Form Approved Through			•			OMB No. 0925-00	
Depar	tment of Health and Hum		LEAVE BLANK-FO				
	Public Health Service		Type Act Review Group	ivity	Number Formerl		
	d character length restric		Council/Board (Montl	n. Year)	Date Re	eceived	
	[°]	racters, including spaces and p		,,			
2. RESPONSE TO SPI (If "Yes," state number Number:		APPLICATIONS OR PROGRAM	I ANNOUNCEMENT O	R SOLICITA ⁻	TION	NO YES	
	IGATOR/PROGRAM DIR	ECTOR	New Investigator	No	Yes		
3a. NAME (Last, first, m	niddle)		3b. DEGREE(S)				
3c. POSITION TITLE			3d. MAILING ADDR	ESS (Street,	, city, state,	, zip code)	
3e. DEPARTMENT, SEF	RVICE, LABORATORY, C	DR EQUIVALENT	-				
3f. MAJOR SUBDIVISIO	N						
3g. TELEPHONE AND F	AX (Area code, number	and extension)	E-MAIL ADDRESS:				
4. HUMAN SUBJECTS RESEARCH	4a. Research Exempt If "Yes," Exemption No.	No Yes	5. VERTEBRATE A	NIMALS	No	Yes	
No	4b. Human Subjects	4c. NIH-defined Phase III	5a. If "Yes," IACUC ap	proval Date	5b. Anima	al welfare assurance no	
Yes	Assurance No.	Clinical Trial No Yes					
6. DATES OF PROPOS SUPPORT (month,	SED PERIOD OF day, year—MM/DD/YY)	7. COSTS REQUESTED FO BUDGET PERIOD	R INITIAL		REQUEST OF SUPP	ED FOR PROPOSED ORT	
From	Through	7a. Direct Costs (\$)	7b. Total Costs (\$)	8a. Direct	Costs (\$)	8b. Total Costs (\$)	
9. APPLICANT ORGAN	NIZATION		10. TYPE OF ORGA	NIZATION			
Name			Public: \rightarrow	Federal	Stat	te Local	
Address			Private: →	Private No	•		
			For-profit: → General Small Business Woman-owned Socially and Economically Disadvantaged				
			11. ENTITY IDENTIF			Theary Disadvantaged	
la stitutional Desfile Eile N	la una la constructiva (la la constructiva)		DUNS NO.	+			
Institutional Profile File N	DFFICIAL TO BE NOTIFI						
Name			13. OFFICIAL SIGNING FOR APPLICANT ORGANIZATION Name				
Title			Title				
Address			Address				
Tel FAX			Tel		FAX		
E-Mail			E-Mail				
statements herein are true, aware that any false, fictit criminal, civil, or administration	, complete and accurate to ious, or fraudulent statement tive penalties. I agree to acc	R ASSURANCE: I certify that the the best of my knowledge. I am hts or claims may subject me to cept responsibility for the scientific ss reports if a grant is awarded as	SIGNATURE OF PI/F (In ink. "Per" signatur			DATE	
a result of this application. 15. 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 OF (In ink. "Per" signatur			DATE	

DESCRIPTION: State the application's broad, long-term objectives and specific aims, making reference to the health relatedness of the project. Describe concisely the research design and methods for achieving these goals. Avoid summaries of past accomplishments and the use of the first person. This abstract is meant to serve as a succinct and accurate description of the proposed work when separated from the application. If the application is funded, this description, as is, will become public information. Therefore, do not include proprietary/confidential information. **DO NOT EXCEED THE SPACE PROVIDED.**

PERFORMANCE SITE(S) (organization, city, state)

 KEY PERSONNEL. See instructions. Use continuation pages as needed to provide the required information in the format shown below.

 Start with Principal Investigator. List all other key personnel in alphabetical order, last name first.

 Name
 Organization

 Role on Project

The name of the principal investigator/program director must be provided at the top of each printed page and each continuation page.

