

# Essential Facts 2005



**University of Colorado at Denver  
and Health Sciences Center**

**Health Sciences Programs**



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Dear Reader,

In achieving the mission of education, research, health care and community service, the health sciences programs at the University of Colorado at Denver and Health Sciences Center (UCDHSC) are nationally known. This “Fact Book 2005” summarizes many reasons for these programs’ preeminence.

The “Fact Book” that follows provides abundant evidence of the health sciences programs’ stature, including noteworthy achievements of the faculty, students, and staff, nationally recognized educational programs, significant research activities and accomplishments, and extensive involvement in caring for the people of Colorado and the Rocky Mountain Region. I invite you to discover the many remarkable accomplishments of these unique programs in the pages that follow.

*James Shore*

James H. Shore, M.D., Chancellor  
University of Colorado at Denver  
and Health Sciences Center

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## **Institutional Information**

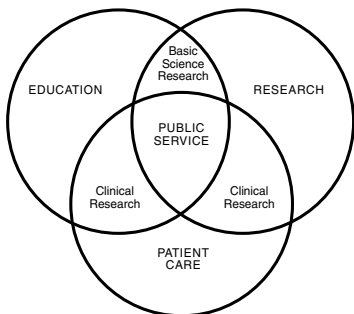
On July 1, 2004, the Regents of the University of Colorado voted to consolidate the University of Colorado at Denver and the University of Colorado Health Sciences Center campuses into one entity, now called the University of Colorado at Denver and Health Sciences Center (UCDHSC). The mission statement below and the data in this fact book cover the Health Sciences portion of the consolidated institution. Data about the Downtown Denver Campus are included in a separate document.

## Mission Statement

The mission statement of the Health Sciences Center (HSC) reflects the main purposes of the institution:

- the education of health professionals;
- the delivery of both health care and community service; and
- the advancement of knowledge through research in the health sciences.

### Interrelationship among HSC's Missions



## Legislative Mission

The legislative mission for the HSC is mandated by the Constitution of Colorado. The Colorado Revised Statutes (C.R.S. 23-20-101) state that the HSC campus' role is to "be a specialized professional institution offering baccalaureate and graduate programs in health-related disciplines". This mission statement was created during the early history of the institution and, although reviewed by the state legislature and the Board of Regents, has not changed since that time.

## History

- 1883 The Medical Department of the University of Colorado opened with two students and two senior faculty members.
- 1898 The School of Nursing was established.
- 1913 The School of Pharmacy became an independent school after it had been a department in the School of Medicine for two years.
- 1925 The new medical center at Ninth Avenue near Colorado Blvd. was formally dedicated.
- 1965 The Medical Center had been greatly expanded to 47 acres including a new Colorado General Hospital and modern quarters for the Medical and Nursing Schools.
- 1973 The School of Dentistry enrolled its first class.
- 1992 School of Pharmacy moved to Health Sciences Center from the Boulder campus.
- 1995 The federal government conveyed 217 acres of the Fitzsimons site in Aurora, Colorado, to the University of Colorado to build a 21st century health sciences center from the ground up. The first phase of transition from the current campus at Ninth Avenue and Colorado Boulevard in Denver to the Fitzsimons will be completed in 2010.
- 2000 The Anschutz Outpatient Pavilion, the Anschutz Cancer Pavilion, and the Building 500 renovation for support space were finished.
- 2001 The Preservation and Access Service Center for Colorado Academic Libraries – Library archive facility, the Rocky Mountain Lions Eye Institute, and the Perinatal Research Center Expansion were completed.
- 2002 The Nighthorse Campbell Native Health Building was dedicated.
- 2004 The Anschutz Inpatient Pavilion opened. The Research Complex I was completed. Included in the Research Complex I facilities are wet and dry research laboratories, core laboratories, lab support space (including space for linear equipment), researcher and program offices, conference rooms, a central vivarium, auditoria, and building support space.
- 2004 The University of Colorado at Denver and the University of Colorado Health Sciences Center joined into a single major urban research university. The consolidated institution boasts some 27,070 students and more than 100 degree programs. The new entity operates on a budget of \$866 million and attracts more than \$300 million a year in research grants and contracts.
- 2005 The Barbara Davis Center for Childhood Diabetes, the largest diabetes and endocrine care research and training program in Colorado, transitioned into a new facility at Fitzsimons.

# Programs and Units

The University of Colorado Health Sciences Center encompasses the Schools of Medicine, Nursing, Dentistry, Pharmacy and the Graduate School. It also has a teaching hospital, the University of Colorado Hospital, and more than 40 distinguished centers and institutes such as the NCI-designated University of Colorado Cancer Center.

| <u>School</u>   | <u>Number of Academic Departments/Programs</u> |
|-----------------|------------------------------------------------|
| Medicine        | 25                                             |
| Nursing         | 9                                              |
| Dentistry       | 5                                              |
| Pharmacy        | 5                                              |
| Graduate School | 26                                             |

### Affiliated hospitals

University of Colorado Hospital  
The Children's Hospital of Denver  
Veterans Affairs Medical Center  
National Jewish Medical and Research Center  
Denver Health Medical Center



## HSC's Outreach Programs

Students and faculty from HSC provide a wide range of services and programs, most voluntary, to Coloradans including:

- “Buff Buddy” for children with sickle cell anemia
- Barnes Pharmacy diabetes program, Sterling
- Brighton Pharmacy, Brighton
- Case Management at Samaritan House, and Randolph School Based Health Clinic (Denver Public Schools)
- Clinical trials for cancer treatment enroll thousands of participants
- Collaborative Partnerships through the School of Medicine’s Perinatal/Pediatric Outreach Education Program to enhance maternal/child health care
- Colorado Rural Health Scholars program for minority and/or economically disadvantaged rural high school students
- Colorado/Wyoming Junior Academy of Sciences
- Community nutrition education programs in metropolitan Denver and collaborative programs to develop the Colorado Nutrition Network
- CU’s Day on Campus
- Daniels Fund Summer Program
- Dental Outreach for Clinical Services and Training (including the “ACTS” program)
- Denver School-Based Health Centers to increase access to primary health care for underserved children
- Department of Pediatrics has provided outreach through the Junglemobile – a retrofitted ambulance replete with internet capabilities and injury prevention information and interactive programs for kids
- Grocery Warehouse, Pueblo
- Health Careers Pre-Collegiate Development Program
- Health Promotion at Brighton Senior Center, Brighton
- High School Teachers Research Residency program
- Inner-city self-sufficiency program for low-income single parent families

