

DEPARTMENT OF HEALTH AND HUMAN SERVICES

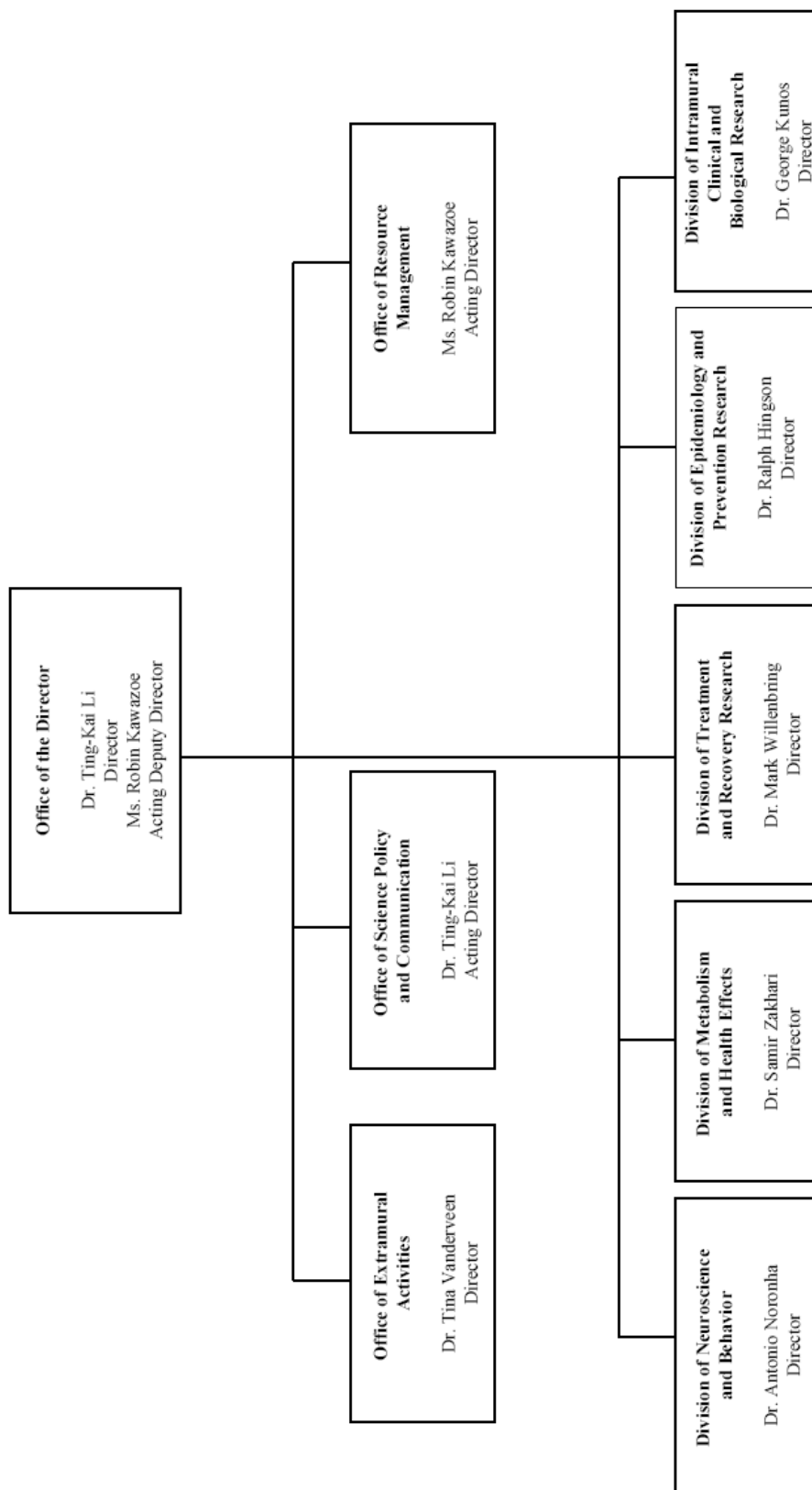
NATIONAL INSTITUTES OF HEALTH

National Institute on Alcohol Abuse and Alcoholism

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# NATIONAL INSTITUTES OF HEALTH

## National Institute on Alcohol Abuse and Alcoholism



**FY 2008 Proposed Appropriation Language**

**NATIONAL INSTITUTES OF HEALTH**

National Institute on Alcohol Abuse and Alcoholism

*For carrying out section 301 and title IV of the Public Health Services Act with respect to alcohol abuse and alcoholism, \$436,505,000.*

**Supplementary Exhibit**

**Comparison of Proposed FY 2008 Appropriation Language to  
Most Recently Enacted Full-Year Appropriation**

**NATIONAL INSTITUTES OF HEALTH**

National Institute on Alcohol Abuse and Alcoholism

For carrying out section 301 and title IV of the Public Health Services Act with respect to alcohol abuse and alcoholism, [~~\$435,728,000~~], **\$436,505,000** (Department of Health and Human Services Appropriation Act, 2006)

**National Institutes of Health  
National Institute on Alcohol Abuse and Alcoholism**

**Amounts Available for Obligation 1/**

| Source of Funding                                                                                                                                   | FY 2006<br>Actual | FY 2007<br>Continuing<br>Resolution | FY 2008<br>Estimate |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------------------------|---------------------|
| Appropriation                                                                                                                                       | \$440,333,000     | \$435,930,000                       | \$436,505,000       |
| Enacted Rescissions                                                                                                                                 | -4,403,000        | 0                                   | 0                   |
| Subtotal, Adjusted Appropriation                                                                                                                    | 435,930,000       | 435,930,000                         | 436,505,000         |
| Real Transfer under Roadmap Authority                                                                                                               | -3,896,000        |                                     |                     |
| Real Transfer under Secretary's One-percent transfer authority                                                                                      | -300,000          |                                     |                     |
| Comparative transfer from OD for NIH Roadmap                                                                                                        | 3,896,000         |                                     |                     |
| Comparative Transfer to NIBIB                                                                                                                       | -21,000           | -22,000                             |                     |
| Comparative transfer to OD                                                                                                                          | -9,000            | -10,000                             |                     |
| Comparative Transfer to NCRR                                                                                                                        | -120,000          | -169,000                            |                     |
| Comparative Transfers to the Office of the Assistant Secretary for Admin. And Mgmt. and to the Office of the Assistant Secretary for Public Affairs | -1,000            | -1,000                              |                     |
| Comparative Transfer to the Office of Public Health Emergency Preparedness                                                                          | 0                 | 0                                   |                     |
| Comparative Transfer from the PHSSEF                                                                                                                | 0                 | 0                                   |                     |
| Comparative Transfer to DHHS for PHS Historian                                                                                                      | 0                 | 0                                   |                     |
| Subtotal, adjusted budget authority                                                                                                                 | 435,479,000       | 435,728,000                         | 436,505,000         |
| Unobligated Balance, start of year                                                                                                                  | 0                 | 0                                   | 0                   |
| Revenue from Breast Cancer Stamp 2/                                                                                                                 | 0                 |                                     |                     |
| Unobligated Balance, end of year                                                                                                                    | 0                 | 0                                   | 0                   |
| Subtotal, adjusted budget authority                                                                                                                 | 435,479,000       | 435,728,000                         | 436,505,000         |
| Unobligated balance lapsing                                                                                                                         | -8,000            | 0                                   | 0                   |
| Total obligations                                                                                                                                   | 435,471,000       | 435,728,000                         | 436,505,000         |

1/ Excludes the following amounts for reimbursable activities carried out by this account:

FY 2006 - \$2,259,000 FY 2007 - \$2,259,000 FY 2008 - \$2,259,000

Excludes \$2,755 in FY 2007 and \$1,437 in FY 2008 for royalties.

**NATIONAL INSTITUTES OF HEALTH**  
**National Institute on Alcohol Abuse and Alcoholism**

(Dollars in Thousands)

