

Department of Health and Human Services
Public Health Services
Grant Progress Report

Review Group	Type	Activity	Grant Number
Total Project Period			
From:		Through:	
Requested Budget Period:			
From:		Through:	

1. TITLE OF PROJECT

2a. PRINCIPAL INVESTIGATOR OR PROGRAM DIRECTOR
(Name and address, street, city, state, zip code)

3. APPLICANT ORGANIZATION
(Name and address, street, city, state, zip code)

2b. E-MAIL ADDRESS

4. ENTITY IDENTIFICATION NUMBER

2c. DEPARTMENT, SERVICE, LABORATORY, OR EQUIVALENT

5. TITLE AND ADDRESS OF ADMINISTRATIVE OFFICIAL

2d. MAJOR SUBDIVISION

E-MAIL:

6. HUMAN SUBJECTS

No Yes
6a. Research Exempt
 No Yes

6b. Human Subjects Assurance No.

If Exempt ("Yes" in 6a):
Exemption No.

6c. NIH-Defined Phase III
Clinical Trial No Yes

If Not Exempt ("No" in 6a):
IRB approval date

Full IRB **or**
 Expedited Review

7. VERTEBRATE ANIMALS

No Yes

7a. If "Yes," IACUC approval Date

7b. Animal Welfare Assurance No.

8. COSTS REQUESTED FOR NEXT BUDGET PERIOD

8a. DIRECT \$

8b. TOTAL \$

9. INVENTIONS AND PATENTS

No Yes If "Yes," Previously Reported
 Not Previously Reported

10. PERFORMANCE SITE(S) (*Organizations and addresses*)

11a. PRINCIPAL INVESTIGATOR
OR PROGRAM DIRECTOR (*Item 2a*)

TEL
FAX

11b. ADMINISTRATIVE OFFICIAL
NAME (*Item 5*)

TEL
FAX

11c. NAME AND TITLE OF OFFICIAL SIGNING FOR APPLICANT
ORGANIZATION (*Item 14*)

NAME
TITLE
TEL
E-MAIL

FAX

12. Corrections to Page 1 Face Page

13. PRINCIPAL INVESTIGATOR/PROGRAM DIRECTOR ASSURANCE: I certify that the statements herein are true, complete and accurate to the best of my knowledge. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. I agree to accept responsibility for the scientific conduct of the project and to provide the required progress reports if a grant is awarded as a result of this application.

SIGNATURE OF PI/PD NAMED IN 2a.
(*In ink. "Per" signature not acceptable.*)

DATE

14. APPLICANT ORGANIZATION CERTIFICATION AND ACCEPTANCE: I certify that the statements herein are true, complete and accurate to the best of my knowledge, and accept the obligation to comply with Public Health Services terms and conditions if a grant is awarded as a result of this application. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties.

SIGNATURE OF OFFICIAL NAMED IN
11c. (*In ink. "Per" signature not acceptable.*)

DATE

Principal Investigator/Program Director (Last, first, middle):

BUDGET JUSTIFICATION	GRANT NUMBER
-----------------------------	---------------------

Provide a detailed budget justification for those line items and amounts that represent a significant change from that previously recommended. Use continuation pages if necessary.

CURRENT BUDGET PERIOD	FROM	THROUGH
------------------------------	------	---------

Explain any estimated unobligated balance (including prior year carryover) that is greater than 25% of the current year's total budget.

Principal Investigator/Program Director (Last, first, middle):

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel in the order listed for Form Page 2.
Follow this format for each person (See attached sample). **DO NOT EXCEED FOUR PAGES.**

NAME		POSITION TITLE		
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>				
INSTITUTION AND LOCATION		DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY

NOTE: The Biographical Sketch may not exceed four pages. Items A and B (together) may not exceed two of the four-page limit. Follow the formats and instructions on the attached sample.

A. Positions and Honors. List in chronological order previous positions, concluding with your present position. List any honors. Include present membership on any Federal Government public advisory committee.

B. Selected peer-reviewed publications (in chronological order). Do not include publications submitted or in preparation.

