	20	75	60
Faculty Search/Malaria	\$ 3,300	18	15	36	30

Historic Houses of JHU

Bus Tours (36)	\$ 19,300	1,665	1,289	1,665	1,289
Walk-in Visitation (24)	\$ 25,900	7,294	1,728	7,294	1,728
Camelot at Dawn Exhibition Preview	\$ -	125	3	125	3
Needlework Symposium	\$ 100	26	6	26	6
Camelot at Dawn Exhibition Preview	\$ 200	140	10	140	10
Smithsonian Dec. Arts Tour Program	\$ 200	15	12	15	12
Bid Spring High School Tour & Tea	\$ 200	15	15	15	15
Washington Art Association Tour	\$ 200	20	16	20	16
AAUW Delaware Tour of Kennedy Exhibit	\$ 500	31	31	31	31
Winterthur Winter Institute Class Tour	\$ 500	35	35	35	35

Dep't of Otolaryngology

Resident Interviews	\$ 6,100	40	38	40	38
Fellowship Applicants	\$ 2,400	15	15	15	15
Observers	\$ 294,100	7	7	387	387
Visitor	\$ 2,100	1	1	14	14
Graduation	\$ 4,800	22	22	44	44
Faculty Recruitment	\$ 2,000	2	2	14	14
Research Meeting	\$ 1,600	10	10	10	10
Trainees	\$ 28,900	6	2	546	182

Dep't of Dermatology

Atlantic Dermatology Conference	\$ 112,500	493	296	1,479	888
Consultant Visits	\$ 2,100	3	3	15	15

Dep't of Finance & Administration

Consultant Visit	\$ 200	1	1	2	2
Consultant Visit	\$ 400	2	2	4	4

Welch Library Events	\$ 1,600	2,370	10	2,370	10
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Bloomberg School of Public Health

Convocation	\$ 240,000	1,750	1,500	1,750	1,500
Career Fair	\$ 2,600	36	16	36	16

Employer Interviews:

Academy for Educational Development	\$ 200	1	1	1	1
CDC (PHPSO)	\$ 200	2	1	2	1
Michigan Population Fellows	\$ 200	1	1	1	1
General Electric	\$ 300	2	2	2	2
ASPH	\$ 200	1	1	1	1

Admissions Tours	\$ 207,400	360	72	6,480	1,296
Admissions Visitor Days	\$ 172,800	900	180	5,400	1,080
Admissions Workshop	\$ 8,000	100	10	500	50

Summer Minority Internship Program	\$ 76,800	29	8	1,740	480
Raskin Lecture	\$ 4,000	100	25	100	25
Health Advisory Board Dinner/Meeting	\$ 16,000	65	50	130	100
Lipitz Professorship Dedication	\$ 1,300	50	8	50	8
Visiting Committee	\$ 1,100	25	7	25	7
Burney Lecture	\$ 2,400	100	15	100	15
JH Malaria Research Inst. Symposium	\$ 28,500	220	75	660	225
Bristol Myers Squibb Nutrition Seminar	\$ 5,600	150	35	150	35
Proctor and Gamble Meeting	\$ 1,600	20	10	20	10
Johnson & Johnson Health Program	\$ 12,800	100	80	100	80
PFHS Lecture	\$ 300	45	2	45	2
PFHS Lecture	\$ 300	45	2	45	2
Shapiro Lecture	\$ 800	100	5	100	5
Health Advisory Board Dinner/Meeting	\$ 7,000	60	44	60	44
Visiting Committee	\$ 1,100	25	7	25	7
Delta Omega Induction	\$ 2,400	70	15	70	15
Honors and Awards Ceremony	\$ 1,600	250	10	250	10
Society of Alumni Meeting	\$ 500	5	3	5	3
Dean's Alumni Advisory Council Meeting	\$ 4,000	50	25	50	25
Anniversary of CDC and Injury Prev Center	\$ 24,000	250	150	250	150

Peabody

Concert Guest Artists	\$ 9,400	59	59	59	59
Elderhostel	\$ 490,000	3,500	3,500	24,500	24,500
Master Classes	\$ 5,000	31	31	31	31
Interviewees for Conservatory Positions	\$ 4,000	25 #	25	25	25
Dean Search Consultants and Candidates	\$ 7,000	44 #	44	44	44
Competitions -- Outside Judges	\$ 1,100	7 #	7	7	7
February Audition Week	\$ 320,000	2,000	2,000	2,000	2,000
May Auditions	\$ 224,000	200	200	1,400	1,400
Site Visits	\$ 75,200	470	470	470	470

Dep't of Biological Chemistry

A.L. Lehninger Lecture	\$ 1,600	350	5	700	10
L. Hellerman Lecture	\$ 600	350	2	700	4
Departmental Seminar Series	\$ 11,200	150	35	300	70