RESEARCH GRANT TABLE OF CONTENTS

	Page Numbers
Face Page	1
Description, Performance Sites, and Personnel	
Table of Contents	
Detailed Budget for Initial Budget Period (or Modular Budget)	
Budget for Entire Proposed Period of Support (not applicable with Modular Budget)	
Budgets Pertaining to Consortium/Contractual Arrangements (not applicable with Modular Budget)	
Biographical Sketch —Principal Investigator/Program Director (<i>Not to exceed four pages</i>)	
Other Biographical Sketches (Not to exceed four pages for each – See instructions)	
Resources	
Nesources	
Research Plan	
Introduction to Revised Application (Not to exceed 3 pages)	
Introduction to Supplemental Application (Not to exceed one page)	
A. Specific Aims	
B. Background and Significance	
C. Preliminary Studies/Progress Report/ // (Items A-D: not to exceed 25 pages*)	
Phase I Progress Report (SBIR/STTR Phase II ONLY) * SBIR/STTR Phase I: Items A-D limited to 15 pages.	
D. Research Design and Methods	
E. Human Subjects	
Protection of Human Subjects (Required if Item 4 on the Face Page is marked "Yes")	
Inclusion of Women (Required if Item 4 on the Face Page is marked "Yes")	
Inclusion of Minorities (Required if Item 4 on the Face Page is marked "Yes")	
Inclusion of Children (Required if Item 4 on the Face Page is marked "Yes")	
Data and Safety Monitoring Plan (Required if Item 4 on the Face Page is marked "Yes" <u>and</u> a Phase I, II, or III clinical trial is proposed	
F. Vertebrate Animals	
G. Literature Cited	
H. Consortium/Contractual Arrangements	
I. Letters of Support (e.g., Consultants)	
J. Product Development Plan (SBIR/STTR Phase II and Fast-Track ONLY)	
Checklist	
Appendix (Five collated sets. No page numbering necessary for Appendix.)	Check if
Appendices NOT PERMITTED for Phase I SBIR/STTR unless specifically solicited.	Appendix is Included
Number of publications and manuscripts accepted for publication (not to exceed 10)	
Other items (list):	

DETAI	ED BUDGET F			ET PERIC	D	FROM	-	THROU	JGH
PERSONNEL (Applicant of	organization only)			%		DOLLAR AM		ESTED	(omit cents)
NAME	RO	LE ON DJECT	TYPE APPT. (months)	EFFORT ON PROJ.	INST. BASE SALARY	SALARY REQUESTED	FRINGE BENEFIT	-	TOTAL
	Prin	cipal							
	Inve	stigator							
	SUB	TOTALS	;						
CONSULTANT COSTS									
EQUIPMENT (Itemize)									
SUPPLIES (Itemize by ca									
TRAVEL									
PATIENT CARE COSTS	INPATIENT								
	OUTPATIENT								
ALTERATIONS AND REN	OVATIONS (Itemize	e by categ	ory)						
OTHER EXPENSES (Iter	nize by category)								
SUBTOTAL DIRECT	COSTS FOR IN	IITIAL B	UDGET P	ERIOD				\$	
CONSORTIUM/CONTRAC	CTUAL COSTS						CT COSTS		
					FACILITIES A	ND ADMINISTRAT	IVE COSTS	_	
TOTAL DIRECT COSTS FOR INITIAL BUDGET PERIOD (Item 7a, Face Page)					\$				
SBIR/STTR Only: FI)							

BUDGET FOR ENTIRE PROPOSED PROJECT PERIOD DIRECT COSTS ONLY

BUDGET	CATEGORY	INITIAL BUDGET PERIOD	ŀ	ADDITIONAL YEARS OF S	UPPORT REQUESTED)
то	TALS	(from Form Page 4)	2nd	3rd	4th	5th
PERSONNEL: fringe benefits organization o	. Applicant					
CONSULTAN	r costs					
EQUIPMENT						
SUPPLIES						
TRAVEL						
PATIENT	INPATIENT					
CARE COSTS	OUTPATIENT					
ALTERATIONS AND RENOVATIONS						
OTHER EXPE	NSES					
SUBTOTAL D	RECT COSTS					
CONSORTIUM/	DIRECT					
CONTRACTUAL COSTS	- F&A					
TOTAL DIR	ECT COSTS					
TOTAL DIR	ECT COSTS FO	DR ENTIRE PROPOSE	D PROJECT PERIO	D (Item 8a, Face Page	e)	\$
SBIR/STT Fee Reque						
(Add Total Fee Checklist Form	e amount to "Total on Page, and enter the second seco	Fee Requested for E direct costs for entire propose hese as "Costs Requested for udget iustification instruc	ed project period" above or Proposed Period of Su	and Total F&A/indirect cos ipport on Face Page, Item	8b.)	\$

USTIFICATION. Follow the budget justification instructions exactly. Use continuation pages as needed.