- Jeff's Valley Pharmacy anticoagulation program, Colorado City
- Jeff's Valley Pharmacy, Pueblo
- K-12 outreach programs, such as the Westminster Judo Club Parents' Association, the Denver Public School Executive Internship program
- K-12 Outreach/Service Programs introduces economically disadvantaged rural high school students to health science careers
- Minority Health Professions Opportunity Days
- Miracles Program- a substance abuse program for women on probation, located in Denver
- School of Medicine's Area Health Education Centers (AHEC) Health Institute focuses on community-based, primary health care career
- Partnership in Prevention Youth Mentoring program
- Primary Care at Arapahoe County Detention Center and Denver Women's Correctional Facility
- Public Health Outreach Nursing Services
- Rural Colorado Community Assessment of Medically Underserved
- Safe Clinic (part of Women in Crisis clinical) serves Jefferson County women and children survivors of domestic violence
- Salud clinic anticoagulation program, Fort Lupton
- San Luis Valley Medical Center, Alamosa
- School-Based Care at Carin' Clinic (Arvada), Baker Elementary (Adams District 50) and Sheridan Middle School (Sheridan)
- Service to Regional or Rural Communities to address the pipeline issue with respect to underrepresented minorities
- St. Mary-Corwin Medical Center anticoagulation and diabetes programs, Pueblo
- Student Ambassador Program provides community outreach
- Summer Cancer Fellowships provide opportunities for nearly 100 high school students and college undergraduates to work in the School of Medicine's research laboratories and clinics during summer months

- The Healthy Nations Initiative, launched with funding from the RWJ Foundation, provides financial support, programmatic supervision and technical assistance to 14 American Indian and Alaska Native communities
- The Center for Human Nutrition links with Colorado State University to provide community outreach relative to human nutrition. The Nutrition Center partners with Denver Public Schools Student Services in the development of a Comprehensive Health Initiative and collaborates with the Denver School Based Health Centers
- The Colorado AHEC system links CU's academic resources with local educational, clinical and planning resources to provide educational services to students, faculty and health care practitioners throughout the state and particularly in rural Colorado
- The Colorado AIDS Education and Training Center educates primary health care providers about HIV infection, including prevention, diagnosis, treatment and psychosocial issues
- The CU Student Rural Health and Primary Care Interest Group hosts an annual Rural Health Week to support and stimulate interest in rural and primary health care
- The Mini-Med School is an award-winning 8 week lecture-based course open free to the community. It is now broadcast live to five outlying sites in Colorado via satellite. Rural audiences are able to participate in the question and answer sessions at the end of each lecture
- The program of prenatal and infancy home visitation for low-income women bearing first children
- The Programs in Public Psychiatry interface with the state's Mental Health Institutes in Pueblo and Fort Logan, where psychiatrists perform medical student education, research and collaborative functions as well as clinical roles
- The School of Medicine supports tele-education outreach for several outlying communities. Grand Rounds are delivered via interactive video to remote sites throughout Colorado
- The Seeds for Health program, which targets Colorado 3rd graders for its "5 a Day" program.

- The Stout Street Clinic for the Homeless, Gilliam Youth Services Center, and Samaritan House Clinic
- The Tar Wars program to educate 5th graders about the dangers of tobacco
- The University of Colorado and Camp Wapiyapi (Lakota Sioux for “healing”) work in conjunction to provide a camping experience and a year-round support system of caring for children with cancer and their families
- Valley Wide Health Systems, Inc anticoagulation program, Alamosa
- Warren Village, a transitional housing development for low-income single parents

## Ranking of HSC Programs

|                                                                                                                          | Latest Ranking                                             | Rank Year                                                   |
|--------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|-------------------------------------------------------------|
| School of Medicine -- Research                                                                                           | 30 <sup>th</sup>                                           | 2005                                                        |
| School of Medicine -- Primary Care                                                                                       | 11 <sup>th</sup>                                           | 2005                                                        |
| <b>School of Medicine Program Ranking</b>                                                                                |                                                            |                                                             |
| AIDS Program                                                                                                             | 13 <sup>th</sup>                                           | 2005                                                        |
| Drug/alcohol Abuse                                                                                                       | 14 <sup>th</sup>                                           | 2005                                                        |
| Family Medicine Program                                                                                                  | 11 <sup>th</sup>                                           | 2005                                                        |
| Internal Medicine                                                                                                        | 23 <sup>rd</sup>                                           | 2005                                                        |
| Masters' Program in Public Health                                                                                        | 6 <sup>th</sup>                                            | 2003                                                        |
| Pediatrics Program                                                                                                       | 8 <sup>th</sup>                                            | 2005                                                        |
| Physician Assistant/Child Health Associate Program                                                                       | 6 <sup>th</sup>                                            | 2003                                                        |
| Physical Therapy Program                                                                                                 | 40 <sup>th</sup>                                           | 2004                                                        |
| <b>School of Nursing Program Ranking</b>                                                                                 |                                                            |                                                             |
| Adult Nurse Practitioner Program                                                                                         | 11 <sup>th</sup>                                           | 2003                                                        |
| Clinical Nurse Specialist Program                                                                                        | 7 <sup>th</sup>                                            | 2003                                                        |
| Family Nurse Practitioner Program                                                                                        | 6 <sup>th</sup>                                            | 2003                                                        |
| Gerontological/Geriatric                                                                                                 | 10 <sup>th</sup>                                           | 2003                                                        |
| Nursing Master's Program                                                                                                 | 15 <sup>th</sup>                                           | 2003                                                        |
| Pediatric Nurse Practitioner Program                                                                                     | 1 <sup>st</sup>                                            | 2003                                                        |
| School of Pharmacy ranking among 81 schools of pharmacy nationally in National Institutes of Health (NIH) grant support* | 14 <sup>th</sup> (FY2003), 1 <sup>st</sup> per faculty FTE | 10 <sup>th</sup> (FY 2004), 3 <sup>rd</sup> per faculty FTE |
| Ranking among public institutions in National Institutes of Health (NIH) grant support (HSC only)                        | 10 <sup>th</sup> (FY 2002)                                 | 10 <sup>th</sup> (FY 2003)                                  |
| School of Pharmacy, PharmD                                                                                               | 23 <sup>rd</sup>                                           | 2005                                                        |