C. Research Support. List selected ongoing or completed (during the last three years) research projects (federal and non-federal support). Begin with the projects that are most relevant to the research proposed in this application. Briefly indicate the overall goals of the projects and your role (e.g. PI, Co-Investigator, Consultant) in the research project. Do not list award amounts or percent effort in projects.

Principal Investigator/Program Director (Last, first, middle):

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel in the order listed for Form Page 2.
Follow the sample format on next page for each person. **DO NOT EXCEED FOUR PAGES.**

NAME	POSITION TITLE
------	----------------

EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel in the order listed for Form Page 2.
Follow sample format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME		POSITION TITLE	
Carlucci, Joseph Louis		Professor of Microbiology	
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Stanford University	Ph.D.	1964	Infectious Diseases
Harvard Medical School	M.D.	1972	Medicine/Parasitology

A. Positions and Honors.**Positions and Employment**

1969-1971 Medical Residency, Internal Medicine, Harvard Medical School
 1971-1973 EIS Officer, Hospital Infection Section, Bacterial Diseases Branch, CDC, Atlanta, GA
 1973-1974 Instructor and Fellow in Medicine, Hematology, Massachusetts General Hospital, Boston, MA
 1974-1975 Instructor in Infectious Diseases, Massachusetts General Hospital, Boston, MA
 1978- Senior Associate in Infectious Diseases, Children's Hospital, Boston, MA
 1978-1984 Assistant Professor of Pediatrics, Harvard Medical School
 1985-1998 Chief, Hemostasis Laboratory, Children's Hospital, Boston, MA
 1993- Professor of Pediatrics, Harvard Medical School, Boston, MA
 1998- Professor, Dept. of Infectious Diseases, Harvard School of Public Health

Other Experience and Professional Memberships

1972-1973 Acting Chief, National Mucosal Infections Study
 1975-2000 Director of Infectious Diseases Laboratory
 1975-present Hospital Epidemiologist (Medical Director Infection Control 2000-present), Children's Hospital, Boston
 1981-1982 President, Society of Hospital Epidemiologists of America
 1988 Member, Society for Pediatric Research
 1989-present Medical Director Quality Assurance, Children's Hospital, Boston, MA
 1991-1993 Director, American Society for Microbiology, Division F
 1991-1997 Hospital Infection Control Practices Advisory Committee, Centers for Disease Control
 1998-present Vice-Chair for Health Outcomes, Dept. of Medicine, Children's Hospital
 1998-2001 Steering Committee, NACHRI/CDC Pediatric Prevention Network

Honors

1982 SERC Advanced Research Scholarship, Infectious Disease Society of America
 2001 Anthony Steinway Award for Excellence in Teaching (Children's Hospital)

B. Selected peer-reviewed publications (in chronological order).

(Publications selected from 133 peer-reviewed publications)

1. Luciani JM, Casper J, Goodman BF, Shaw CM, Carlucci JL. Prevention of respiratory virus infections through compliance with frequent hand-washing routines. *N Engl J Med* 1988 ;318:389-394.