Budget Mechanism - Total

| MECHANISM                                       | FY 2006<br>Actual |                   | FY 2007<br>Continuing Resolution |                   | FY 2008<br>Estimate |                   | Change      |          |
|-------------------------------------------------|-------------------|-------------------|----------------------------------|-------------------|---------------------|-------------------|-------------|----------|
|                                                 | No.               | Amount            | No.                              | Amount            | No.                 | Amount            | No.         | Amount   |
| Research Grants:                                |                   |                   |                                  |                   |                     |                   |             |          |
| <u>Research Projects:</u>                       |                   |                   |                                  |                   |                     |                   |             |          |
| Noncompeting                                    | 543               | \$190,442         | 536                              | \$189,300         | 540                 | \$186,693         | 4           | -\$2,607 |
| Administrative supplements                      | (33)              | 3,186             | (26)                             | 1,500             | (26)                | 1,500             | (0)         | 0        |
| Competing:                                      |                   |                   |                                  |                   |                     |                   |             |          |
| Renewal                                         | 51                | 19,439            | 55                               | 21,054            | 58                  | 22,207            | 3           | 1,153    |
| New                                             | 135               | 37,125            | 146                              | 40,209            | 152                 | 41,876            | 6           | 1,667    |
| Supplements                                     | 1                 | 217               | 1                                | 235               | 1                   | 235               | 0           | 0        |
| Subtotal, competing                             | 187               | 56,781            | 202                              | 61,498            | 211                 | 64,318            | 9           | 2,820    |
| Subtotal, RPGs                                  | 730               | 250,409           | 738                              | 252,298           | 751                 | 252,511           | 13          | 213      |
| SBIR/STTR                                       | 30                | 8,625             | 22                               | 8,269             | 21                  | 8,119             | -1          | -150     |
| Subtotal, RPGs                                  | 760               | 259,034           | 760                              | 260,567           | 772                 | 260,630           | 12          | 63       |
| <u>Research Centers:</u>                        |                   |                   |                                  |                   |                     |                   |             |          |
| Specialized/comprehensive                       | 18                | 29,687            | 18                               | 27,276            | 18                  | 27,276            | 0           | 0        |
| Clinical research                               | 0                 | 0                 | 0                                | 0                 | 0                   | 0                 | 0           | 0        |
| Biotechnology                                   | 0                 | 0                 | 0                                | 0                 | 0                   | 0                 | 0           | 0        |
| Comparative medicine                            | 0                 | 0                 | 0                                | 0                 | 0                   | 0                 | 0           | 0        |
| Research Centers in Minority Institutions       | 0                 | 0                 | 0                                | 0                 | 0                   | 0                 | 0           | 0        |
| Subtotal, Centers                               | 18                | 29,687            | 18                               | 27,276            | 18                  | 27,276            | 0           | 0        |
| <u>Other Research:</u>                          |                   |                   |                                  |                   |                     |                   |             |          |
| Research careers                                | 83                | 11,441            | 90                               | 11,781            | 93                  | 12,051            | 3           | 270      |
| Cancer education                                | 0                 | 0                 | 0                                | 0                 | 0                   | 0                 | 0           | 0        |
| Cooperative clinical research                   | 2                 | 8,899             | 2                                | 8,690             | 2                   | 8,690             | 0           | 0        |
| Biomedical research support                     | 0                 | 0                 | 0                                | 0                 | 0                   | 0                 | 0           | 0        |
| Minority biomedical research support            | 0                 | 0                 | 0                                | 0                 | 0                   | 0                 | 0           | 0        |
| Other                                           | 35                | 7,941             | 29                               | 7,144             | 29                  | 7,144             | 0           | 0        |
| Subtotal, Other Research                        | 120               | 28,281            | 121                              | 27,615            | 124                 | 27,885            | 3           | 270      |
| Total Research Grants                           | 898               | 317,002           | 899                              | 315,458           | 914                 | 315,791           | 15          | 333      |
| <u>Research Training:</u>                       | <u>FTEs</u>       |                   | <u>FTEs</u>                      |                   | <u>FTEs</u>         |                   |             |          |
| Individual awards                               | 80                | 2,927             | 80                               | 2,927             | 80                  | 2,927             | 0           | 0        |
| Institutional awards                            | 197               | 7,962             | 200                              | 8,357             | 200                 | 8,357             | 0           | 0        |
| Total, Training                                 | 277               | 10,889            | 280                              | 11,284            | 280                 | 11,284            | 0           |          |
| Research & development contracts<br>(SBIR/STTR) | 25<br>(7)         | 33,788<br>(1,455) | 25<br>(4)                        | 33,714<br>(1,550) | 25<br>(4)           | 33,714<br>(1,550) | 0<br>(0)    | 0<br>(0) |
|                                                 | <u>FTEs</u>       |                   | <u>FTEs</u>                      |                   | <u>FTEs</u>         |                   | <u>FTEs</u> |          |
| Intramural research                             | 117               | 45,574            | 118                              | 45,348            | 118                 | 45,031            | 0           | -317     |
| Research management and support                 | 108               | 24,330            | 109                              | 24,693            | 112                 | 24,940            | 3           | 247      |
| Cancer prevention & control                     | 0                 | 0                 | 0                                | 0                 | 0                   | 0                 | 0           | 0        |
| Construction                                    |                   | 0                 |                                  | 0                 |                     | 0                 |             | 0        |
| Buildings and Facilities                        |                   | 0                 |                                  | 0                 |                     | 0                 |             | 0        |
| NIH Roadmap for Medical Research                | 0                 | 3,896             | 0                                | 5,231             | 0                   | 5,745             |             | 514      |
| Total, NIAAA                                    | 225               | 435,479           | 227                              | 435,728           | 230                 | 436,505           | 3           | 777      |

Includes FTEs which are reimbursed from the NIH Roadmap for Medical Research

NATIONAL INSTITUTES OF HEALTH  
National Institute on Alcohol Abuse and Alcoholism  
Budget Authority by Program  
(Dollars in thousands)

| <u>Extramural Research</u><br>Detail: | FY 2004 |                  | FY 2005 |                  | FY 2006 |                  | FY 2006 |                      | FY 2007 |                                 | FY 2008 |                    | Change<br>FTEs Amount |
|---------------------------------------|---------|------------------|---------|------------------|---------|------------------|---------|----------------------|---------|---------------------------------|---------|--------------------|-----------------------|
|                                       | FTEs    | Actual<br>Amount | FTEs    | Actual<br>Amount | FTEs    | Actual<br>Amount | FTEs    | Comparable<br>Amount | FTEs    | Continuing Resolution<br>Amount | FTEs    | Estimate<br>Amount |                       |
| Embryo and Fetus                      |         | \$20,532         |         | \$20,773         |         | \$20,511         |         | \$20,511             |         | \$20,442                        |         | \$20,461           | \$19                  |
| Youth/Adolescence                     |         | 54,680           |         | 55,322           |         | 54,625           |         | 54,625               |         | 54,440                          |         | 54,490             | 50                    |
| Young Adult                           |         | 152,206          |         | 153,992          |         | 152,051          |         | 151,961              |         | 151,447                         |         | 151,587            | 140                   |
| Mid-Life/Senior Adult                 |         | 134,749          |         | 136,330          |         | 134,612          |         | 134,582              |         | 134,127                         |         | 134,251            | 124                   |
| <b>Subtotal, Extramural</b>           |         | 362,167          |         | 366,417          |         | 361,799          |         | 361,679              |         | 360,456                         |         | 360,789            | 333                   |
| <b>Intramural research</b>            | 119     | 42,471           | 117     | 45,346           | 117     | 45,574           | 117     | 45,574               | 118     | 45,348                          | 118     | 45,031             | 0 -317                |
| <b>Res. management &amp; support</b>  | 133     | 22,376           | 116     | 23,743           | 108     | 24,361           | 108     | 24,330               | 109     | 24,693                          | 112     | 24,940             | 3 247                 |
| <b>Research</b>                       |         | 1,411            |         | 2,771            |         | 3,896            |         | 3,896                |         | 5,231                           |         | 5,745              | 0 514                 |
| <b>TOTAL</b>                          | 252     | 428,425          | 233     | 438,277          | 225     | 435,630          | 225     | 435,479              | 227     | 435,728                         | 230     | 436,505            | 3 777                 |

Includes FTEs which are reimbursed from the NIH Roadmap for Medical Research

## **Major Changes in the Fiscal Year 2008 Budget Request**

Major changes by budget mechanism and/or budget activity detail are briefly described below. Note that there may be overlap between budget mechanism and activity detail and these highlights will not sum to the total change for the FY 2008 budget request for NIAAA, which is \$0.777 million more than the FY 2007 Continuing Resolution, for a total of \$436.505 million.

Research Project Grants (+\$0.2 million, total \$251.0 million). NIAAA will support a total of 211 Research Project Grant (RPG) awards in FY 2008. Noncompeting RPGs will increase by 4 awards and decrease by \$2.6 million. Competing RPGs will increase by 9 awards and \$2.8 million.

Research Careers (+\$0.3 million; total \$12.051 million): NIAAA will support the Pathway to Independence program, by funding an additional 3 awards in FY 2008. Total support for the Pathway program in FY 2008 is 6 awards and \$1.6 million.

NIH Roadmap for Biomedical Research (+\$0.5 million; total \$5.745 million): NIAAA will continue its support of the NIH Roadmap, an incubator for new ideas and initiatives that will accelerate the pace of discovery, in FY 2008.

Neuroscience Blueprint (+0.2 million; total \$1.0 million): NIAAA will continue to expand its support for the NIH Neuroscience blueprint which was inspired by recognition that unifying themes in neuroscience research are fundamental to understanding the normal and disordered nervous system and to developing better prevention and treatment therapies.

Intramural Research (-\$0.3 million; total \$45.0 million): NIAAA will work to identify areas of potential savings within the Intramural Research Program which will allow us to achieve our program goals and accomplishments as outlined in the Justification Narrative for the Intramural Research Program area as described below.