# Research Programs

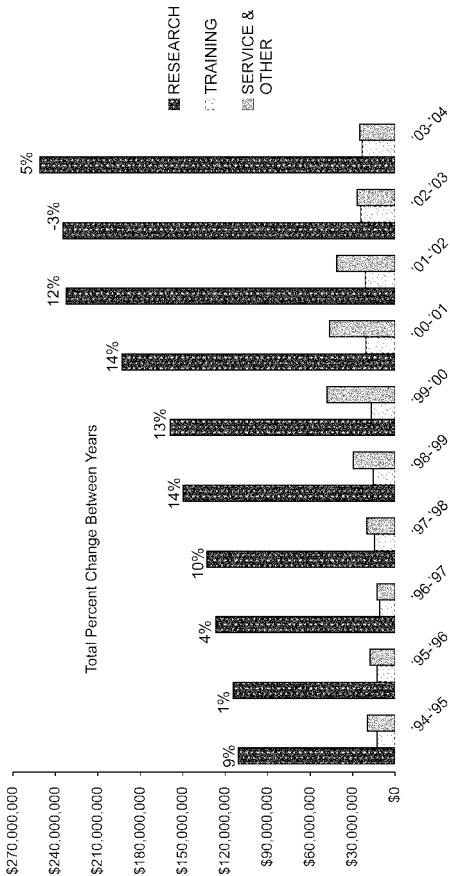
## Top 20 Sponsored Program Awards

| Principal Investigator | Title                                             | Sponsor                                                              | Total       |
|------------------------|---------------------------------------------------|----------------------------------------------------------------------|-------------|
| Richard Krugman        | General Clinical Research Center - Adult          | National Center for Research Resources (DHHS)                        | \$6,988,202 |
| Paul Bunn              | Cancer Center Core Grant                          | National Cancer Institute                                            | \$3,562,736 |
| Richard Krugman        | General Clinical Research Center - Pediatrics     | National Center for Research Resources (DHHS)                        | \$3,433,517 |
| George Eisenbarth      | Virginia Mason/UCHSC Autoimmune Prevention Center | National Institute of Allergy and Infectious Diseases (DHHS)         | \$2,988,760 |
| Paul Bunn              | Spore in Lung Cancer - Administrative Extension   | National Cancer Institute                                            | \$2,253,947 |
| Paul Bunn              | Spore in Lung Cancer                              | National Cancer Institute                                            | \$2,250,000 |
| Ivan McMurry           | Adaptations to Hypoxia                            | National Heart, Lung and Blood Institute (DHHS)                      | \$2,230,469 |
| Tom J. Brewster        | Signal MSO Treatment Funding Contract             | Signal Behavioral Health Network                                     | \$2,139,105 |
| James Hill             | Look Ahead: Action for Health in Diabetes         | National Institute of Diabetes, Digestive and Kidney Diseases (DHHS) | \$2,079,999 |
| Robert Schooley        | Immunopathogenesis of Acute HIV-1 Infection       | National Institute of Allergy and Infectious Diseases (DHHS)         | \$1,996,328 |

|                                                  |                                                      |                                                              |                     |
|--------------------------------------------------|------------------------------------------------------|--------------------------------------------------------------|---------------------|
| Constance A. Benson                              | Regional AIDS Education and Training Center          | Health Resources & Services Administration                   | \$1,964,000         |
| Kathryn V. Holmes                                | SARS Coronavirus: Inhibition of Entry                | National Institute of Allergy and Infectious Diseases (DHHS) | \$1,838,728         |
| Robert Schooley                                  | Adult AIDS Clinical Trials Unit (AACTU)              | National Institute of Allergy and Infectious Diseases (DHHS) | \$1,838,275         |
| Thomas Crowley                                   | Antisocial Drug Dependence: Genetics                 | National Institute on Drug Abuse (DHHS)                      | \$1,758,975         |
| Richard Irons                                    | China Leukemia Lymphoma Project                      | American Petroleum Institute                                 | \$1,748,061         |
| Thomas Crowley                                   | Adolescent Antisocial Drug Dependence Genetics       | National Institute on Drug Abuse (DHHS)                      | \$1,739,850         |
| David Olds                                       | National Replication of the Nurse-Family Partnership | Robert Wood Johnson                                          | \$1,553,468         |
| Robert Schooley                                  | University of Colorado Center for AIDS Research      | National Institute of Allergy and Infectious Diseases (DHHS) | \$1,541,289         |
| Paula Riggs                                      | Rocky Mountain Regional Clinical Trials Node         | National Institute on Drug Abuse (DHHS)                      | \$1,500,000         |
| Boris Tabakoff                                   | Gene Array Technology Center for Alcohol Research    | National Institute on Alcohol Abuse and Alcoholism (DHHS)    | \$1,460,556         |
| <b>Top 20 Awards Equal 15.6% of Total Awards</b> |                                                      | <b>Top 20 Total Award Amount</b>                             | <b>\$46,836,265</b> |



# Sponsored Program Awards by Function



# Faculty Information

## Noteworthy Accomplishments by HSC Faculty

- Discovery that a naturally occurring protein in the blood prevents the AIDS virus from reproducing and spreading to healthy cells.
- First identification of a genetic factor that converts normal cells into cancer cells.
- First 3-D computerized images of the entire human body derived from anatomical sections (“visible human”)
- First classification and numbering system for human chromosomes
- First demonstration of cancer cells killed by genetic manipulation of toxin genes
- First description of Toxic Shock Syndrome
- First successful liver transplant assisted by the drug cyclosporin
- First successful open-heart surgeries using hypothermia
- First identification of the Battered Child Syndrome
- First to define ARDS (Adult Respiratory Distress Syndrome)
- First Sim Suite™ advanced heart surgery simulator
- Pioneered Denver Developmental Screening Test, establishing a national model to assess child development
- First instance of what has come to be known as “cloning”
- Pioneered the first Child Health Associate program in the nation
- Conducted pioneering research leading to development of influenza vaccines and the eradication of smallpox
- Analysis of the molecular structure that allows T-cells to recognize antigens
- Discovery that lymphocytes are preprogrammed to respond to antigens, cornerstone of immunology
- First in nation to use ultrasound on a patient
- First human thyroid autograft, using tissue from one’s own body to repair damaged or diseased tissues
- First arterial homograft (use of human arterial tissue in heart surgery)

## **Recent Accomplishments by Faculty**

U. S. News & World Report's top 50 ranking of America's Best Hospitals for 2004 involved the following Department of Medicine Divisions (rank in parentheses): Respiratory Disorders (9), Kidney Disease (11), Geriatrics (17), Hormonal Disorders (18), Cancer (24), Heart & Heart Surgery (38) and Digestive Diseases (43).

The Department of Medicine ranked 12 of 126 Departments of Medicine throughout the country for NIH research funding for the most recently reported year.

A Women's Health Research Center was established with Drs. Judith Regensteiner, JoAnn Lindenfeld and Lorna Moore as the primary leaders.

The Department of Otolaryngology has received a \$2.8 million grant from the Centers for Disease Control to establish an International Hearing Center for Information, Education, Resources and Research.