2. Gussmann J, Pratt R, Sideway DG, Sinclair JM, Emmerson MF, Carlucci JL. Coagulase-negative staphylococcal bacteremia in the changing neonatal intensive care unit population. Is there an epidemic? *JAMA*. 1988;158:1548-1552.
3. Gussmann J, Carlucci JL, McGovern JE, Jr., Methodologic issues in nursing home epidemiology. *Rev Infect Dis* 1989;11:1119-1141.
4. Gussmann J, Emmerson MF, Smyth NE, Platt RI, Sidebottom DG, Carlucci JL. Early hospital release and antibiotic usage with nosocomial staphylococcal bacteremia in two neonatal intensive care unit populations. *Amer J Dis Child* 1991;149:325-339.
5. Murphy JA, Black RW, Schroeder LC, Weissman ST, Gussman JM, Carlucci JL, Short CJ. Quality of care for children with asthma: the role of social factors and practice setting. *Pediatrics* 1996;98:379-84.
6. Gussmann J, Carlucci JL, McGovern JE, Jr. Incidence of *Staphylococcus epidermidis* catheter-related bacteremia by infusions. *J Infect Dis* 1996;172:320-4.
7. Carlucci JL, Huskins WC. Control of nosocomial antimicrobial-resistant bacteria A strategic priority for hospitals worldwide. *Clin Infect Dis* 1997;S139-S145.
8. Corning WC, Saylor BM, O'Steen C, Gulapagos L, O'Reilly EJ, Carlucci JL. Hospital infection prevention and control: A model for improving the quality of hospital care in low income countries. *Infect Control Hosp Epi*. 1999;13:123-35.
9. Handler CJ, Marriott B, Clearwater PT, Carlucci JL. Quality of care at a children's hospital: the child's perspective. *Arch Pediatr Adolesc Med*. 1999;143:1120-7.
10. McKinney D, Poulet KL, Wong Y, Murphy V, Ulright M, Dorling G, Long JC, Carlucci JL, Piper GB. Protective vaccine for *Staphylococcus aureus*. *Science* 1999;214:1421-7.
11. Gulazzii L, Kispert ZT, Carlucci JL, Corning WC. Risk-adjusted mortality rates in surgery: a model for outcome measurement in hospitals developing new quality improvement programs. *J Hosp Infect* 2000;24:33-42.
12. Huebner J, Quaas A, Krueger WA, Carlucci JL, Pier GB. Prophylactic and therapeutic efficacy of antibodies to a capsular polysaccharide shared among vancomycin-sensitive and resistant enterococci. *Infect Immun* 2000; 68:4631-6.
13. Levitan O, Sissy RB, Kenney J, Buchwald E, Maccharone AB, Carlucci JL. Enhancement of neonatal innate defense: Effects of adding a recombinant fragment of bactericidal protein on growth and tumor necrosis factor-inducing activity of gram-positive bacteria tested in vivo. *Immun* 2000;38:3120-25.
14. Garletti JS, Harrison MC, Collin PA, Miller CD, Otter D, Shaker C, Wren M, Carlucci JL, Makato DG. A randomized trial comparing iodine to a alcohol impregnated dressing for prevention of catheter infections in neonates. *Pediatrics*. 2001;127:1461-6.
15. Corning WC, Barillo K, Festival MR, Lingonberry S, Lumbar P, Peters A, Pursons M, Carlucci JL, Tella JE. A national survey of practice variation in the use of antibiotic prophylaxis in heart surgery. *J Hosp Infect*. 2001;33:121-5.
16. Hoboken S, Peterson D, Gravelly L, Carlucci JL. Compliance with hand hygiene practice in pediatric intensive care. *Pediatric Crit Care Med*. 2001;12:211-214.
17. Hasker S, Pittoui D, Gray L, Zaruccii A, Potter G, Seemore MH, Carlucci JL. Interventional study to evaluate the impact of an antibiotic-infused hand gel in improving hand hygiene compliance. *Pediatr Infect Dis J*. Accepted for publication.
18. Lander C, Summers R, Murray S, Hummer CJ, Carlucci JL. Pediatrics: Is hospital food more nutritional than mom's cooking? *Pediatrics* 2001;11: 140-145.

C. Research Support

Ongoing Research Support

R01 HS35793 Carlucci (PI)

9/01/99-8/30/04

AHRQ

Reducing Antimicrobial Resistance in Low-Income Communities: A Randomized Trial.

This study is a randomized trial of interventions to reduce antimicrobial usage and resistance in low-income communities.

Role: PI

Ongoing Research Support (cont.)

2 R01 AI12345-05 Carlucci (PI) 4/01/01-3/31/06
NIH/NIAID
Bacteriology and Mycology Study of ICU Patients at Risk for Antimicrobial Resistant Bacterial Infections.
The study will perform clinical trials of interventions to reduce antimicrobial resistant infections.
Role: PI

R01- AI24680-04 Peterson (PI) 3/01/01-2/28/06
NIH/NIAID
Virulence and Immunity to Staphylococci.
This study investigates the production of polysaccharide by *Staphylococcus aureus* and its role in virulence as measured in animal models of infection and its ability to function as a target for protective antibody.
Role: Paid consultant.