Purchasing Department

Little Twelve Conference	\$ 6,600	30	30	60	60
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Center for Alt. to Animal Testing

20th Anniversary Symposium	\$ 28,600	96	53	384	212
Advisory Board Meeting and Grant Review	\$ 2,600	25	12	50	24
Refinement Lecture	\$ 1,000	60	6	60	6
Refinement Program Meeting	\$ 1,000	15	6	15	6
Altweb Project Team Meeting	\$ 600	16	4	16	4
Program Projects and Board Meeting	\$ 9,500	48	25	144	75

Division of Infectious Diseases

AIDS conference	\$ 76,000	530	200	1,590	600
Infect Cont.	\$ 15,200	80	40	240	120

Corrections	\$ 95,000	300	250	900	750
Preceptorships	\$ 11,000	50	50	100	100
Carnegie Institution of Washington	\$ 2,100	34	13	34	13
Dep't of Civil Engineering					
Weekly Department Seminars	\$ 1,300	50	8	50	8
Biophysics					
Recruitment Weekend	\$ 9,300	29	29	58	58
Dep't: History of Science, Med & Tech					
Colloquia	\$ 115,200	300	60	3,600	720
Workshops	\$ 20,600	120	24	720	144
Prospective Students Reception	\$ 3,800	13	12	26	24
Mechanical Engineering					
Seminars	\$ 64,000	20	20	400	400
Faculty Interviews	\$ 2,400	15	15	15	15
Dep't of Global Studies					
Distinguished Lecture	\$ 5,900	150	37	150	37
Krieger Mind/Brain Institute					
Bodian Seminars	\$ 1,000,000	1,000	250	25,000	6,250
Humanities Center					
Prospective Students	\$ 600	4	4	4	4
Dep't of Facilities Management					
Architects	\$ 16,000	50	50	100	100
Engineers	\$ 16,000	50	50	100	100
Construction Consultants	\$ 16,000	50	50	100	100
Office of Conference Services					
CTY Team	\$ -	65	65	130	130
Injury Prevention	\$ 53,300	62	62	372	372
Partners for Youth	\$ 6,700	21	21	42	42
Quality Assurance	\$ 64,400	28	28	420	420
Population & Family Health	\$ 23,800	12	12	156	156
Anatomy Institute	\$ 71,700	17	17	459	459
REU	\$ 43,800	10	10	280	280
Packer Collegiate	\$ 26,600	70	70	210	210
Baltic Studies	\$ 37,800	70	70	280	280
Body Psychotherapy	\$ 58,100	83	83	415	415
North-South Games	\$ 18,700	117	117	117	117
SMYTE	\$ 11,800	31	31	93	93
Alpha Leadership	\$ 30,600	30	30	210	210
Fogarty Aids	\$ 143,400	44	44	924	924
*Computer Intrusion	\$ 11,800	31	31	93	93
Pine Forest Choir	\$ 600	40	40	40	40

MPH	\$ 85,600	40	40	560	560
Nat'l Center for Homeopathy	\$ 177,600	83	83	1,162	1,162
Blue Jay Camp I	\$ 18,000	300	300	1,200	1,200
Epidem. & Biostatistics I	\$ 149,800	70	70	980	980
Epidem. & Biostatistics II	\$ 64,200	30	30	420	420
Super Kids	\$ 8,400	40	40	560	560
CTY Staff & Faculty	\$ 14,400	80	80	960	960
College Visits I	\$ 3,500	22	22	22	22
Summer Scholars Staff	\$ 800	5	5	50	50
AIKI Expo	\$ 8,000	50	50	50	50
Fencing Camp	\$ 2,500	28	28	168	168
CTY Session I	\$ 36,600	349	349	2,443	2,443
Summer Scholars	\$ 2,300	30	30	150	150
Pre-College Staff	\$ 900	15	15	60	60
College Visits II	\$ 3,500	22	22	22	22
Pre-College	\$ 40,000	250	250	250	250
RET I	\$ 4,200	26	26	26	26
Undergraduate Summer Research	\$ 18,800	38	38	1,254	1,254
Early Epidemiology (Fogerty)	\$ 38,700	45	45	270	270
REU I	\$ 21,400	4	4	136	136
Summer Scholars Staff	\$ 3,200	6	6	216	216
Epidem. & Biostatistics II	\$ 216,200	212	212	1,484	1,484
Epidem. & Biostatistics I	\$ 61,200	60	60	420	420
Super Kids	\$ 37,800	70	70	2,520	2,520
CTY Staff & Faculty	\$ 16,700	30	30	1,110	1,110
CTY Session I	\$ 15,800	81	81	1,053	1,053
Summer Scholars	\$ 12,800	25	25	850	850
Pre-College Staff	\$ 168,000	320	320	11,200	11,200
RADAR	\$ 4,000	25	25	25	25
White Mountain Sports Camp	\$ 900	20	20	60	60
Pre-College	\$ 81,000	150	150	5,400	5,400
CTY OMNI	\$ 26,300	250	250	1,750	1,750
RET I	\$ 400	4	4	28	28
RET II	\$ 42,000	100	100	2,800	2,800
Blue Jay Camp II	\$ 1,000	13	13	65	65
ECA	\$ 100	2	2	4	4
College Dream II	\$ 16,500	220	220	1,100	1,100
REU III	\$ 6,800	75	75	450	450
CTY Session II	\$ 158,400	320	320	10,560	10,560
American Computer Exp.	\$ 133,500	25	25	850	850
SHEAR	\$ 162,000	300	300	1,200	1,200
MPT Bio-Health	\$ 14,000	20	20	100	100
Sonlife Ministries	\$ 510,000	500	500	3,500	3,500
Blue Jay Camp III	\$ 16,500	220	220	1,100	1,100
RET III	\$ 1,400	13	13	91	91
Championship Lacrosse	\$ 36,000	600	600	2,400	2,400
JHPIEGO					
Preconference Visit	\$ 11,500	5	5	75	75
Visiting Consultants	\$ 2,400	2	2	16	16
Visiting Physicians	\$ 3,400	4	4	24	24