# Faculty Headcounts by Tenure Status, Rank, and Race/Ethnicity, November 2004

## Tenured/Tenure Track Faculty

| Rank                | Race/Ethnicity     |                                  |                        |          |                     | Total |
|---------------------|--------------------|----------------------------------|------------------------|----------|---------------------|-------|
|                     | Black non-Hispanic | American Indian or Alaska Native | Asian/Pacific Islander | Hispanic | White, non-Hispanic |       |
| Professor           | 2                  | 1                                | 9                      | 7        | 308                 | 337   |
| Associate Professor | 3                  | 1                                | 17                     | 11       | 267                 | 323   |
| Assistant Professor | 5                  | 4                                | 49                     | 9        | 292                 | 429   |
| Total               | 10                 | 6                                | 75                     | 27       | 867                 | 1089  |

## 14 Faculty Not on Tenure Track

| Rank                   | Race/Ethnicity     |                                  |                        |          |                     | Total |
|------------------------|--------------------|----------------------------------|------------------------|----------|---------------------|-------|
|                        | Black non-Hispanic | American Indian or Alaska Native | Asian/Pacific Islander | Hispanic | White, non-Hispanic |       |
| Professor              |                    |                                  |                        |          | 19                  | 21    |
| Associate Professor    |                    |                                  | 2                      | 1        | 38                  | 43    |
| Assistant Professor    | 1                  | 1                                | 5                      | 2        | 78                  | 98    |
| Sr. Instructor         | 2                  | 2                                | 9                      | 8        | 111                 | 173   |
| Instructor             | 4                  | 3                                | 28                     | 16       | 295                 | 408   |
| Lecturer               |                    |                                  |                        |          | 1                   | 2     |
| Emeritus/Other Faculty |                    |                                  |                        |          | 1                   | 1     |
| Total                  | 7                  | 6                                | 44                     | 27       | 543                 | 746   |
| Grand Total            | 17                 | 12                               | 119                    | 54       | 1410                | 1835  |

## Faculty Headcounts by Tenure Status and Gender, November 2004

| Rank                   | Tenured/Tenure-track |            | Not on tenure track |            | Total      |            |
|------------------------|----------------------|------------|---------------------|------------|------------|------------|
|                        | male                 | female     | male                | female     | male       | female     |
| Professor              | 271                  | 66         | 20                  | 1          | 291        | 67         |
| Associate Professor    | 196                  | 127        | 23                  | 20         | 219        | 147        |
| Assistant Professor    | 218                  | 211        | 44                  | 54         | 262        | 265        |
| Sr. Instructor         |                      |            | 65                  | 108        | 65         | 108        |
| Instructor             |                      |            | 121                 | 287        | 121        | 287        |
| Lecturer               |                      |            |                     | 2          | 0          | 2          |
| Emeritus/Other Faculty |                      |            | 1                   |            | 1          | 0          |
| <b>Total</b>           | <b>685</b>           | <b>404</b> | <b>274</b>          | <b>472</b> | <b>959</b> | <b>876</b> |

## Faculty Headcounts by School and Rank, November 2004

|                        | Medicine | Dentistry | Nursing | Pharmacy |
|------------------------|----------|-----------|---------|----------|
| <b>Regular</b>         |          |           |         |          |
| Professor              | 299      | 19        | 11      | 11       |
| Associate Professor    | 297      | 23        | 17      | 6        |
| Assistant Professor    | 409      | 7         | 8       | 17       |
| Sr. Instructor         | 151      |           | 11      |          |
| Instructor             | 294      | 1         | 10      | 3        |
| Lecturer               | 2        |           |         |          |
| Emeritus/Other Faculty | 1        |           |         |          |
| <i>Total</i>           | 1,453    | 50        | 57      | 37       |
| <b>Clinical</b>        |          |           |         |          |
| Professor              | 15       | 2         |         |          |
| Associate Professor    | 8        | 3         | 1       | 9        |
| Assistant Professor    | 35       | 24        | 4       | 11       |
| Senior Instructor      | 6        |           | 5       |          |
| Instructor             | 35       | 21        | 34      | 6        |
| <i>Total</i>           | 99       | 50        | 44      | 26       |
| <b>Research</b>        |          |           |         |          |
| Professor              |          |           | 1       | 1        |
| Associate Professor    |          |           | 1       | 1        |
| Assistant Professor    | 3        | 2         | 3       | 4        |
| Instructor             | 1        |           |         | 3        |
| <i>Total</i>           | 4        | 2         | 5       | 8        |
| <b>Grand Total</b>     | 1,556    | 102       | 106     | 71       |

# Student Information



## Admission Data, Fall 2004

| <u>Program</u>                  | <u># of Applicants</u> | <u>Incoming Class</u> | <u>Selectivity rate*</u> |
|---------------------------------|------------------------|-----------------------|--------------------------|
| PhD Basic and Clinical Sciences | 471                    | 103                   | 22.0%                    |
| MS-Biometrics                   | 6                      | 4                     | 66.7%                    |
| CHA/PA                          | 161                    | 39                    | 26.2%                    |
| MS-Genetics Counseling          | 79                     | 7                     | 8.9%                     |
| MSPH                            | 75                     | 40                    | 54.1%                    |
| DDS                             | 976                    | 46                    | 4.8%                     |
| BSDH                            | 86                     | 24                    | 30.4%                    |
| ND                              | 92                     | 37                    | 44.6%                    |
| PhD-Nursing                     | 21                     | 7                     | 33.3%                    |
| MS-Nursing                      | 86                     | 50                    | 70.4%                    |
| BSN                             | 730                    | 165                   | 23.4%                    |
| PharmD                          | 902                    | 130                   | 15.3%                    |
| MD                              | 2,512                  | 132                   | 5.5%                     |

Note: Data for DPT, which started in June 2004, are not included in this report.  
 \* Selectivity rate is calculated as class size divided by the total number of applicants minus those who refused the HSC.