BUDGET JUSTIFICATION PAGE MODULAR RESEARCH GRANT APPLICATION							
Initial Budget PeriodSecond Year of SupportThird Year of SupportFourth Year of SupportFifth Year of Support							
Total Direct Costs Requested for Entire Project Period \$							

Personnel

Consortium

Fee (SBIR/STTR Only)

RESOURCES								
FACILITIES: Specify the facilities to be used for the conduct of the proposed research. Indicate the performance sites and describe capacities, pertinent capabilities, relative proximity, and extent of availability to the project. Under "Other," identify support services such as machine shop, electronics shop, and specify the extent to which they will be available to the project. Use continuation pages if necessary.								
Laboratory:								
Clinical:								
Animal:								
Computer:								
Office:								
Other:								

MAJOR EQUIPMENT: List the most important equipment items already available for this project, noting the location and pertinent capabilities of each.

	CHEC	KLIST	
TYPE OF APPLICATION (Check	all that apply.)		
NEW application. (This app	plication is being submitted to the PHS for t	the first time.)	
SBIR Phase I	BIR Phase II: SBIR Phase I Grant No.		SBIR Fast Track
STTR Phase I	TTR Phase II: STTR Phase I Grant No.		STTR Fast Track
REVISION of application nu	mber:		
	prior unfunded version of a new, competin		
COMPETING CONTINUAT	ION of grant number:		INVENTIONS AND PATENTS (Competing continuation appl. and Phase II only)
(This application is to exten	d a funded grant beyond its current project	period.)	No / Previously reported
SUPPLEMENT to grant nur	nber:		Yes. If "Yes," Not previously reported
	tional funds to supplement a currently funde	ed grant.)	
CHANGE of principal invest	igator/program director		
Name of former principal invest			
FOREIGN application or sig	gnificant foreign component.		
1. PROGRAM INCOME (See in			
	ther program income is anticipated during to reflect the amount and source(s).	the period(s) for whi	ch grant support is request. If program income
Budget Period	Anticipated Amount		Source(s)
2. ASSURANCES/CERTIFICATI		•Debarment and	Suspension; •Drug- Free Workplace (applicable to new
	ations are made and verified by the or Applicant Organization on the Face	[Type 1] or revise	ed [Type 1] applications only); •Lobbying; •Non-
Page of the application. Description		(Form HHS 441 c	Federal Debt; •Research Misconduct; •Civil Rights or HHS 690); •Handicapped Individuals (Form HHS 641
	lanation and place it after this page.		x Discrimination (Form HHS 639-A or HHS 690); •Age orm HHS 680 or HHS 690); •Recombinant DNA and
	ing Human Embryonic Stem Cells•	Human Gene Tra	ansfer Research; •Financial Conflict of Interest (except
Minority Inclusion Policy Inclusio	Human Fetal Tissue •Women and n of Children Policy• Vertebrate Animals•	Phase I SBIR/ST Participation.	TR) •STTR ONLY: Certification of Research Institution
3. FACILITIES AND ADMINSTR	ATIVE COSTS (F&A)/ INDIRECT COSTS.	. See specific instruc	ctions.
DHHS Agreement dated:		[No Facilities And Administrative Costs Requested.
DHHS Agreement being neg	gotiated with		Regional Office.
No DHHS Agreement, but ra	ate established with		Date
		pe reproduced and p	provided to peer reviewers as confidential information.)
a. Initial budget period:	Amount of base \$	x Rate applied	= F&A costs \$
b. 02 year	Amount of base \$	x Rate applied	= F&A costs \$
c. 03 year	Amount of base \$	x Rate applied	= F&A costs \$
d. 04 year	Amount of base \$	x Rate applied	= F&A costs \$
e. 05 year	Amount of base \$	x Rate applied	= F&A costs \$
,			TOTAL F&A Costs \$
*Check appropriate box(es):			
Salary and wages base	Modified total direc	t cost base	Other base (Explain)
Off-site, other special rate,	or more than one rate involved (Explain)		
Explanation (Attach separate she			
4. SMOKE-FREE WORKPLACE	Yes No (The response	to this question has	no impact on the review or funding of this application.)