**NATIONAL INSTITUTES OF HEALTH**  
**National Institute on Alcohol Abuse and Alcoholism**  
**Summary of Changes**

| FY 2007 Continuing Resolution                                              |                                     |                     |                  | \$435,728,000       |
|----------------------------------------------------------------------------|-------------------------------------|---------------------|------------------|---------------------|
| FY 2008 Estimated Budget Authority                                         |                                     |                     |                  | 436,505,000         |
| Net change                                                                 |                                     |                     |                  | 777,000             |
| CHANGES                                                                    | FY 2007<br>Continuing<br>Resolution |                     | Change from Base |                     |
|                                                                            | FTEs                                | Budget<br>Authority | FTEs             | Budget<br>Authority |
| A. Built-in:                                                               |                                     |                     |                  |                     |
| 1. Intramural research:                                                    |                                     |                     |                  |                     |
| a. Annualization of January<br>2007 pay increase                           |                                     | \$17,294,000        |                  | \$361,000           |
| b. January 2008 pay increase                                               |                                     | 17,294,000          |                  | 389,000             |
| c. Two extra days of pay                                                   |                                     | 17,294,000          |                  | 133,000             |
| d. Payment for centrally furnished services                                |                                     | 7,432,000           |                  | 74,000              |
| e. Increased cost of laboratory supplies,<br>materials, and other expenses |                                     | 20,622,000          |                  | 469,000             |
| Subtotal                                                                   |                                     |                     |                  | 1,426,000           |
| 2. Research Management and Support:                                        |                                     |                     |                  |                     |
| a. Annualization of January<br>2007 pay increase                           |                                     | \$14,565,000        |                  | \$352,000           |
| b. January 2008 pay increase                                               |                                     | 14,565,000          |                  | 328,000             |
| c. Two extra days of pay                                                   |                                     | 14,565,000          |                  | 112,000             |
| d. Payment for centrally furnished services                                |                                     | 3,243,000           |                  | 32,000              |
| e. Increased cost of laboratory supplies,<br>materials, and other expenses |                                     | 6,885,000           |                  | 139,000             |
| Subtotal                                                                   |                                     |                     |                  | 963,000             |
| Subtotal, Built-in                                                         |                                     |                     |                  | 2,389,000           |

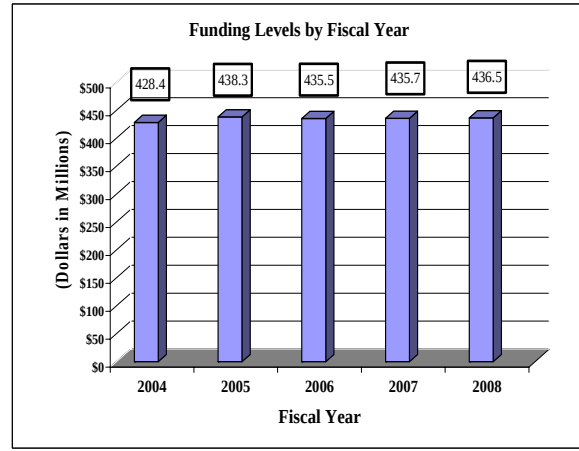
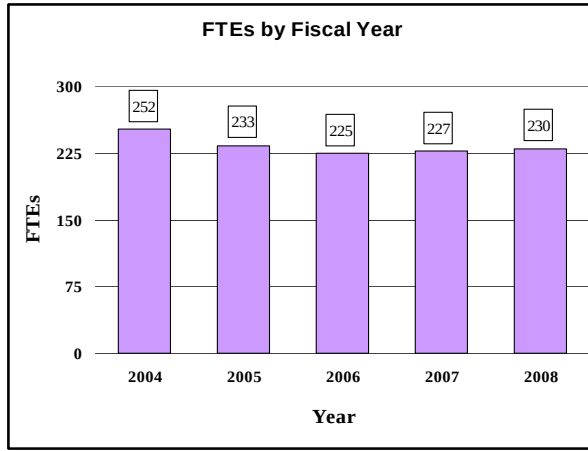
**NATIONAL INSTITUTES OF HEALTH**  
**National Institute on Alcohol Abuse and Alcoholism**

**Summary of Changes--continued**

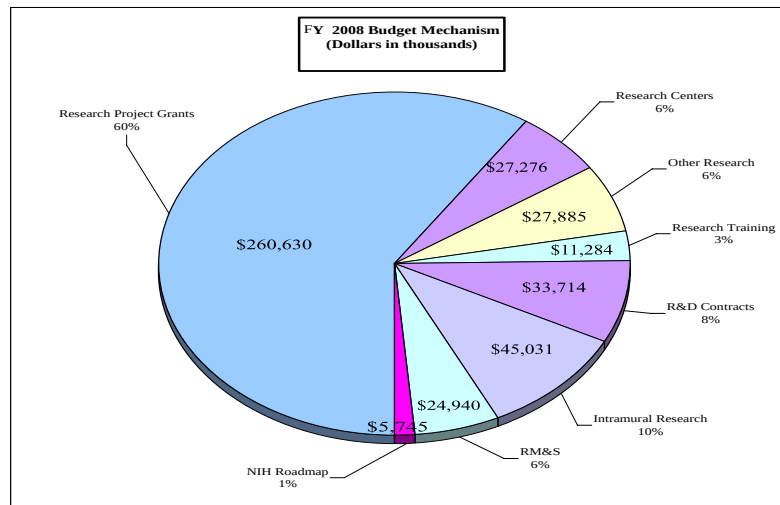
| CHANGES                               | FY 2007<br>Continuing<br>Resolution |               |             |              |
|---------------------------------------|-------------------------------------|---------------|-------------|--------------|
|                                       | Change from Base                    |               |             |              |
|                                       | No.                                 | Amount        | No.         | Amount       |
| <b>B. Program:</b>                    |                                     |               |             |              |
| 1. Research project grants:           |                                     |               |             |              |
| a. Noncompeting                       | 536                                 | \$190,800,000 | 4           | -\$2,607,000 |
| b. Competing                          | 202                                 | 61,498,000    | 9           | 2,820,000    |
| c. SBIR/STTR                          | 22                                  | 8,269,000     | -1          | -150,000     |
| Total                                 | 760                                 | 260,567,000   | 12          | 63,000       |
| 2. Research centers                   | 18                                  | 27,276,000    | 0           | 0            |
| 3. Other research                     | 121                                 | 27,615,000    | 3           | 270,000      |
| 4. Research training                  | 280                                 | 11,284,000    | 0           | 0            |
| 5. Research and development contracts | 25                                  | 33,714,000    | 0           | 0            |
| Subtotal, extramural                  |                                     |               |             | 333,000      |
|                                       | <u>FTEs</u>                         |               | <u>FTEs</u> |              |
| 6. Intramural research                | 118                                 | 45,348,000    | 0           | -1,743,000   |
| 7. Research management and support    | 109                                 | 24,693,000    | 3           | -716,000     |
| 8. Cancer control and prevention      | 0                                   | 0             | 0           | 0            |
| 9. Construction                       |                                     | 0             |             | 0            |
| 10. Buildings and Facilities          |                                     | 0             |             | 0            |
| 11. NIH Roadmap for Medical Research  | 0                                   | 5,231,000     | 0           | 514,000      |
| Subtotal, program                     |                                     | 435,728,000   |             | -1,612,000   |
| Total changes                         | 227                                 |               | 3           | 777,000      |

## Fiscal Year 2008 Budget Graphs

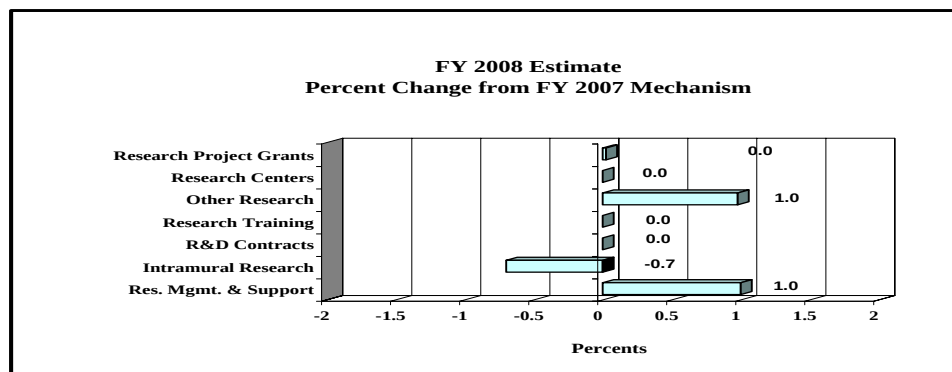
### History of Budget Authorities and FTEs:



### Distribution by Mechanism:



### Change by Selected Mechanisms:



## Justification

### National Institute on Alcohol Abuse and Alcoholism

Authorizing Legislation: Section 301 and title IV of the Public Health Service Act, as amended

Budget Authority:

| FY 2006<br>Actual |               | FY 2007<br>Continuing Resolution |               | FY 2008<br>Estimate |               | Increase or<br>Decrease |           |
|-------------------|---------------|----------------------------------|---------------|---------------------|---------------|-------------------------|-----------|
| <u>FTEs</u>       | <u>BA</u>     | <u>FTEs</u>                      | <u>BA</u>     | <u>FTEs</u>         | <u>BA</u>     | <u>FTEs</u>             | <u>BA</u> |
| 225               | \$435,479,000 | 227                              | \$435,728,000 | 230                 | \$436,505,000 | 3                       | \$777,000 |

This document provides justification for the Fiscal Year 2008 activities of the National Institute on Alcohol Abuse and Alcoholism (NIAAA), including HIV/AIDS activities. Details of the FY 2008 HIV/AIDS activities are in the Office of AIDS Research (OAR) section of the Overview, Volume One. Details on the Roadmap/Common Fund are located in the Overview, Volume One.