## Enrollment by School, Race/Ethnicity, and Gender, Fall 2004

| School                     | Total | Race/Ethnicity |          |                         |                  |                 | Gender           |      |        |
|----------------------------|-------|----------------|----------|-------------------------|------------------|-----------------|------------------|------|--------|
|                            |       | White          | Hispanic | Asian/Pacific Islanders | African-American | Native American | Foreign National | Male | Female |
| <b>School of Medicine</b>  | 1,332 | 1,088          | 91       | 86                      | 29               | 6               | 32               | 515  | 817    |
| Medical Students           | 555   | 447            | 42       | 40                      | 22               | 4               | 0                | 288  | 267    |
| Graduate Students          | 471   | 377            | 30       | 28                      | 5                | 0               | 31               | 162  | 309    |
| CHA/PA Students            | 142   | 131            | 2        | 9                       | 0                | 0               | 0                | 14   | 128    |
| DPT Students               | 65    | 58             | 4        | 2                       | 0                | 1               | 0                | 10   | 55     |
| Nondegree Students         | 99    | 75             | 13       | 7                       | 2                | 1               | 1                | 41   | 58     |
| <b>School of Dentistry</b> | 216   | 184            | 15       | 13                      | 2                | 2               | 0                | 101  | 115    |
| Undergraduate Students     | 46    | 40             | 4        | 1                       | 0                | 1               | 0                | 0    | 46     |
| Dental Students            | 170   | 144            | 11       | 12                      | 2                | 1               | 0                | 101  | 69     |
| <b>School of Nursing</b>   | 672   | 570            | 38       | 34                      | 21               | 4               | 5                | 58   | 614    |
| Undergraduate Students     | 312   | 263            | 19       | 19                      | 7                | 3               | 1                | 35   | 277    |
| Graduate Students          | 231   | 195            | 12       | 9                       | 11               | 0               | 4                | 11   | 220    |
| Nursing Doctorate Students | 127   | 110            | 7        | 6                       | 3                | 1               | 0                | 11   | 116    |
| Nondegree Students         | 2     | 2              | 0        | 0                       | 0                | 0               | 0                | 1    | 1      |
| <b>School of Pharmacy</b>  | 535   | 352            | 41       | 94                      | 28               | 5               | 15               | 167  | 368    |
| Graduate Students          | 48    | 30             | 1        | 5                       | 0                | 0               | 12               | 24   | 24     |
| PharmD Students            | 485   | 320            | 40       | 89                      | 28               | 5               | 3                | 143  | 342    |
| Nondegree Students         | 2     | 2              | 0        | 0                       | 0                | 0               | 0                | 0    | 2      |
| <b>Campus Total</b>        | 2,755 | 2,194          | 185      | 227                     | 80               | 17              | 52               | 841  | 1,914  |

# Enrollment by School, Enrollment Level, Status, and Residency, Fall 2004

| School                     | Total | Full-Time | Part-Time | Resident | Nonresident |
|----------------------------|-------|-----------|-----------|----------|-------------|
| <b>School of Medicine</b>  | 1,332 | 1,218     | 114       | 1,187    | 145         |
| Medical Students           | 555   | 552       | 3         | 520      | 35          |
| Graduate Students          | 471   | 446       | 25        | 382      | 89          |
| CHA/PA Students            | 142   | 142       | 0         | 135      | 7           |
| DPT Students               | 65    | 59        | 6         | 57       | 8           |
| Nondegree Students         | 99    | 19        | 80        | 93       | 6           |
| <b>School of Dentistry</b> | 216   | 216       | 0         | 163      | 53          |
| Undergraduate Students     | 46    | 46        | 0         | 43       | 3           |
| Dental Students            | 170   | 170       | 0         | 120      | 50          |
| <b>School of Nursing</b>   | 672   | 575       | 97        | 648      | 24          |
| Undergraduate Students     | 312   | 287       | 25        | 304      | 8           |
| Graduate Students          | 231   | 172       | 59        | 216      | 15          |
| Nursing Doctorate Students | 127   | 116       | 11        | 126      | 1           |
| Nondegree Students         | 2     | 0         | 2         | 2        | 0           |
| <b>School of Pharmacy</b>  | 535   | 519       | 16        | 481      | 54          |
| Graduate Students          | 48    | 46        | 2         | 28       | 20          |
| PharmD Students            | 485   | 473       | 12        | 452      | 33          |
| Nondegree Students         | 2     | 0         | 2         | 1        | 1           |
| <b>Campus Total</b>        | 2,755 | 2,528     | 227       | 2,479    | 276         |

## Graduation Rates of Most Recent Class by Program, 2004

| <u>Program</u>                                               | <u>Class Year</u> | <u>Graduation Rate</u> | <u>Still Enrolled</u> |
|--------------------------------------------------------------|-------------------|------------------------|-----------------------|
| PhD-Basic and Clinical Sciences                              | 1998              | 40.6%                  | 15.6%                 |
| MS-Biometrics, Medical Physics, Genetics                     | 2001              | 58.3%                  | 16.7%                 |
| CHA/PA                                                       | 2001              | 41.8%                  | 34.3%                 |
| MSPT                                                         | 2001              | 97.6%                  | 0.0%                  |
| MSPH                                                         | 2001              | 35.3%                  | 44.1%                 |
| MD                                                           | 2000              | 76.4%                  | 17.3%                 |
| DDS                                                          | 2000              | 97.4%                  | 2.6%                  |
| BSDH                                                         | 2002              | 100.0%                 | 0.0%                  |
| ND                                                           | 1999              | 65.4%                  | 19.2%                 |
| PhD-Nursing                                                  | 1998              | 57.1%                  | 28.6%                 |
| MS-Nursing                                                   | 2001              | 65.3%                  | 20.4%                 |
| BSN                                                          | 2002              | 87.7%                  | 8.0%                  |
| PharmD                                                       | 2000              | 80.0%                  | 10.0%                 |
| PhD-Pharmaceutical Sciences, Toxicology,<br>and Pharmacology | 1998              | 42.9%                  | 0.0%                  |

## Degrees Conferred by Gender and Race/Ethnicity, AY 2003-2004

| Degree Type               | Total      | Race/Ethnicity   |           |                 |                         |           |                     |           | Gender     |            |
|---------------------------|------------|------------------|-----------|-----------------|-------------------------|-----------|---------------------|-----------|------------|------------|
|                           |            | Foreign National | Black     | Native American | Asian/Pacific Islanders | Hispanic  | White, non-Hispanic | Unknown   | Male       | Female     |
| Bachelor's Degree         | 201        | 0                | 3         | 2               | 4                       | 13        | 168                 | 11        | 20         | 181        |
| Master's Degree           | 183        | 0                | 2         | 0               | 6                       | 5         | 169                 | 1         | 22         | 161        |
| First-Professional Degree | 235        | 2                | 13        | 2               | 39                      | 20        | 158                 | 1         | 112        | 123        |
| Doctoral Degree           | 60         | 2                | 1         | 0               | 2                       | 3         | 51                  | 1         | 17         | 43         |
| <b>Total Awards</b>       | <b>679</b> | <b>4</b>         | <b>19</b> | <b>4</b>        | <b>51</b>               | <b>41</b> | <b>546</b>          | <b>14</b> | <b>171</b> | <b>508</b> |