Place this form at the end of the signed original copy of the application. Do <u>not</u> duplicate.

PERSONAL DATA ON PRINCIPAL INVESTIGATOR/PROGRAM DIRECTOR

The Public Health Service has a continuing commitment to monitor the operation of its review and award processes to detect—and deal appropriately with—any instances of real or apparent inequities with respect to age, sex, race, or ethnicity of the proposed applicant.

To provide the PHS with the information it needs for this important task, complete the form below and attach it to the signed original of the application after the Checklist. **Do not attach copies of this form to the duplicated copies of the application.**

Upon receipt of the application by the PHS, this form will be separated from the application. This form will **not** be duplicated, and it will **not** be a part of the review process. Data will be confidential, and will be maintained in Privacy Act record system 09-25-0036, "Grants: IMPAC (Grant/Contract Information)." The PHS requests Social Security Numbers for accurate identification, referral, and review of applications and for management of PHS grant programs. Provision of the Social Security Number is voluntary. No individual will be denied any right, benefit, or privilege provided by law because of refusal to disclose his or her Social Security Number. The PHS requests the Social Security Number under Sections 301(a) and 487 of the PHS Acts as amended (42 U.S.C 241a and U.S.C. 288). All analyses conducted on the date of birth and race and/or ethnic origin data will report aggregate statistical findings only and will not identify individuals. If you decline to provide this information, it will in no way affect consideration of your application. Your cooperation will be appreciated.

DATE OF BIRTH (MM/DD/YY)	SEX/GENDER
SOCIAL SECURITY NUMBER	Female Male

ETHNICITY

1. Do you consider yourself to be Hispanic or Latino? (See definition below.) Select one.

Hispanic or Latino. A person of Mexican, Puerto Rican, Cuban, South or Central American, or other Spanish culture or origin, regardless of race. The term, "Spanish origin," can be used in addition to "Hispanic or Latino."

Hispanic or Latino

Not Hispanic or Latino

RACE

2. What race do you consider yourself to be? Select one or more of the following.

<i>American Indian or Alaska Native.</i> A person having origins in any of the original peoples of North, Central, or South America, and who maintains tribal affiliation or community attachment.
Asian. A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent, including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam. (Note: Individuals from the Philippine Islands have been recorded as Pacific Islanders in previous data collection strategies.)
Black or African American. A person having origins in any of the black racial groups of Africa. Terms such as "Haitian" or "Negro" can be used in addition to "Black" or African American."
<i>Native Hawaiian or Other Pacific Islander.</i> A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.
White A person baying origins in any of the original peoples of Europe, the Middle East, or North Africa

White. A person having origins in any of the original peoples of Europe, the Middle East, or North Africa.

Check here if you do not wish to provide some or all of the above information.

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							
		Sex/Gender					
Ethnic Category	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

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

Study Title:

Total Enrollment:

Protocol Number:

Grant Number:

Sex/Gender						
Ethnic Category	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						

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.

BUDGET of RESEARCH INSTITUTION (STTR ONLY)	THROUGH
--	---------

NAME AND ADDRESS OF RESEARCH INSTITUTION

PERSONNEL				%		DOLLAR AMC	TED (omit cents)	
NAME		E ON JECT	TYPE APPT. (months)	EFFORT ON PROJ.	INST. BASE SALARY	SALARY REQUESTED	FRINGE BENEFITS	TOTAL
	Princi Inves	ipal tigator						
	SUBT				>			¢
CONSULTANT COSTS						\$		
EQUIPMENT (Itemize)								
SUPPLIES (Itemize by category)								
TRAVEL								
PATIENT CARE COSTS	INPATIENT							
	OUTPATIENT							
ALTERATIONS AND RENOVATIONS (Itemize by category)								
OTHER EXPENSES (Itemize by category)								
TOTAL DIRECT COSTS (also enter as Consortium/Contractual Costs on Budget Page of Small Business Concern)				\$				
FACILITIES and ADMINISTRATIVE COSTS (show calculation) (also enter as Consortium/Contractual Costs on Budget of Small Business Concern)					\$			
CERTIFICATION OF RESEARCH INSTITUTION PARTICIPATION. Through the signature below of the duly authorized representative of the research institution on this "Certification of Research Institution" page, and by way of the signature of the official signing for applicant organization (small								