Visiting USAID/NGO Staff	\$	300	2	2	2	2
Other Visitors	\$	300	2	2	2	2

Dep't of Biostatistics

Biostatistics Seminars (14)	\$	31,400	55	14	770	196
Consulting -- Dep't of Justice	\$	800	50	5	50	5
Prospective Students	\$	1,600	10	10	10	10
Winter Institute -- Biostat Courses	\$	1,600	32	10	32	10
Faculty Recruitment	\$	1,300	8	8	8	8

Space Telescope Science Institute

Prime Contract Review	\$	5,500	75	25	150	50
ECF/Sci Work & Agreement	\$	200	10	1	20	2
ESA Visit	\$	300	5	2	5	2
Family Day	\$	-	350	0	350	-
OSS Education Council	\$	4,400	65	20	130	40
Art Reception	\$	800	50	5	50	5
Hubble Fellowship Symposium	\$	42,400	40	20	80	40
Caltech Alumni Visit	\$	4,000	50	25	50	25
Nasa Keck TAC Meeting	\$	1,500	10	7	20	14
STUC	\$	1,100	11	5	22	10
SOC Meeting	\$	1,100	30	5	60	10
Office Product Show	\$	-	300	0	300	-
2001 IDEAS Panel Review	\$	300	20	2	20	2
Mission Definition Review	\$	2,200	60	10	120	20
Hubble Fellowship Panel Review	\$	1,100	12	5	24	10
ESA Visit	\$	200	17	1	17	1
AURA SW Workshop 2002	\$	6,600	130	30	260	60
Art Reception	\$	800	50	5	50	5
Media Globe Planetarium Demo	\$	800	20	5	20	5
ESA Visit	\$	200	2	1	2	1
STUC	\$	1,100	16	5	32	10
SOC Meeting	\$	1,100	30	5	60	10
HST Cycle 11 Panel Review	\$	500	16	3	16	3
May Symposium	\$	14,000	140	20	700	100
IIVC	\$	200	3	1	6	2
SOC Meeting	\$	1,100	20	5	40	10
Art Reception	\$	800	50	5	50	5
NVO Outreach Workshop	\$	2,200	40	10	80	20
OPO Advisory Meeting	\$	300	8	2	8	2
AURA Board Meeting	\$	500	15	3	15	3

Office of Admissions & Student Services

Pinning Ceremonies	\$	180,000	1,500	1,125	1,500	1,125
Open House- Fall & Spring	\$	38,400	600	240	600	240
Career Fair	\$	60,000	500	375	500	375
Information Sessions	\$	3,800	200	10	600	30
Graduation	\$	96,000	800	600	800	600

Program of Comparative American Cultures

Chandler Seminar	\$	-	30	-	30	-
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Scott Seminar	\$ -	30	-	30	-
Rosaldo Seminar	\$ 200	30	1	30	1
Powers Seminar	\$ -	30	-	30	-
W.E.B. DuBois Seminar	\$ 1,800	50	8	100	16
School of Medicine Dean's Office					
JH Medicine Board of Trustees	\$ 800	62	5	62	5
JH Medicine Board of Trustees	\$ 1,400	67	9	67	9
JH Medicine Board of Trustees	\$ 500	48	3	48	3
JH Medicine Board of Trustees	\$ 600	60	4	60	4
JH Board of Visitors	\$ 2,100	24	13	24	13
JH Board of Visitors	\$ 1,600	23	10	23	10
Surgery Search Candidate Visits	\$ 2,000	9	9	18	18
Kennedy Krieger Institute	\$ 346,500	10,828	2,166	10,828	2,166
National Institute on Drug Abuse	\$ 160,000	5,000	1,000	5,000	1,000
Applied Physics Laboratory					
Conferences, meetings	\$ 392,400	9,394	3,567	9,394	3,567
Student Visitors					
Undergraduates	\$ 1,560,000	19,667	19,667	19,667	19,667
Graduates	\$ 1,559,000	21,300	21,300	21,300	21,300
Total	\$ 17,276,400	195,895	98,914	429,685	222,117