## Passing Rates of Licensure Examinations by Subject

| Year | Physician Assistant National Certifying Examination |     | NCLEX for BSN |     | NCLEX for ND graduates |     | USMLE (medical students) Step 1 |     | USMLE (medical students) Step 2 |     |
|------|-----------------------------------------------------|-----|---------------|-----|------------------------|-----|---------------------------------|-----|---------------------------------|-----|
|      | HSC                                                 | US  | HSC           | US  | HSC                    | US  | HSC                             | US  | HSC                             | HSC |
| 2004 | 100%                                                | 85% | 85%           | 85% | 84%                    | NA  | 94%                             | 93% | 93%                             | 93% |
| 2003 | 91%                                                 | 86% | 86%           | NA  | 87%                    | NA  | 95%                             | 97% | 97%                             | 97% |
| 2002 | 100%                                                | 90% | 90%           | 71% | 95%                    | NA  | 97%                             | 97% | 97%                             | 97% |
| 2001 | 100%                                                | 93% | 93%           | 78% | 100%                   | 78% | 91%                             | 95% | 95%                             | 95% |
| 2000 | 100%                                                | 90% | 90%           | 76% | 89%                    | 76% | 95%                             | 94% | 94%                             | 94% |
| 1999 | 100%                                                | 90% | 90%           | 78% | 88%                    | 78% | 98%                             | 96% | 96%                             | 96% |
| 1998 | 100%                                                | 89% | 89%           | 78% | 96%                    | 78% | 100%                            | 93% | 93%                             | 93% |
| 1997 | 100%                                                | 86% | 86%           | 82% | 100%                   | 82% | 98%                             | 95% | 95%                             | 95% |

## Average Tuition by Level and Residency Status, AY 2004-2005

| Level                                                                              | In-State   | Out-of-State |
|------------------------------------------------------------------------------------|------------|--------------|
| Full-time undergraduate students<br>Per credit hour charge                         |            |              |
| Dental Hygiene (Annual Tuition)                                                    | \$6,289    | \$21,398     |
| Nursing                                                                            | \$212/hour | \$720/hour   |
| Full-time graduate students<br>Per credit hour charge (excluding 1st Professional) |            |              |
| Genetic Counseling                                                                 | \$224/hour | \$477/hour   |
| Basic and Clinical Science                                                         | \$80/hour  | \$374/hour   |
| MS- Public Health                                                                  | \$224/hour | \$477/hour   |
| Child Health Assoc/Physicians Asst.                                                | \$150/hour | \$359/hour   |
| Physical Therapy- MS                                                               | \$181/hour | \$556/hour   |
| Nursing                                                                            | \$302/hour | \$936/hour   |
| Pharmaceutical Sciences                                                            | \$172/hour | \$594/hour   |
| Toxicology- Pharmacy                                                               | \$172/hour | \$594/hour   |
| Full-time first-professional students                                              |            |              |
| Dentistry (DDS) Annual Tuition                                                     | \$12,185   | \$38,919     |
| Medicine (MD) Annual Tuition                                                       | \$17,265   | \$69,178     |
| Pharmacy (PharmD) Annual Tuition                                                   | \$11,088   | \$24,444     |
| Nursing (Nursing Doctorate)                                                        | \$302/hour | \$936/hour   |
| Physical Therapy- DPT                                                              | \$329/hour | \$778/hour   |

## Financial Aid Awarded in FY 2003-2004

| Program         | Total Awards        | Number of Awards | Average Amount Awarded | Students Enrolled More Than Half-Time | Percent Receiving Financial Aid |
|-----------------|---------------------|------------------|------------------------|---------------------------------------|---------------------------------|
| Basic Sciences  | \$1,839,955         | 134              | \$13,731               | 466                                   | 29%                             |
| CHA/PA          | \$1,932,695         | 92               | \$21,008               | 131                                   | 70%                             |
| Dental          | \$5,466,858         | 158              | \$34,600               | 164                                   | 96%                             |
| DH              | \$646,305           | 35               | \$18,466               | 45                                    | 78%                             |
| Medicine        | \$14,589,735        | 463              | \$31,511               | 516                                   | 90%                             |
| Nurse-undergrad | \$2,948,893         | 210              | \$14,042               | 278                                   | 76%                             |
| Nurse-grad      | \$3,523,040         | 208              | \$16,938               | 420                                   | 50%                             |
| Pharmacy        | \$8,303,734         | 410              | \$20,253               | 622                                   | 66%                             |
| PT              | \$1,963,085         | 88               | \$22,308               | 95                                    | 93%                             |
| <b>Total</b>    | <b>\$41,214,300</b> | <b>1798</b>      | <b>\$22,922</b>        | <b>2737</b>                           | <b>65.7%</b>                    |



**Select Colorado Occupational Projections (2002-2012)  
Compared to HSC's Degrees Granted (AY 2003-2004)**

| Occupation Title     | Average Annual Openings | HSC Degrees Granted in 2003-2004 |
|----------------------|-------------------------|----------------------------------|
| Dental Hygienists    | 227                     | 21                               |
| Dentists             | 53                      | 40                               |
| Pharmacists          | 328                     | 82                               |
| Physical Therapists  | 242                     | 42                               |
| Physician Assistants | 142                     | 22                               |
| Registered Nurses    | 2,412                   | 191                              |

Source: Office of Labor Market Information, Colorado Department of Labor & Employment, Colorado Occupational Projections, 2002-2012.

## MD Graduates by Specialty of Residency, 2004

| <b>Number of<br/><u>students</u></b> | <b>Specialty Choice</b>          |
|--------------------------------------|----------------------------------|
| 21                                   | Family Medicine                  |
| 13                                   | General/Preliminary Surgery      |
| 19                                   | Internal Medicine                |
| 9                                    | Anesthesiology                   |
| 9                                    | Emergency Medicine               |
| 11                                   | Pediatrics                       |
| 1                                    | Diagnostic Radiology             |
| 2                                    | Neurological Surgery             |
| 2                                    | Neurology                        |
| 3                                    | Obstetrics/Gynecology            |
| 6                                    | Orthopaedic Surgery              |
| 1                                    | Otolaryngology                   |
| 6                                    | Pathology                        |
| 4                                    | Psychiatry                       |
| 1                                    | Radiation Oncology               |
| 2                                    | Urology                          |
| 1                                    | Dermatology                      |
| 1                                    | Physical/Rehabilitation Medicine |
| 2                                    | Ophthalmology                    |

**State Where 2003 HSC Graduate Survey  
Respondents Worked or Lived**

| <u>State</u> | <u>Frequency</u> | <u>Percent</u> |
|--------------|------------------|----------------|
| CO           | 124              | 69.3%          |
| CA           | 9                | 5.0%           |
| WA           | 6                | 3.4%           |
| NM           | 4                | 2.2%           |
| NY           | 4                | 2.2%           |
| AZ           | 3                | 1.7%           |
| TX           | 3                | 1.7%           |
| HI           | 2                | 1.1%           |
| MI           | 2                | 1.1%           |
| NV           | 2                | 1.1%           |
| OR           | 2                | 1.1%           |
| VA           | 2                | 1.1%           |
| VT           | 2                | 1.1%           |
| FL           | 1                | 0.6%           |
| IA           | 1                | 0.6%           |
| IL           | 1                | 0.6%           |
| KY           | 1                | 0.6%           |
| LA           | 1                | 0.6%           |
| MA           | 1                | 0.6%           |
| NE           | 1                | 0.6%           |
| SD           | 1                | 0.6%           |
| TN           | 1                | 0.6%           |
| UT           | 1                | 0.6%           |
| WV           | 1                | 0.6%           |
| WY           | 1                | 0.6%           |
| Unspecified  | 2                | 1.1%           |
| <b>Total</b> | <b>179</b>       | <b>100.0%</b>  |