#### Director's Overview

Alcohol is the third leading cause of preventable death in the U.S.<sup>1</sup> Drinking too much, too fast, too often can lead to acute and chronic consequences for the drinker as well as consequences that extend beyond the individual, affecting the health and well-being of others and society-at-large. Excessive alcohol use also comes with a price, costing the U.S. an estimated \$185 billion annually.<sup>2</sup>

The National Institute on Alcohol Abuse and Alcoholism (NIAAA) is the lead agency for U.S. research on alcohol abuse, alcoholism, and other health effects of alcohol. The Institute's mission is to provide leadership in the national effort to reduce alcohol related problems. NIAAA's goal is to support and promote the best science on alcohol and health for the benefit of all by: increasing the understanding of normal and abnormal biological functions and behavior relating to alcohol use; improving the diagnosis, prevention, and treatment of alcohol use disorders; reducing alcohol-related health disparities; and enhancing access to quality health care.

New scientific knowledge has advanced our fundamental understanding of alcohol use and its impact on health in two key areas. First, it has reframed our understanding of the problems from alcohol use through the recognition that the nature of the problems significantly changes over the course of the lifespan. By adopting a lifespan perspective we are increasing our knowledge of

<sup>1</sup> Mokdad AH, Marks JS, Stroup DF, Gerberding JL. JAMA. 2004. 29: 1238-45.

<sup>2</sup> Harwood, H. Updating Estimates of the Economic Costs of Alcohol Abuse in the United States: Estimates, Update Methods and Data (2000). <http://pubs.niaaa.nih.gov/publications/economic-2000/>

how the emergence and progression of problem drinking are influenced by changes in biology, psychology, and exposure to social and environmental inputs over a person's lifetime, and, conversely, how drinking behavior affects biology, psychology, and the choice of environments. By focusing on key issues in a lifespan perspective we will facilitate the discovery of life stage-appropriate strategies for identifying, treating, and preventing alcohol use disorders.

Second, new scientific knowledge is informing NIAAA's efforts to understand the fundamental nature of Alcohol Use Disorders (AUDs). Research results from NIAAA's National Epidemiologic Survey on Alcohol-Related Conditions (NESARC) indicate that Alcohol Abuse and Alcoholism (more accurately, Alcohol Dependence) are part of a continuum of severity of alcohol use problems rather than independent disorders. Further, such analyses are already showing how new criteria based on the quantity and frequency of alcohol use can improve diagnosis when used in combination with existing diagnostic criteria. The development of these quantitative criteria will lead to better assessment of the stage of the disease for any given individual, and inform development of improved treatment approaches for the differing severity levels of alcohol dependence. Information on how quantity and frequency can be used in diagnosis and follow-up care is an integral part of NIAAA's *Clinician's Guide*. Recognizing that adolescents may experience different effects of alcohol, have different patterns of drinking, and experience different consequences as compared with adults, NIAAA is also evaluating how the criteria used for adults might be modified to allow for differences in the biology and behaviors characteristic of adolescents.

In response to NIAAA findings of the high prevalence of alcohol dependence in young adults, the extensive binge drinking among adolescents, and the serious consequences that result, the Surgeon General issued a *Call to Action To Prevent and Reduce Underage Drinking*. This concise report offers a comprehensive view of underage drinking and its consequences within a developmental framework. NIAAA provided the scientific foundation for the *Call to Action* based on the work of its Underage Drinking Steering Committee and collaborated with the Office of the Surgeon General and the Substance Abuse and Mental Health Services Administration to produce it.

Given the high rates of drinking (especially binge drinking) among adolescents, coupled with the knowledge that adolescence is a time of significant brain maturation and refinement, it is critical to better understand the short- and long-term effects of drinking on brain development. NIAAA is investing in studies to determine how alcohol exposure affects the programmed growth and refinement that occur in the brain during adolescence and into early adulthood, recognizing that even transient disruptions of these developmental processes have the potential to change lifetime academic, vocational, social, and emotional trajectories. Such studies may help explain the correlation between early alcohol use and future alcohol dependence.

In every age group there is a large variation in the way individuals respond to alcohol. The nature of their response may affect their decision to drink as well as put them at risk for, or protect them from, developing alcohol dependence. To fully understand which effects contribute to drinking behavior and their mechanisms, NIAAA seeks to define the full range of effects of alcohol on central nervous system function and the variability associated with unique genetic and gene-environment profiles.

In addition to understanding what factors contribute to the initiation and escalation of drinking, it is equally important to understand how individuals change harmful drinking patterns with or without treatment. For example, a large number of individuals who meet diagnostic criteria for alcohol dependence are able to change their drinking behavior in the absence of treatment. In addition, individuals with legal mandates to enter treatment are more likely to engage in treatment, remain longer in treatment, and have better outcomes than those who do not. NIAAA is focusing considerable attention on determining what factors contribute to behavior change in individuals in various life stages and circumstances.

For individuals who continue to drink heavily, damage to tissues and organs may manifest later in life. For example, over time, the cumulative effect of alcohol exposure may cause damage to a number of cells and tissues including those of the liver. The relationship of tissue damage to life stage, drinking behavior, and genetic makeup is of central interest. Evidence suggests that the mitochondrion, the so-called powerhouse organelle contained in cells of all types, may be particularly susceptible to alcohol-induced damage. The goal of a new NIAAA research initiative is to better define factors that contribute to alcohol's damaging effects on a variety of cell types in a variety of tissues and organs.

Medications development continues to be a strong focus of the Institute. The Institute's approach is multi-faceted: continue basic research to develop candidates for medications; develop the infrastructure to test multiple compounds, enabling faster determination of which of them merit advancement to large, multi-site studies; and work with the pharmaceutical industry to ensure their interest in taking promising compounds through the final phase clinical trials.

#### **FY 2008 Justification by Activity Detail:**

Overall Budget Policy: Investigator-initiated research projects and new investigator research and career development are the Institute's highest priorities. The NIAAA carefully evaluates investigator-initiated requests to all its programs, conducts scientific review, and presents results to the NIAAA Advisory Council to determine the level of recommended support. The level of support provided for Institute-initiated projects (e.g., RFAs) is also evaluated. The Institute maintains a balance between solicitations issued to the extramural community in areas that need stimulation and funding made available to support investigator-initiated projects. NIAAA's Program Funding Table comprises the primary building blocks used to manage NIAAA's portfolio and parallels closely the objectives identified in NIAAA's Strategic Plan. This Plan was developed with input from advisory boards and scientific, medical, and advocacy groups. The Plan identifies opportunities in broad research areas and recommends optimal use of existing and new knowledge to identify, treat, and prevent alcohol use disorders.

The following narrative includes representative NIAAA activities that highlight program plans and expected accomplishments.

#### **Embryo and Fetus**

In recognition that the nature of problems resulting from alcohol exposure significantly change over the course of the lifespan, NIAAA has organized its research portfolio corresponding to life

stage. The earliest stage of life, encompassing the developing embryo and fetus, is a period of great vulnerability to the adverse effects of alcohol. Alcohol-induced birth defects are known as fetal alcohol spectrum disorders (FASD). The most serious adverse consequence of prenatal alcohol exposure is fetal alcohol syndrome (FAS), a devastating developmental disorder characterized by craniofacial abnormalities, growth retardation, and nervous system impairments that may include mental retardation. Alcohol may also damage neurological and behavioral development even in the absence of obvious physical birth defects. The severity of defects depends on the dose, pattern, and timing of *in utero* exposure to alcohol. Further work is needed to identify critical periods of risk to alcohol exposure and how these relate to levels of alcohol exposure and consequences. Research studies indicate that alcohol's causative role in FASD can also be influenced by maternal hormones, nutrition, age, parity, maternal blood alcohol level, years of drinking, and genetic factors, suggesting possible targets for intervention. Researchers are pursuing two paths for preventing FASD. The most desirable route for prevention involves eliminating or significantly reducing alcohol consumption by women during pregnancy. Ongoing studies with high risk mothers as well as general outreach efforts are showing some success, but as long as children are being born with FASD, a completely preventable disorder, we need to explore additional ways to prevent these debilitating disorders. Also of interest are interventions to minimize the damage caused by prenatal alcohol exposure. Pharmacological intervention may have applicability when there is early alcohol exposure, or failure to stop drinking during pregnancy. Development of interventions will depend on additional research that further elucidates the mechanisms by which alcohol causes damage as well as identifies the factors that ameliorate or exacerbate these effects.

**Budget Policy:** The FY 2008 budget estimate for the Embryo and Fetus Program is \$20.5 million, unchanged from the FY 2007 Continuing Resolution. The Program plans for 2008, along with expected accomplishments are as follows. NIAAA will continue to support research to prevent and intervene with FASD. Also, NIAAA will be funding a new initiative (\$2 million in FY 2008) to study alcohol sensitivity and tolerance across individuals and the lifespan. Research studies under this program will contribute important insight into individual and population variation in responses to alcohol exposure, including why some mothers appear to be more susceptible than others to giving birth to children with FASD.

## **Youth/Adolescence**

The studies in NIAAA's portfolio comprising research on Childhood, Youth, and Adolescence is a critical component for understanding the emergence and progression of drinking behavior. During childhood, expectations about drinking are established, while adolescence is the period of life during which most youth initiate and accelerate alcohol consumption. By the time they are seniors in high school, 75% have begun drinking and 28% report binge drinking in the past two weeks, i.e., drinking five or more drinks on one occasion.<sup>3</sup> One million high school students drink five or more drinks on at least six occasions per month<sup>4</sup>. Drinking five or more drinks in a

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<sup>3</sup> Johnston, LD, O'Malley, PM, Bachman, JG, & Schulenberg, JE (2006). Monitoring the Future national survey results on drug use, 1975-2005. Volume I: Secondary school students (NIH Publication No. 06-5883). Bethesda, MD: National Institute on Drug Abuse, 684.