Source: Johns Hopkins Institutions; BAE, 2002.

Appendix Table C-1: Income Multipliers Used to Estimate Indirect Income

Expenditures by	Multiplier
University	2.3688
Health System	2.1035
Affiliated Institutions	2.3688
Patients and Companions	2.0081
Staff	1.8974
Students	1.8279
Visitors	2.0081
Retirees	1.9071

Total

Sources: U.S. Bureau of Economic Analysis; BAE, 2002.

Appendix C-2: Derivation of Student Expenditure Multipliers

	Percent of Students	Expenditures	Percent of Total Expenditures	Multipliers Income	Employment
Undergraduates	53%				
Living in Dorms		Retail	50%	2.0705	31.1
		Eating/Drinking	10%	2.0279	29.0
		Service	30%	1.9306	33.1
		Transportation	10%	1.8198	30.9
	51%	Blended Multipliers	100%	1.9992	31.5
Living in Other University-Owned Housing		Retail	53%	2.0705	31.1
		Eating/Drinking	32%	2.0279	29.0
		Service	11%	1.9306	33.1
		Transportation	4%	1.8198	30.9
	0%	Blended Multipliers	100%	2.0315	30.6
Living in Private Housing		Real Estate	40%	1.3705	4.1
		Retail	32%	2.0705	31.1
		Eating/Drinking	19%	2.0279	29.0
		Service	6%	1.9306	33.1
		Transportation	3%	1.8198	30.9
	49%	Blended Multipliers	100%	1.7665	20.0
Graduate Students	47%				
Living in Other University-Owned Housing		Retail	53%	2.0705	31.1
		Eating/Drinking	32%	2.0279	29.0
		Service	11%	1.9306	33.1
		Transportation	4%	1.8198	30.9
	5%	Blended Multipliers	100%	2.0315	30.6
Living in Private Housing		Real Estate	51%	1.3705	4.1
		Retail	26%	2.0705	31.1
		Eating/Drinking	16%	2.0279	29.0
		Service	5%	1.9306	33.1
		Transportation	2%	1.8198	30.9
	95%	Blended Multipliers	100%	1.6947	17.1
All Students		Blended Multipliers		1.8043	22.1

Sources: U.S. Bureau of Economic Analysis; Student Survey; BAE, 2002.

Appendix C-3: Derivation of Visitor Expenditure Multipliers

Expenditures	Percent of	Multipliers	
	Total	Income	Employment
	Expenditures		
Hotels	52%	1.9911	25.3
Eating/Drinking	31%	2.0279	29.0
Other	17%	2.0716	26.0
Blended Multipliers	100%	2.0162	26.6

Sources: U.S. Bureau of Economic Analysis; International Association of Convention and Visitors Bureaus; BAE, 2002.

Appendix C-4: Derivation of Staff Expenditure Multipliers

Expenditures	Percent of	Multipliers	
	Total Expenditures	Income	Employment
Retail	7%	2.0705	31.1
Eating/Drinking	13%	2.0279	28.9
Real Estate	29%	1.3705	4.1
Transportation	20%	1.8198	30.9
Health	3%	2.0846	25.9
Personal	1%	1.9298	33.0
Miscellaneous	21%	2.0716	26.0
Amusement	6%	1.9212	26.3
Blended Multipliers	100%	1.8021	21.4

Sources: U.S. Bureau of Economic Analysis; BAE, 2002.

Appendix C-5: Derivation of Retiree Expenditure Multipliers

Expenditures	Percent of	Multipliers	
	Total	Income	Employment
	Expenditures		
Retail	24%	2.0705	31.1
Eating/Drinking	5%	2.0279	28.9
Real Estate	25%	1.3705	4.1
Transportation	16%	1.8198	30.9
Health	12%	2.0846	25.9
Personal	2%	1.9298	33.0
Miscellaneous	13%	2.0716	26.0
Amusement	5%	1.9212	26.3
Blended Multipliers	100%	1.8487	22.9

Sources: U.S. Bureau of Economic Analysis; U.S. Department of Labor; BAE, 2002.