## 2003 HSC Graduate Survey Respondents' Primary Responsibility at Work

| <u>Primary Responsibility</u>  | <u>Frequency</u> | <u>Percent</u> |
|--------------------------------|------------------|----------------|
| Patient care                   | 153              | 85.5%          |
| Teaching/consulting/training   | 8                | 4.5%           |
| Research                       | 7                | 3.9%           |
| Administration/management      | 6                | 3.4%           |
| Pharmacy (e.g., dispense meds) | 2                | 1.1%           |
| Unspecified                    | 3                | 1.7%           |
| <b>Total</b>                   | <b>179</b>       | <b>100.0%</b>  |

## Type of Setting Where Employed 2003 HSC Graduate Survey Respondents Spent the Majority of Working Time

| <u>Setting</u>                | <u>Frequency</u> | <u>Percent</u> |
|-------------------------------|------------------|----------------|
| Hospital                      | 95               | 53.1%          |
| Clinic/private office         | 48               | 26.8%          |
| College, university or school | 8                | 4.5%           |
| Pharmacy                      | 8                | 4.5%           |
| LTC/nursing home              | 5                | 2.8%           |
| Government agency             | 1                | 0.6%           |
| Other or Unspecified          | 14               | 7.8%           |
| <b>Total</b>                  | <b>179</b>       | <b>100.0%</b>  |

## Employment Status of 2003 HSC Graduate Survey Respondents

| <u>Employment Status</u> | <u>Frequency</u> | <u>Percent</u> |
|--------------------------|------------------|----------------|
| Employed                 | 179              | 94.7%          |
| Looking for work         | 4                | 2.1%           |
| Family responsibilities  | 4                | 2.1%           |
| Further education        | 2                | 1.1%           |
| <b>Total</b>             | <b>189</b>       | <b>100.0%</b>  |

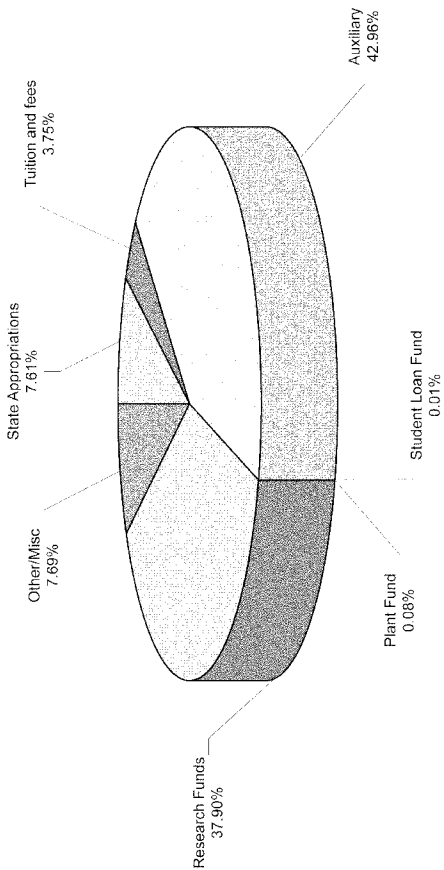
**Number and Percent of 2003 HSC Graduate Survey Respondents Reporting  
that HSC Instructional Program(s) Met Her/His Educational Goals**

|                 | <b>Frequency</b> | <b>Percent</b> |
|-----------------|------------------|----------------|
| Yes, completely | 113              | 59.8%          |
| Yes, partially  | 72               | 38.1%          |
| No, not at all  | 4                | 2.1%           |
| Missing         | -                | -              |
| <b>Total</b>    | <b>189</b>       | <b>100.0%</b>  |

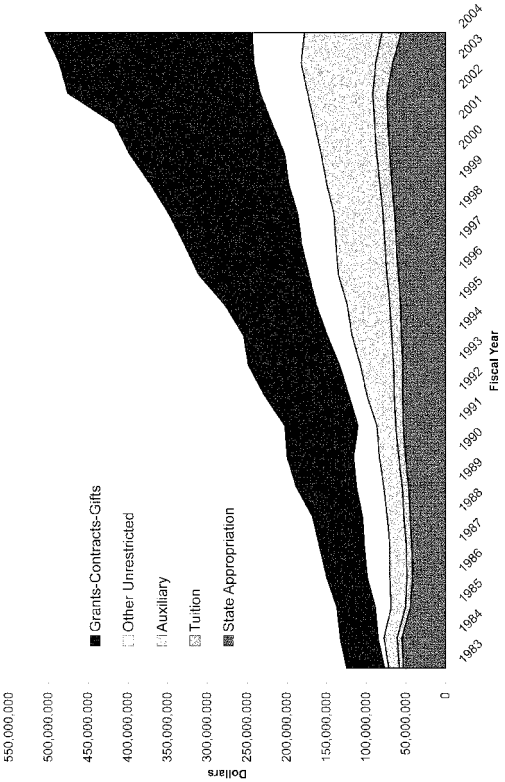
# Budget, Resources, and Economic Impacts

## HSC Budget FY 2005

Total Budget Amount: \$728,501,299



# HSC Sources of Revenue





## **The Economic Impact of HSC**

- ❖ The Health Sciences Center (HSC) represents a \$1.26 billion dollar campus economy in FY 2004.
- ❖ In the past ten years, funding for the HSC's sponsored programs (grants and contracts) has more than doubled, from \$143 million in FY 1994 to nearly \$300 million in FY 2004.
- ❖ As of December 2004, the HSC directly employed 6,279 (including full-time, part-time, and temporary employees), and the affiliated University of Colorado Hospital has 3,316 paid employees.

### **The Economic Impact of Anticipated Development at Fitzsimons<sup>1</sup>**

- ❖ The Fitzsimons site encompasses approximately 578 developable acres of land. About 7.0 million square feet of the total building space is expected to be complete by 2010, with the remaining 6.6 million square feet developed in response to private sector demand for bioscience research facilities and public sector demand for health care delivery, research and health care education.
- ❖ Completion of the anticipated Fitzsimons building program will entail a capital investment of nearly \$4.0 billion in current dollars. Of that total, about \$3.0 billion represents investments in "bricks and mortar" for utility infrastructure, parking facilities and buildings. The remainder will be for services and fees, such as, architectural design and legal fees, and furnishings and equipment. Construction expenditures average nearly \$115 million per year between 2003 and 2007.
- ❖ Construction at Fitzsimons will support 32,905 job-years in construction and other parts of the

economy, providing an important near-term economic stimulus to the regional economy. Total labor income related to construction through 2010 is estimated at \$1.34 billion.