<sup>4</sup> Grunbaum, JA, Kann, L, Kinchen, SA, Williams, B, Ross JG, Lowry, R and Kolbe, L (2002). Youth Risk Behavior Surveillance: United State, 2001, MMWR Surveill. Summ 51: (4) 1-62.

two hour period is enough to make most legally intoxicated and elevates the risk for unintentional and intentional injuries, the leading cause of death among young people in the U.S.<sup>5</sup>. Despite the widespread use of alcohol by adolescents, the short- and long-term effects of drinking on brain development are not yet well characterized although studies indicate that adolescent drinking, and especially heavy drinking, can affect brain structure and function. Additional studies in this area are critical, because the brain is still undergoing programmed growth and refinement through adolescence and into early adulthood. Consequently, even transient disruptions of these developmental processes have the potential to change lifetime academic, vocational, social, and emotional trajectories (see portrait). Given that youth/adolescence is a key period of the lifespan for the initiation and escalation of alcohol use, and recognizing that these behaviors can affect future health and well-being through multiple mechanisms, NIAAA has focused considerable effort on the prevention of early alcohol use. As noted earlier, NIAAA provided the scientific foundation for the Surgeon General's *Call to Action To Prevent and Reduce Underage Drinking* based on the work of NIAAA's Underage Steering Committee in collaboration with the Office of the Surgeon General and the Substance Abuse and Mental Health Services Administration. This document, which offers a comprehensive view of underage drinking and its consequences within a developmental framework, is anticipated to reach audiences ranging from parents to health care professionals, and from school and college administrators to policy makers. In an effort to increase the involvement of health care providers in combating underage drinking, NIAAA awarded 4 grants in response to the RFA *Underage Drinking: Building Healthcare System Responses*, two of which focus on minority populations and are co-funded by the National Center on Minority Health and Health Disparities. The RFA solicited applications to enable rural and small urban health care systems to become platforms for research programs on underage drinking. Recognizing that adolescents may experience different pharmacological effects of alcohol, have different patterns of drinking and experience different consequences compared to adults, NIAAA is also evaluating screening and diagnosis of adolescents to determine how the criteria used for adults might be modified to allow for differences in the biology and behaviors characteristic of adolescents. In FY 2006, NIAAA convened a workshop of experts titled "AUD Diagnosis in Youth – What are the Issues?" to be followed in FY 2007 by a companion workshop on screening for AUD in Youth.

**Budget Policy:** The FY 2008 budget estimate for the Youth/Adolescence detail is \$54.5 million, unchanged from the FY 2007 Continuing Resolution. The Program plans for FY 2008, along with expected accomplishments are as follows. NIAAA has committed \$1.5 million for FY 2007 and \$1.5 million for FY 2008 to support pilot studies to establish the optimal research design to determine the short- and long-term effects of drinking on brain development given that studies indicate that adolescent drinking, and especially heavy drinking, can affect brain structure and function. In addition, NIAAA has committed \$1.5 million for FY 2007 and \$1.5 million for FY 2008 for companion studies that will focus on the role of hormones and sex differences in drinking behavior and its consequences.

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<sup>5</sup> Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. WISQARS Leading Causes of Death Reports 199-2003.

### Portrait of a Program: Alcohol and the Developing Brain

FY 2007 Level: \$3 million  
FY 2008 Level: \$6 million  
Change \$3 million

The brain continues to develop throughout adolescence (and into a person's twenties) coincident with dramatic hormonal, physiological, and behavioral changes. Adolescence is also the period of life during which many youth initiate and escalate alcohol use. Alcohol is the number one drug of choice among children and adolescents.

Research has shown that binge drinking during adolescence is associated with significant changes in brain structure and neuropsychological deficits, with implications for learning and other cognitive abilities into adulthood. Due to the potential for childhood and adolescent drinking to adversely affect brain structure and function, it is imperative to understand the effects of alcohol on the developing brain.

To address this issue, NIAAA has launched an initiative to investigate the short- and long- term effects of alcohol use on brain structure and function. One part of this initiative involves longitudinal studies to follow adolescents as they initiate and escalate their drinking. These studies will explore the effects of timing, dose, and duration of alcohol exposure to understand the extent of alcohol's effects on the developing brain and to investigate if any deleterious effects persist or resolve. A second part of this initiative focuses on the effects of sex hormones on the developing brain and how those actions interact with alcohol's effects. The impetus for this part of NIAAA's initiative are studies that show that sex differences in drinking patterns become apparent during puberty and that early drinking may create risks for alcohol problems that are sex dependent, as well as, imaging studies in both animals and humans showing sex differences in brain development during adolescence. For this part of the initiative, NIAAA will support animal studies to explore the mechanisms through which sex hormones may interact with alcohol to affect brain development, and help explain these observed differences.

## Young Adult

Compared to all other age groups, the prevalence of episodic heavy or high-risk drinking is greatest among young adults aged 18 to 24, including college, non-college, military, and civilian young adult populations. Alcohol use disorders including alcohol dependence (alcoholism), also peak during this period. While most young adults transition out of harmful drinking behaviors, a minority will continue to drink heavily into the later stages of adulthood. Of the various sub-populations of young adults, college students have received perhaps the greatest research scrutiny regarding alcohol consumption in recent years, including NIAAA's seminal report on college drinking that will be updated in FY 2007. During the first few years following high school, the heavy drinking rates of college students surpass those of their non-college peers. Research on the college-attending population has shown that some 1,700 college students between the ages of 18 and 24 die every year as a result of hazardous drinking. In addition, nearly 600,000 college students suffer unintentional injuries under the influence of alcohol, and another 700,000 are assaulted by fellow drinking students. Alcohol-related assaults include nearly 100,000 sexual assaults or date rapes.<sup>6</sup> NIAAA will continue to support research on interventions that prevent or reduce alcohol-related problems among college students.

<sup>6</sup> Hingson R, Heeren T, Winter M, Wechsler H. Magnitude of alcohol-related mortality and morbidity among U.S. college students ages 18-24: changes from 1998 to 2001. Annual Rev Public Health. 2005;26:259-79.

Researchers have noted that young adults rarely identify themselves as problem drinkers. Therefore NIAAA is supporting studies on screening and brief interventions to identify and intervene with problem drinkers in young adult populations. Several studies indicate that the non-student population of young adults is also an important target for preventive interventions, especially because these individuals may be less likely to mature out of heavy drinking patterns established during adolescence. These phenomena raise important research questions. For example, what factors allow many young adults to discontinue harmful drinking patterns, most often in the absence of formal alcoholism treatment? Why do others experience protracted alcohol problems well into their adulthood? To address these issues NIAAA has launched a new research initiative to determine the mechanisms by which individuals change their drinking behavior (see portrait). This initiative is also described in more detail in the budget policy section.

Budget Policy: The FY 2008 budget estimate for the Young Adult detail is \$149.8 million, an increase of \$0.1 million or unchanged in percentage from the FY 2007 Continuing Resolution. The Program plans for FY 2008, along with expected accomplishments are as follows. NIAAA is investing \$3 million in FY 2007 and \$5 million in FY 2008 for an initiative to determine the mechanisms of behavioral change in young adults, many of whom change their harmful drinking behavior without treatment. This investment also includes research on adults in midlife who are more likely to seek treatment for alcohol use disorders (see portrait). NIAAA will also invest \$2 million in FY 2008 to determine the mechanisms that drive the transition from controlled, voluntary alcohol use to compulsive, involuntary use (i.e., addiction). The goal of this initiative is to understand whether the specialized systems within the brain that are used in learning, memory, motivation, attention and choice can be co-opted to support addiction to alcohol and to identify the mechanisms by which alcohol acts on these systems. These two initiatives are the result of deliberations of NIAAA's Extramural Advisory Board, NIAAA's Teams and Divisions, with concurrence from NIAAA's National Advisory Council and were informed by NIAAA's Strategic Plan.

### **Portrait of a Program: Mechanisms of Behavior Change**

FY 2007 Level: \$3 million  
FY 2008 Level: \$5 million  
Change \$2 million

Data from NIAAA's NESARC study have revealed the prevalence of alcohol dependence is lower for adults during midlife than for young adults; however, midlife is the stage of the lifespan when individuals are most likely to seek treatment. Data from clinical trials comparing treatments show that the most dramatic rate of improvement occurs within the first few weeks of treatment. These results raise the question of whether treatment itself is responsible for the improvement in drinking behavior or is it the positive motivation to seek treatment that underlies a substantial part of the treatment success. Further, a substantial amount of evidence has shown that a wide array of available therapeutic approaches yields strikingly similar results, suggesting that it is not the particular technique that is responsible for change but other unspecified factors.

As a result, NIAAA treatment research is putting more emphasis on addressing the common mechanisms of change across all behavioral treatments. In FY 2007, based on the recommendations of NIAAA's Extramural Advisory Board and the National Advisory Council, the Institute supported projects in response to a RFA to investigate the underlying mechanisms that drive behavior change within the context of behavioral treatments for alcohol dependence. In FY 2008 funds will be committed to support a transdisciplinary approach that integrates neuroscientific, computational, and behavioral-social sciences in the analysis of existing data sets or studies. Future plans will emphasize the development of innovative and exploratory research.