2 R01 HL 00000-13 Anderson (PI) 3/01/01-2/28/06
NIH/NHLBI
Chloride and Sodium Transport in Airway Epithelial Cells
The major goals of this project are to define the biochemistry of chloride and sodium transport in airway epithelial cells and clone the gene(s) involved in transport.
Role: Co-Investigator

5 R01 HL 00000-07 Baker (PI) 4/1/01 – 3/31/04
NIH/NHLBI
Ion Transport in Lungs
The major goal of this project is to study chloride and sodium transport in normal and diseased lungs.
Role: Co-Investigator

1 R01 AI12826-01 Hoffman (PI) 9/28/01-9/27/03
NIH/NIAID
Intermountain Child Health Services Research Consortium
This consortium will seek to build pediatric health services research capacity and training in the Intermountain Region.
Role: Co-Investigator

Completed Research Support

5 RO1 AI10011-05 Herman (PI) 10/01/99 – 11/30/01
NIH/NIAID
Evaluating Quality Improvement Strategies (EQUIS)
The goal of this study was to evaluate quality improvement and collaborative learning to improve asthma care in office-based pediatrics.
Role: Co-Investigator

5 R01 AI098765 Spielman (PI) 7/01/96 -6/30/01
NIH/NIAID
Epidemiology of Emerging Infections #1 T32 AI07654
The goal of this project was to study emerging infections in high risk populations who are treated in emergency room situations.
Role: Co-Investigator

Principal Investigator/Program Director (Last, first, middle):

PROGRESS REPORT SUMMARY	GRANT NUMBER
--------------------------------	--------------

PERIOD COVERED BY THIS REPORT		
PRINCIPAL INVESTIGATOR OR PROGRAM DIRECTOR	FROM	THROUGH

APPLICANT ORGANIZATION

TITLE OF PROJECT (Repeat title shown in Item 1 on first page)

A. Human Subjects (Complete Item 6 on the Face Page)

Involvement of Human Subjects No Change Since Previous Submission Change

B. Vertebrate Animals (Complete Item 7 on the Face Page)

Use of Vertebrate Animals No Change Since Previous Submission Change

SEE PHS 2590 INSTRUCTIONS.

WOMEN AND MINORITY INCLUSION: See PHS 398 Instructions. Use Inclusion Enrollment Report Format Page and, if necessary, Targeted/Planned Enrollment Format Page.

CHECKLIST**1. PROGRAM INCOME (See instructions.)**

All applications must indicate whether program income is anticipated during the period(s) for which grant support is requested. If program income is anticipated, use the format below to reflect the amount and source(s).

Budget Period	Anticipated Amount	Source(s)

2. ASSURANCES/CERTIFICATIONS (See instructions.)

The following assurances/certifications are made and verified by the signature of the Official Signing for Applicant Organization on the Face Page of the application. Descriptions of individual assurances/ certifications are provided in Section III of the PHS 398. If unable to certify compliance, where applicable, provide an explanation and place it after this page.

•Human Subjects •Research Using Human Embryonic Stem Cells •Research on Transplantation of Human Fetal Tissue •Women and Minority Inclusion Policy •Inclusion of Children Policy •Vertebrate Animals

•Debarment and Suspension •Drug- Free Workplace (*applicable to new [Type 1] or revised [Type 1] applications only*); •Lobbying •Non-Delinquency on Federal Debt •Research Misconduct •Civil Rights (Form HHS 441 or HHS 690); •Handicapped Individuals (Form HHS 641 or HHS 690) •Sex Discrimination (Form HHS 639-A or HHS 690) •Age Discrimination (Form HHS 680 or HHS 690); •Recombinant DNA and Human Gene Transfer Research •Financial Conflict of Interest (except Phase I SBIR/STTR) •STTR ONLY: Certification of Research Institution Participation.

3. FACILITIES AND ADMINISTRATIVE (F&A) COSTS

Indicate the applicant organization's most recent F&A cost rate established with the appropriate DHHS Regional Office, or, in the case of for-profit organizations, the rate established with the appropriate PHS Agency Cost Advisory Office.

F&A costs will **not** be paid on construction grants, grants to Federal organizations, grants to individuals, and conference grants. Follow any additional instructions provided for Research Career Awards, Institutional National Research Service Awards, Small Business Innovation Research/Small Business Technology Transfer Grants, foreign grants, and specialized grant applications.