❖ Construction related state and local sales taxes would total \$50.7 million through 2010. State income tax revenue related to the development of Fitzsimons is estimated to be \$27.2 million, and the motor vehicle license fees accrued will approximate \$1.7 million.

### **Long-Term Economic Impact**

❖ By 2010, more than 34,800 long-term on-site jobs will be directly and indirectly supported by the Fitzsimons redevelopment project.

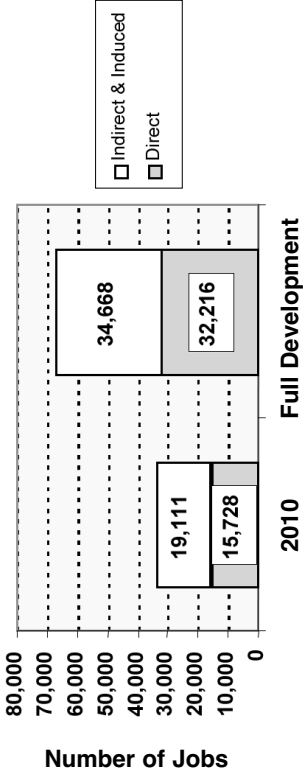
❖ At full development, Fitzsimons will support more than 66,800 jobs in Colorado, about 32,200 direct, on-site and another 34,700 jobs elsewhere in the metropolitan area and the state. The latter category includes jobs supported indirectly by the purchases of goods and services by the establishments located at Fitzsimons and the households deriving income from those establishments.

❖ Economic activities occurring at Fitzsimons will support annual output across Colorado totaling \$3.1 billion by 2010 and \$6.3 billion when full development is achieved.

❖ Total labor income in the state from the long-term jobs located at Fitzsimons will reach \$1.17 billion per year by 2010 and \$2.45 billion at full development.

❖ Significant tax revenues will accrue to state and local governments as a result of the Fitzsimons development. State corporate and personal income, sales taxes and motor vehicle registration fees will total \$93.8 million annually at build out. Statewide, local

# Long-Term Jobs Supported by Bioscience, Health Care and Related Activities at Fitzsimons



sales and use taxes supported by Fitzsimons will total \$40.5 million per year at build out.

❖ Over time, the Fitzsimons project will become a major source of local tax revenue. At full development, on-site development and activity will generate an estimated \$32.5 million in annual tax sales and property tax revenues. Initially most of these revenues will accrue to the tax increment financing district established to finance infrastructure improvements required to help bring the redevelopment project to reality and realize the economic development opportunities and benefits afforded.

### **Construction Related Impacts**

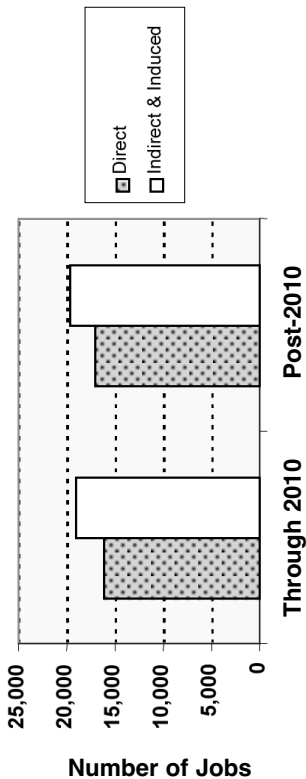
❖ In addition to the long-term economic gains, the on-site construction and development activities at Fitzsimons through 2010 will directly and indirectly support an estimated 32,905 job-years throughout the state.

❖ On-site construction will support another 36,640 job-years of employment beyond 2010 – 16,950 direct jobs and 19,690 jobs supported indirectly by the circulation of expenditures by suppliers, contractors and households associated with the construction.

❖ Future development activities at Fitzsimons will generate total economic activity of more than \$7.2 billion in Colorado. Of that amount, nearly \$2.8 billion will accrue as income to entrepreneurs, employees, business owners and property owners.

❖ The economic activity associated with the Fitzsimons redevelopment will generate significant public sector revenues as well. Nearly \$107 million in corporate and personal income taxes, sales taxes and motor vehicle registration fees will accrue to the Colorado state treasury by the completion of the project.

# Jobs Supported by Construction and Redevelopment Activities at Fitzsimons



## **Other Benefits**

- ❖ Developing a major research and education effort can have widespread economic impacts beyond those captured in an economic model. For example the 7,000+ acre Research Triangle Park (RTP) in North Carolina is widely credited with transforming the state's economy and image from a traditional, rural manufacturing area to a progressive, technology-driven, quality-lifestyle environment.
- ❖ At full development, Fitzsimons will support nearly as much total floor space as presently exists at RTP. And while Fitzsimons will host a diversified mix of research, health care and education uses which are less intensive in terms of space utilization than the primarily research and office functions at RTP, on-site employment at Fitzsimons will nevertheless reach about 65 percent of the on-site jobs at RTP today.
- ❖ The RTP and other co-located major research and education facilities have demonstrated the added long-term economic development and diversification gains that occur as industries cluster and achieve a degree of critical mass. Such gains include serving as magnets to attract yet other firms seeking to capitalize on the proximity to similar firms, the positive influences of such clustering on labor force development and recruiting, and the boost in business formation in other nearby communities as new startups, spin-offs and large-scale production facilities locate elsewhere in the surrounding region.
- ❖ Medical advances developed at Fitzsimons will contribute to improved quality of life and health care for people the world over. As documented by the Lasker Foundation, such benefits have real, tangible value in

terms of better health, greater life expectancies, and lower health care outlays. Coloradoans stand to realize those benefits in a more direct and timely manner.

❖ Much of the operating income supporting the research and health care entities located at Fitzsimons will come from outside the state. Such sources also include funded research from the federal government, research foundations and private sector clients. Other sources of such income include out-of-state patients receiving treatment at Fitzsimons that is unavailable in their own community and much of the financing and sale revenues of bioscience firms located in the bioscience park. The net inflow of wealth from these sources, in particular the funded research, will strengthen the state's economy.

❖ The influx of new jobs will provide enhanced employment opportunities for area residents. The associated housing needs and the business and consumer expenditure potentials associated with Fitzsimons will provide a vital stimulus for new capital investment, enhancing nearby property values and local government's fiscal position.

<sup>1</sup> Hammer • Siler • George • Associates, (April 2002). *Economic Impacts of the Fitzsimons Redevelopment Project*. And Hammer • Siler • George • Associates, (February 2003). *Economic Benefits of Accelerated Development of UCHSC at Fitzsimons*.