Findings from this research will improve clinical practice both by identifying key aspects of therapy that must be present for maximum effect and by facilitating the delivery of more finely tuned individualized treatment. This research will also lay the groundwork for studies on the larger question of how health-related behavioral change is affected by social and other factors external to treatment.

### **Midlife/Senior Adult**

While the underage and young adult life stages may be viewed by some as the most problematic periods for alcohol abuse and dependence, a much more complete spectrum of alcohol-related problems and issues becomes manifested during the midlife period and beyond. At midlife, many of the pathological consequences of heavy alcohol use become most evident, and individuals with alcohol dependence are most likely to seek treatment of their alcoholism at this time. In senior adults drinking can aggravate a variety of pathological conditions including stroke, hypertension, neurodegeneration, memory loss, mood disorders, and cognitive or emotional dysfunction. Of particular importance in the senior population is the interaction of alcohol with medications. NIAAA will continue to invest in research to understand alcohol-related health problems during the midlife and senior stages. NIAAA will focus attention on mechanisms of behavioral change that includes research to identify biological factors and contextual social factors that contribute to the decisional process to change drinking behavior leading to recovery, and the factors underlying sustained recovery among those individuals who succeed in both the presence and absence of professional treatment. This initiative was also included in the section on Young Adult (for greater detail see portrait). For individuals who continue to drink heavily, damage to other tissues and organs often manifest during midlife. Evidence suggests that the mitochondrion, the so-called powerhouse organelle contained in cells of all types, may be particularly susceptible to alcohol induced damage. NIAAA will support research related to molecular targets of alcohol-related pathologies, in particular those that result from alcohol's effect on mitochondrial function. Animal models will also be used to examine

the specific contributions of alcohol to organ pathology. NIAAA is especially interested in alcohol-induced epigenetic modifications, metabolic and environmentally-induced changes in gene expression that occur in the absence of alterations in basic gene sequence, that may cause detrimental effects throughout the lifespan and contribute to tissue damage during midlife. Identification of epigenetic changes may provide targets for medications development that will complement targets derived from ongoing research to identify genes involved in alcohol dependence. Medications development continues to be a strong focus of the institute. In particular, NIAAA continues to develop the infrastructure for early Phase II human trials of multiple compounds, enabling faster determination of those that merit advancement to large, multi-site studies. In FY 2006, \$1.1 million was spent to set up early Phase 2 trials followed in FY 2007 with \$2.2 million for conducting the trial. To date, trials have focused on medications designed to help individuals reduce their alcohol consumption; however, medications that reduce the potential for drug interactions in senior adults may also emerge. We anticipate that therapeutic targets will emerge from studies on tissue damage as well. Reducing the public health burden from heavy and harmful alcohol use and improving the quality of life of individuals who suffer the consequences of heavy alcohol use is also an area of significant concern.

Budget Policy: The FY 2008 budget estimate for the Mid Life/ Senior Adult detail is \$132.7 million, an increase of \$0.1 million or unchanged in percentage from the FY 2007 Continuing Resolution. The Program plans for FY 2008 along with expected accomplishments are as follows. NIAAA has allocated \$3 million in FY 2007 and \$5 million in FY 2008 for research on mechanisms of behavioral change that includes research to identify biological factors and contextual social factors that contribute to the decisional process to change drinking behavior leading to recovery, and the factors underlying sustained recovery among those individuals who succeed in both the presence and absence of professional treatment. This activity has also been described previously Young Adult section and related portrait. NIAAA has committed \$2 million for FY 2008 for research related to molecular targets of alcohol-related pathologies, in particular those that result from alcohol's effect on mitochondrial function. NIAAA is especially interested in alcohol-induced epigenetic modifications, metabolic and environmentally-induced changes in gene expression that occur in the absence of alterations in basic gene sequence, that may cause detrimental effects throughout the lifespan and contribute to tissue damage during midlife. NIAAA has committed \$3 million to launch a new initiative, *Health Services Research to Inform a Public Health Approach to Heavy Drinking*, in FY 2008 to support research to examine organizational, managerial, and financial strategies designed to increase the effectiveness of alcohol treatment in health care settings. This initiative will also focus on access to appropriate services and coordinated care across primary care, general mental health, and specialty treatment settings throughout various stages of recovery. The innovative use of technology to improve the effectiveness of treatment will also be encouraged. The expected outcomes of this initiative are improved treatment strategies that reduce individual and public health burden from heavy alcohol use.

### Portrait of a Program: Medications Development

#### Funding levels:

FY 2007 Level: \$26.0 million

FY 2008 Level: \$28.5 million

Change \$2.5 million

While for many years, alcoholism treatment approaches relied almost exclusively on behavioral therapies, complementary efforts to develop medications for alcohol use disorders have expanded rapidly in recent years. Although several agents have been approved for use in the U.S. and other countries, these medications are highly effective with some patients but less effective with others. The results of several clinical trials indicate these drugs are primarily effective in distinct subsets of individuals. This is not surprising since alcoholism is a complex, heterogeneous disease caused by many genetic and environmental factors that differ from one drinker to another. Therefore, a diverse repertoire of medications is needed to provide effective therapy to a broader spectrum of alcohol-dependent individuals.

To identify the next generation of medications, NIAAA is testing agents that target different neurobiological substrates of alcohol dependence. These efforts will expand, and ultimately personalize, treatment options. This is encouraging news for the nearly 18 million American adults who, in any year, struggle with alcohol dependence and abuse<sup>7</sup>. Studies in animal models have produced additional targets for human studies that are now underway or planned for the near term. Agents in this category include cannabinoid CB<sub>1</sub> receptor blockers and metabotropic glutamate receptor agonists, as well as agents that target drinking mediated by stress and anxiety systems through their action on corticotropin-releasing factor, neuropeptide Y, and nociceptin receptors. To foster more efficient, predictable drug development, NIAAA will validate preclinical models to screen novel compounds and establish a network of sites to conduct early human trials. NIAAA will continue to encourage the pharmaceutical industry to screen proprietary compounds in the preclinical models and, when results are positive, test them in the early human trials network. These efforts in medications development represent an integration of endeavors among NIAAA's intramural and extramural programs and the pharmaceutical industry in treating the complex nature of alcohol dependence and in overcoming the challenges of medications development, as well as set the course for individualized treatment.

### NIAAA Intramural Research Program

The NIAAA intramural research program is organizationally located in the Division of Intramural Clinical and Biological Research (DICBR). The mission of the DICBR is to: 1) plan, develop, and conduct basic and applied research into the causes and consequences of alcohol abuse and alcoholism; (2) operate a clinical facility in which to conduct research on alcohol-related disease and methods of improving treatment for these conditions; (3) provide training in biological, epidemiological, and clinical research on alcohol health effects at multiple levels of inquiry; and (4) collaborate with academic and other outside researchers in the study of alcohol and health. The scope of research in the DICBR is broad, ranging from neuroimaging to large-scale surveys, and from studies on individual molecules within cells to clinical trials. For example, to provide a better understanding of the scope and nature of alcohol dependence in the U.S. population and its relationship to other psychiatric disorders, the Laboratory of Epidemiology and Biometry conducts comprehensive national surveys on the prevalence, family history, and lifetime development of alcohol use disorders and comorbid diseases (National Epidemiologic Survey on Alcohol-Related Conditions, NESARC). Its findings, available in a

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<sup>7</sup> Grant BF, Dawson DA, Stinson FS, Chou SP, Dufour MC, and Pickering RP. Drug and Alcohol Dependence 2004. 74: 223-234.

public database, are a major resource for research studies nationwide and led, in part, to NIAAA's adoption of a lifespan approach for studying alcohol dependence. A central set of questions that DICBR's research seeks to answer is how the interplay between genetic and environmental factors makes an individual more or less vulnerable to alcohol's effects, including the risk for alcohol dependence and tissue and organ damage, and, what opportunities exist for intervention. This line of questioning has led to investigation in a number of research domains. For example, research in the Laboratory of Neurogenetics relates individuals' genetic composition to complex behaviors, to determine what genes play a role in the development of alcohol dependence. Identification of these genes will lead to better understanding of mechanisms of vulnerability and gene-environment interactions, new molecular diagnostic markers to individualize treatment, and new molecular targets for intervention. Understanding alcohol addiction in all its complexity also requires a better understanding of behaviors linked to dependence, including acute alcohol intoxication, alcohol seeking, reward, and compulsive drinking. Research groups within DICBR are using a variety of approaches to uncover the mechanisms, molecules, and processes that underlie these behaviors. For example, the Section on Neuroendocrinology is focusing on endocannabinoids, the naturally occurring substances in the brain that act on the same receptors as the active ingredients of marijuana, having previously discovered that they play a role in regulating appetite for alcohol. Understanding the reinforcing effects of drugs of abuse, including alcohol is a central focus of the Laboratory of Neuroimaging which uses brain imaging to characterize the molecular changes underlying addiction and their relationship to brain function, treatment, and vulnerability. The goal is an understanding of the neural basis of addiction-related brain functions such as decision-making, goal-directed behavior, habit formation, and habitual behavior. DICBR laboratories also study how alcohol leads to cell and tissue damage both in the brain and in other organs. The Section on Liver Biology is investigating what factors contribute to liver injury and repair and what factors are protective in some individuals in the presence of agents, such as alcohol or hepatitis viral proteins, that cause liver disease in others. To ensure that DICBR's research moves to practice, the Laboratory of Clinical and Translational Studies uses animal models of alcoholism to identify and validate novel molecular targets, which it then tests in clinical trials using medications that act on such targets.