DHHS Agreement dated: _____ No Facilities and Administrative Costs Requested.

No DHHS Agreement, but rate established with _____ Date _____

CALCULATION*

Entire proposed budget period: Amount of base \$ _____ x Rate applied _____ % = F&A costs \$ _____
Add to total direct costs from Form Page 2 and enter new total on Face Page, Item 8b.

*Check appropriate box(es):

Salary and wages base Modified total direct cost base Other base (*Explain*)

Off-site, other special rate, or more than one rate involved (*Explain*)

Explanation (*Attach separate sheet, if necessary.*):

Principal Investigator/Program Director (Last, first, middle):

PERSONNEL REPORT

GRANT NUMBER

Place this form at the end of the signed original copy of the application. Do not duplicate.

All Key Personnel for the Current Budget Period

Name	Degree(s)	SSN	Role on Project (e.g. PI, Res. Assoc.)	Date of Birth (MM/DD/YY)	Annual % Effort

Principal Investigator/Program Director (Last, first, middle):

NEXT BUDGET PERIOD <i>(Follow instructions carefully)</i>	FROM	THROUGH	GRANT NUMBER
ITEMIZE DIRECT COSTS REQUESTED FOR NEXT BUDGET PERIOD			DOLLAR AMOUNT REQUESTED (omit cents)
PREDOCTORAL STIPENDS No. Requested:			\$
POSTDOCTORAL STIPENDS <i>(Itemize)</i> No. Requested:			\$
OTHER STIPENDS <i>(Specify)</i> No. Requested:			\$
TOTAL STIPENDS →			\$
TUITION, FEES, AND INSURANCE <i>(Itemize)</i> No. Requested:			\$
TRAINEE TRAVEL <i>(Describe)</i> No. Requested:			\$
TRAINEE RELATED EXPENSES No. Requested:			\$
TOTAL DIRECT COSTS FOR NEXT BUDGET PERIOD <i>(Also enter on Page 1, Item 8a)</i>			\$

Summary of Trainees	GRANT NUMBER
----------------------------	--------------

Complete for trainees who have left the program or who have completed their training (during this reporting period)

Name	Degree Earned	Current Position

Complete for *all* trainees for this reporting period.

Distribution of Trainees According to Category: Use the table on the "Inclusion Enrollment Report Format Page." See PHS 398.

Targeted/Planned Enrollment Table

This report format should NOT be used for data collection from study participants.

Study Title:

Total Planned Enrollment:

TARGETED/PLANNED ENROLLMENT: Number of Subjects			
Ethnic Category	Sex/Gender		
	Females	Males	Total
Hispanic or Latino			
Not Hispanic or Latino			
Ethnic Category Total of All Subjects*			
Racial Categories			
American Indian/Alaska Native			
Asian			
Native Hawaiian or Other Pacific Islander			
Black or African American			
White			
Racial Categories: Total of All Subjects *			

*The "Ethnic Category Total of All Subjects" must be equal to the "Racial Categories Total of All Subjects."

Inclusion Enrollment Report Table

This report format should NOT be used for data collection from study participants.

Study Title: _____

Total Enrollment: _____

Protocol Number: _____

Grant Number: _____

PART A. TOTAL ENROLLMENT REPORT: Number of Subjects Enrolled to Date (Cumulative) by Ethnicity and Race				
Ethnic Category	Sex/Gender			
	Females	Males	Unknown or Not Reported	Total
Hispanic or Latino				**
Not Hispanic or Latino				
Unknown (Individuals not reporting ethnicity)				
Ethnic Category: Total of All Subjects*				*
Racial Categories				
American Indian/Alaska Native				
Asian				
Native Hawaiian or Other Pacific Islander				
Black or African American				
White				
More than one race				
Unknown or not reported				
Racial Categories: Total of All Subjects*				*
PART B. HISPANIC ENROLLMENT REPORT: Number of Hispanics or Latinos Enrolled to Date (Cumulative)				
Racial Categories	Females	Males	Unknown or Not Reported	Total
American Indian or Alaska Native				
Asian				
Native Hawaiian or Other Pacific Islander				
Black or African American				
White				
More Than One Race				
Unknown or not reported				
Racial Categories: Total of Hispanics or Latinos**				**

* These totals must agree.