**Budget Policy:** The 2008 budget estimate for the Intramural Research Program is \$45.0 million, a decrease of \$0.3 million or 0.7 percent from the 2007 Continuing Resolution. The Program plans for 2008, along with expected accomplishments, are as follows: NIAAA will continue support for the ten Laboratories within DICBR, as well as the Office of Laboratory Animal Science and the Office of Research and Information Technology.

## **Research Management and Support**

NIAAA RMS activities provide administrative, budgetary, logistical, and scientific support in the review, award, and monitoring of research grants, training awards and research and development contracts. RMS functions also encompass strategic planning, coordination, and evaluation of the Institute's programs, regulatory compliance, international coordination, and liaison with other Federal agencies, Congress, and the public. The Institute currently oversees nearly 900 research grants and centers, as well as 25 research and support contracts. More than 550 NIAAA research projects involve human subjects, including 121 clinical trials.

Budget Policy: The 2008 budget estimate for the Research Management and Support detail is \$24.9 million, an increase of \$0.2 million or 1 percent from the 2007 Continuing Resolution. The Program plans for 2008, along with expected accomplishments are as follows: to satisfactorily administer the review, processing, award, and scientific performance appraisal of approximately 900 research grants, 115 training awards, and 25 contracts in alcohol abuse and alcoholism program areas.

**NATIONAL INSTITUTES OF HEALTH  
National Institute on Alcohol Abuse and Alcoholism**

**Budget Authority by Object**

|                                                                             | FY 2007<br>Continuing<br>Resolution          | FY 2008<br>Estimate         | Increase or<br>Decrease         |
|-----------------------------------------------------------------------------|----------------------------------------------|-----------------------------|---------------------------------|
| Total compensable workyears:                                                |                                              |                             |                                 |
| Full-time employment                                                        | 227                                          | 230                         | 3                               |
| Full-time equivalent of overtime & holiday hours                            | 1                                            | 1                           | 0                               |
| Average ES salary                                                           | \$166,290                                    | \$169,615                   | \$3,325                         |
| Average GM/GS grade                                                         | 12.4                                         | 12.5                        | 0.1                             |
| Average GM/GS salary                                                        | \$91,306                                     | \$93,132                    | \$1,826                         |
| Average salary, grade established by act of<br>July 1, 1944 (42 U.S.C. 207) | \$87,266                                     | \$89,011                    | \$1,745                         |
| Average salary of ungraded positions                                        | 94,319                                       | 96,205                      | 1,886                           |
| <b>OBJECT CLASSES</b>                                                       | <b>FY 2007<br/>Continuing<br/>Resolution</b> | <b>FY 2008<br/>Estimate</b> | <b>Increase or<br/>Decrease</b> |
| Personnel Compensation:                                                     |                                              |                             |                                 |
| 11.1 Full-Time Permanent                                                    | \$15,098,000                                 | \$16,007,000                | \$909,000                       |
| 11.3 Other than Full-Time Permanent                                         | 6,624,000                                    | 6,936,000                   | 312,000                         |
| 11.5 Other Personnel Compensation                                           | 400,000                                      | 423,000                     | 23,000                          |
| 11.7 Military Personnel                                                     | 676,000                                      | 709,000                     | 33,000                          |
| 11.8 Special Personnel Services Payments                                    | 2,767,000                                    | 2,883,000                   | 116,000                         |
| <b>Total, Personnel Compensation</b>                                        | <b>25,565,000</b>                            | <b>26,958,000</b>           | <b>1,393,000</b>                |
| 12.0 Personnel Benefits                                                     | 5,797,000                                    | 6,115,000                   | 318,000                         |
| 12.2 Military Personnel Benefits                                            | 497,000                                      | 521,000                     | 24,000                          |
| 13.0 Benefits for Former Personnel                                          | 0                                            | 0                           | 0                               |
| <b>Subtotal, Pay Costs</b>                                                  | <b>31,859,000</b>                            | <b>33,594,000</b>           | <b>1,735,000</b>                |
| 21.0 Travel & Transportation of Persons                                     | 787,000                                      | 743,000                     | -44,000                         |
| 22.0 Transportation of Things                                               | 82,000                                       | 77,000                      | -5,000                          |
| 23.1 Rental Payments to GSA                                                 | 1,000                                        | 1,000                       | 0                               |
| 23.2 Rental Payments to Others                                              | 23,000                                       | 22,000                      | -1,000                          |
| 23.3 Communications, Utilities &<br>Miscellaneous Charges                   | 1,215,000                                    | 1,161,000                   | -54,000                         |
| 24.0 Printing & Reproduction                                                | 169,000                                      | 156,000                     | -13,000                         |
| 25.1 Consulting Services                                                    | 492,000                                      | 461,000                     | -31,000                         |
| 25.2 Other Services                                                         | 2,797,000                                    | 2,651,000                   | -146,000                        |
| 25.3 Purchase of Goods & Services from<br>Government Accounts               | 47,225,000                                   | 46,406,000                  | -819,000                        |
| 25.4 Operation & Maintenance of Facilities                                  | 1,485,000                                    | 1,419,000                   | -66,000                         |
| 25.5 Research & Development Contracts                                       | 12,135,000                                   | 11,774,000                  | -361,000                        |
| 25.6 Medical Care                                                           | 438,000                                      | 420,000                     | -18,000                         |
| 25.7 Operation & Maintenance of Equipment                                   | 1,068,000                                    | 1,010,000                   | -58,000                         |
| 25.8 Subsistence & Support of Persons                                       | 0                                            | 0                           | 0                               |
| <b>25.0 Subtotal, Other Contractual Services</b>                            | <b>65,640,000</b>                            | <b>64,141,000</b>           | <b>-1,499,000</b>               |
| 26.0 Supplies & Materials                                                   | 2,520,000                                    | 2,411,000                   | -109,000                        |
| 31.0 Equipment                                                              | 1,459,000                                    | 1,379,000                   | -80,000                         |
| 32.0 Land and Structures                                                    | 0                                            | 0                           | 0                               |
| 33.0 Investments & Loans                                                    | 0                                            | 0                           | 0                               |
| 41.0 Grants, Subsidies & Contributions                                      | 326,742,000                                  | 327,075,000                 | 333,000                         |
| 42.0 Insurance Claims & Indemnities                                         | 0                                            | 0                           | 0                               |
| 43.0 Interest & Dividends                                                   | 0                                            | 0                           | 0                               |
| 44.0 Refunds                                                                | 0                                            | 0                           | 0                               |
| <b>Subtotal, Non-Pay Costs</b>                                              | <b>398,638,000</b>                           | <b>397,166,000</b>          | <b>-1,472,000</b>               |
| <b>NIH Roadmap for Medical Research</b>                                     | <b>5,231,000</b>                             | <b>5,745,000</b>            | <b>514,000</b>                  |
| <b>Total Budget Authority by Object</b>                                     | <b>435,728,000</b>                           | <b>436,505,000</b>          | <b>777,000</b>                  |

Includes FTEs which are reimbursed from the NIH Roadmap for Medical Research

**NATIONAL INSTITUTES OF HEALTH**  
**National Institute on Alcohol Abuse and Alcoholism**

**Salaries and Expenses**

| OBJECT CLASSES                                                | FY 2007<br>Continuing<br>Resolution | FY 2008<br>Estimate | Increase or<br>Decrease |
|---------------------------------------------------------------|-------------------------------------|---------------------|-------------------------|
| <b>Personnel Compensation:</b>                                |                                     |                     |                         |
| Full-Time Permanent (11.1)                                    | \$15,098,000                        | \$16,007,000        | \$909,000               |
| Other Than Full-Time Permanent (11.3)                         | 6,624,000                           | 6,936,000           | 312,000                 |
| Other Personnel Compensation (11.5)                           | 400,000                             | 423,000             | 23,000                  |
| Military Personnel (11.7)                                     | 676,000                             | 709,000             | 33,000                  |
| Special Personnel Services Payments (11.8)                    | 2,767,000                           | 2,883,000           | 116,000                 |
| <b>Total Personnel Compensation (11.9)</b>                    | <b>25,565,000</b>                   | <b>26,958,000</b>   | <b>1,393,000</b>        |
| Civilian Personnel Benefits (12.1)                            | 5,797,000                           | 6,115,000           | 318,000                 |
| Military Personnel Benefits (12.2)                            | 497,000                             | 521,000             | 24,000                  |
| Benefits to Former Personnel (13.0)                           | 0                                   | 0                   | 0                       |
| <b>Subtotal, Pay Costs</b>                                    | <b>31,859,000</b>                   | <b>33,594,000</b>   | <b>1,735,000</b>        |
| Travel (21.0)                                                 | 787,000                             | 743,000             | -44,000                 |
| Transportation of Things (22.0)                               | 82,000                              | 77,000              | -5,000                  |
| Rental Payments to Others (23.2)                              | 23,000                              | 22,000              | -1,000                  |
| Communications, Utilities and<br>Miscellaneous Charges (23.3) | 1,215,000                           | 1,161,000           | -54,000                 |
| Printing and Reproduction (24.0)                              | 169,000                             | 156,000             | -13,000                 |
| <b>Other Contractual Services:</b>                            |                                     |                     |                         |
| Advisory and Assistance Services (25.1)                       | 492,000                             | 461,000             | -31,000                 |
| Other Services (25.2)                                         | 2,797,000                           | 2,651,000           | -146,000                |
| Purchases from Govt. Accounts (25.3)                          | 19,820,000                          | 18,575,000          | -1,245,000              |
| Operation & Maintenance of Facilities (25.4)                  | 1,485,000                           | 1,419,000           | -66,000                 |
| Operation & Maintenance of Equipment (25.7)                   | 1,068,000                           | 1,010,000           | -58,000                 |
| Subsistence & Support of Persons (25.8)                       | 0                                   | 0                   | 0                       |
| <b>Subtotal Other Contractual Services</b>                    | <b>25,662,000</b>                   | <b>24,116,000</b>   | <b>-1,546,000</b>       |
| Supplies and Materials (26.0)                                 | 2,517,000                           | 2,408,000           | -109,000                |
| <b>Subtotal, Non-Pay Costs</b>                                | <b>30,455,000</b>                   | <b>28,683,000</b>   | <b>-1,772,000</b>       |
| <b>Total, Administrative Costs</b>                            | <b>62,314,000</b>                   | <b>62,277,000</b>   | <b>-37,000</b>          |

**NATIONAL INSTITUTES OF HEALTH  
National Institute on Alcohol Abuse and Alcoholism**

**Authorizing Legislation**

|                                                       |                       | FY 2007                   |                          | FY 2008                   |                 |
|-------------------------------------------------------|-----------------------|---------------------------|--------------------------|---------------------------|-----------------|
| PHS Act/<br>Other Citation                            | U.S. Code<br>Citation | 2007 Amount<br>Authorized | Continuing<br>Resolution | 2008 Amount<br>Authorized | Budget Estimate |
| Research and Investigation                            | Section 301           | P.L. 109-482              | Indefinite               | Indefinite                | \$436,505,000   |
| National Institute on Alcohol Abuse<br>and Alcoholism | Section 402(a)        | P.L. 109-482              |                          |                           |                 |
| Total, Budget Authority                               |                       | 435,728,000               |                          | 436,505,000               |                 |

**NATIONAL INSTITUTES OF HEALTH**  
**National Institute on Alcohol Abuse and Alcoholism**

**Appropriations History**

| Fiscal Year | Budget Estimate to Congress | House Allowance | Senate Allowance | Appropriation <u>1/</u> |
|-------------|-----------------------------|-----------------|------------------|-------------------------|
| 1999        | 229,551,000 <u>2/ 3/</u>    | 248,778,000     | 259,747,000      | 259,747,000             |
| Rescission  |                             |                 |                  | -172,000                |
| 2000        | 248,916,000 <u>2/</u>       | 265,497,000     | 265,497,000      | 29,393,500              |
| Rescission  |                             |                 |                  | -1,566,000              |
| 2001        | 308,661,000 <u>2/</u>       | 349,216,000     | 336,848,000      | 340,678,000             |
| Rescission  |                             |                 |                  | -154,000                |
| 2002        | 381,966,000                 | 379,026,000     | 390,761,000      | 384,238,000             |
| Rescission  |                             |                 |                  | -623,000                |
| 2003        | 416,773,000                 | 401,933,000     | 418,773,000      | 418,773,000             |
| Rescission  |                             |                 |                  | -2,722,000              |
| 2004        | 430,121,000                 | 430,121,000     | 431,521,000      | 431,471,000             |
| Rescission  |                             |                 |                  | -2,802,000              |
| 2005        | 441,911,000                 | 441,911,000     | 444,900,000      | 441,911,000             |
| Rescission  |                             |                 |                  | -3,634,000              |
| 2006        | 440,333,000                 | 440,333,000     | 452,271,000      | 440,333,000             |
| Rescission  |                             |                 |                  | -4,403,000              |
| 2007        | 433,318,000                 | 433,318,000     | 433,318,000      | 435,930,000             |
| 2008        | 436,505,000                 |                 |                  |                         |

1/ Reflects enacted supplementals, rescissions, and reappropriations.

2/ Excludes funds for HIV/AIDS research activities consolidated in the NIH Office of AIDS Research

3/ Reflects a decrease of \$692,000 for the budget amendment for Bioterrorism

**NATIONAL INSTITUTES OF HEALTH**  
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**Details of Full-Time Equivalent Employment (FTEs)**

| OFFICE/DIVISION                                                                                                          | FY 2006<br>Actual   | FY 2007<br>Continuing<br>Resolution | FY 2008<br>Estimate |
|--------------------------------------------------------------------------------------------------------------------------|---------------------|-------------------------------------|---------------------|
| Office of the Director                                                                                                   | 12                  | 14                                  | 14                  |
| Office of Extramural Activities                                                                                          | 13                  | 13                                  | 13                  |
| Office of Science Policy and Communications                                                                              | 20                  | 14                                  | 14                  |
| Office of Resource Management                                                                                            | 26                  | 28                                  | 28                  |
| Division of Epidemiology and<br>Prevention Research                                                                      | 10                  | 11                                  | 11                  |
| Division of Metabolism and<br>Health Effects                                                                             | 9                   | 9                                   | 10                  |
| Division of Neuroscience and<br>Behavior                                                                                 | 9                   | 10                                  | 11                  |
| Division of Treatment and<br>Recovery Research                                                                           | 9                   | 10                                  | 11                  |
| Division of Intramural Clinical and<br>Biological Research                                                               | 117                 | 118                                 | 118                 |
| Total                                                                                                                    | 225                 | 227                                 | 230                 |
| Includes FTEs which are reimbursed from the NIH Roadmap for Medical Research<br>FTEs supported by funds from Cooperative |                     |                                     |                     |
|                                                                                                                          | (0)                 | (0)                                 | (0)                 |
| FISCAL YEAR                                                                                                              | Average GM/GS Grade |                                     |                     |
| 2004                                                                                                                     | 11.7                |                                     |                     |
| 2005                                                                                                                     | 12.1                |                                     |                     |
| 2006                                                                                                                     | 12.1                |                                     |                     |
| 2007                                                                                                                     | 12.4                |                                     |                     |
| 2008                                                                                                                     | 12.5                |                                     |                     |

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**Detail of Positions**

| GRADE                                                         | FY 2006<br>Actual | FY 2007<br>Continuing<br>Resolution | FY 2008<br>Estimate |
|---------------------------------------------------------------|-------------------|-------------------------------------|---------------------|
| Total, ES Positions                                           | 2                 | 2                                   | 2                   |
| Total, ES Salary                                              | \$ 326,057        | \$ 332,578                          | \$ 339,230          |
| GM/GS-15                                                      | 19                | 19                                  | 20                  |
| GM/GS-14                                                      | 36                | 37                                  | 38                  |
| GM/GS-13                                                      | 37                | 38                                  | 39                  |
| GS-12                                                         | 29                | 30                                  | 30                  |
| GS-11                                                         | 7                 | 7                                   | 7                   |
| GS-10                                                         | 2                 | 2                                   | 2                   |
| GS-9                                                          | 9                 | 9                                   | 9                   |
| GS-8                                                          | 6                 | 6                                   | 6                   |
| GS-7                                                          | 3                 | 3                                   | 3                   |
| GS-6                                                          | 0                 | 0                                   | 0                   |
| GS-5                                                          | 2                 | 2                                   | 2                   |
| GS-4                                                          | 0                 | 0                                   | 0                   |
| GS-3                                                          | 0                 | 0                                   | 0                   |
| GS-2                                                          | 0                 | 0                                   | 0                   |
| GS-1                                                          | 0                 | 0                                   | 0                   |
| Subtotal                                                      | 150               | 153                                 | 156                 |
| Grades established by Act of<br>July 1, 1944 (42 U.S.C. 207): |                   |                                     |                     |
| Assistant Surgeon General                                     | 0                 | 0                                   | 0                   |
| Director Grade                                                | 3                 | 3                                   | 3                   |
| Senior Grade                                                  | 3                 | 3                                   | 3                   |
| Full Grade                                                    | 0                 | 0                                   | 0                   |
| Senior Assistant Grade                                        | 0                 | 0                                   | 0                   |
| Assistant Grade                                               | 0                 | 0                                   | 0                   |
| Subtotal                                                      | 6                 | 6                                   | 6                   |
| Ungraded                                                      | 73                | 73                                  | 73                  |
| Total permanent positions                                     | 160               | 163                                 | 166                 |
| Total positions, end of year                                  | 231               | 233                                 | 236                 |
| Total full-time equivalent (FTE)<br>employment, end of year   | 225               | 227                                 | 230                 |
| Average ES salary                                             | \$163,029         | \$166,290                           | \$169,615           |
| Average GM/GS grade                                           | 12.4              | 12.4                                | 12.5                |
| Average GM/GS salary                                          | \$89,516          | \$91,306                            | \$93,132            |

Includes FTEs which are reimbursed from the NIH Roadmap for Medical Research.

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**New Positions Requested**

|                                      | FY 2008 |        |               |
|--------------------------------------|---------|--------|---------------|
|                                      | Grade   | Number | Annual Salary |
| Health Scientist Administrator (HSA) | GS-13   | 3      | \$80,000      |
| Total Requested                      |         | 3      |               |