** These totals must agree.



Principal Investigator/Program Director (Last, first, middle):



PHS 2590 OTHER SUPPORT

Provide active support for all key personnel. **Other Support includes all financial resources, whether Federal, non-Federal, commercial or institutional, available in direct support of an individual's research endeavors, including but not limited to research grants, cooperative agreements, contracts, and/or institutional awards.** Training awards, prizes, or gifts do not need to be included.

There is no "form page" for other support. Information on other support should be provided in the *format* shown below, using continuation pages as necessary. **Include the principal investigator's name at the top and number consecutively with the rest of the Grant Progress Report.** The sample below is intended to provide guidance regarding the type and extent of information requested. For information pertaining to the use of and policy for other support, see "Policy and Additional Guidance" in the PHS 398 instructions.

Format

NAME OF INDIVIDUAL

ACTIVE

Project Number (Principal Investigator) Source Title of Project (<i>or Subproject</i>)	Dates of Approved/Proposed Project Annual Direct Costs	Percent Effort
--	---	----------------

The major goals of this project are...

OVERLAP (*summarized for each individual*)

Samples

ANDERSON, R.R.

ACTIVE

2 R01 HL 00000-13 (Anderson) NIH/NHLBI Chloride and Sodium Transport in Airway Epithelial Cells	3/1/2001 – 2/28/2005 \$186,529	30%
---	-----------------------------------	-----

The major goals of this project are to define the biochemistry of chloride and sodium transport in airway epithelial cells and clone the gene(s) involved in transport.

5 R01 HL 00000-07 (Baker) NIH/NHLBI Ion Transport in Lungs	4/1/2001 – 3/31/2005 \$122,717	10%
--	-----------------------------------	-----

The major goal of this project is to study chloride and sodium transport in normal and diseased lungs.

R000 (Anderson) Cystic Fibrosis Foundation Gene Transfer of CFTR to the Airway Epithelium	9/1/2001 – 8/31/2005 \$43,123	10%
---	----------------------------------	-----

The major goals of this project are to identify and isolate airway epithelium progenitor cells and express human CFTR in airway epithelial cells.

OVERLAP: NONE

RICHARDS, L.

NONE

HERNANDEZ, M.

ACTIVE

5 R01 CA 00000-07 (Hernandez) NIH/NCI	4/1/2001 – 3/31/2005	40% academic
--	----------------------	--------------

PHS 2590 OTHER SUPPORT (continued)

Gene Therapy for Small Cell Lung Carcinoma

The major goals of this project are to use viral strategies to express the normal p53 gene in human SCLC cell lines and to study the effect on growth and invasiveness of the lines.

5 P01 CA 00000-03 (Chen)	7/1/2000 – 6/30/2002	20% academic
NIH/NCI	\$104,428 (sub only)	100% summer

Mutations in p53 in Progression of Small Cell Lung Carcinoma

The major goals of this subproject are to define the p53 mutations in SCLC and their contribution to tumor progression and metastasis.

BE 00000 (Hernandez)	9/1/1996 – 8/31/2002	20% academic
American Cancer Society	\$86,732	

p53 Mutations in Breast Cancer

The major goals of this project are to define the spectrum of p53 mutations in human breast cancer samples and correlate the results with clinical outcome.

OVERLAP

Potential commitment overlap for Dr. Hernandez between 5 R01 CA 00000-07 and the application under consideration. If the application under consideration is funded with Dr. Hernandez committed at 30 percent effort, Dr. Hernandez will request approval to reduce her effort on the NCI grant.

BENNETT, P.

ACTIVE

Investigator Award (Bennett)	9/1/1999 – 8/31/2002	70%
------------------------------	----------------------	-----

Howard Hughes Medical Institute \$581,317
Gene Cloning and Targeting for Neurological Disease Genes
This award supports the PI's program to map and clone the gene(s) implicated in the development of Alzheimer's disease and to target expression of the cloned gene(s) to relevant cells.

OVERLAP : None