business concern) on the Face Page of the application, the small business concern and the research institution certify jointly that: (1) the proposed STTR project will be conducted jointly by the small business concern and the research institution in which not less than 40 percent of the work will be performed by the small business concern and not less than 30 percent of the work will be performed by the research institution ("cooperative research and development"); (2) the proposed STTR project is a cooperative research or research and development effort to be conducted jointly by the small business concern and the research institution in which not less than 40 percent of the work will be performed by the small business concern and not less than 30 percent of the work will be performed by the research institution ("performance of research and analytical work"); and (3) regardless of the proportion of the proposed project to be performed by each party, the small business concern will be the primary party that will exercise management direction and control of the performance of the project. If the research institution is a contractor-operated federally funded research and development center, the duly authorized representative of the contractor-operated federally funded research and development center certifies, additionally, that it: (4) is free from organizational conflicts of interests relative to the STTR program; (5) did not use privileged information gained through work performed for an STTR agency or private access to STTR agency personnel in the development of this STTR grant application; and (6) used outside peer review, as appropriate, to evaluate the proposed project and its performance therein.

Signature of Duly Authorized Representative	Printed Name	Title	Date of Signature

Certification of Research Institution for Small Business Technology Transfer Grants

Through the signature below of the duly authorized representative of the research institution on this "Certification of Research Institution" page, and by way of the signature of the official signing for applicant organization (small business concern) on the Face Page of the application, the small business concern and the research institution certify *jointly* that:

- (1) the proposed STTR project will be conducted jointly by the small business concern and the research institution in which not less than 40 percent of the work will be performed by the small business concern and not less than 30 percent of the work will be performed by the research institution ("cooperative research and development");
- (2) the proposed STTR project is a cooperative research or research and development effort to be conducted jointly by the small business concern and the research institution in which not less than 40 percent of the work will be performed by the small business concern and not less than 30 percent of the work will be performed by the research institution ("performance of research and analytical work"); and
- (3) regardless of the proportion of the proposed project to be performed by each party, the small business concern will be the primary party that will exercise management direction and control of the performance of the project.

If the research institution is a contractor-operated federally funded research and development center, the duly authorized representative of the contractor-operated federally funded research and development center certifies, *additionally*, that it:

- (4) is free from organizational conflicts of interests relative to the STTR program
- (5) did not use privileged information gained through work performed for an STTR agency or private access to STTR agency personnel in the development of this STTR grant application; and
- (6) used outside peer review, as appropriate, to evaluate the proposed project and its performance therein.

Signature of Duly Authorized Representative

Date of Signature

Printed Name and Title of Duly Authorized Representative

Research Institution Total Costs =

(Direct costs + F&A Costs)

Mailing address for application

Use this label or a facsimile

All applications and other deliveries to the Center for Scientific Review must come either via courier delivery or via the United States Postal Service (USPS.) Applications delivered by individuals to the Center for Scientific Review will no longer be accepted.

Applications sent via the USPS EXPRESS or REGULAR MAIL should be sent to the following address:

CENTER FOR SCIENTIFIC REVIEW NATIONAL INSTITUTES OF HEALTH 6701 ROCKLEDGE DRIVE ROOM 1040 – MSC 7710 BETHESDA, MD 20892-7710

NOTE: All applications sent via a courier delivery service (non-USPS) should use this address, but <u>CHANGE THE ZIP CODE TO 20817</u>

The telephone number is 301-435-0715. C.O.D. applications will not be accepted.

For application in response to RFA

IF THIS APPLICATION IS IN RESPONSE TO AN RFA, be sure to put the RFA number in line 2 of the application face page. In addition, after duplicating copies of the application, cut along the dotted line below and staple the RFA label to the bottom of the face page of the original and place the original on top of your entire package. Failure to use this RFA label could result in delayed processing of your application such that it may not reach the review committee on time for review. **Do not use** the label unless the application is in response to a specific RFA. Also, applicants responding to a specific RFA should be sure to follow all special mailing instructions published in the RFA.

RFA No.

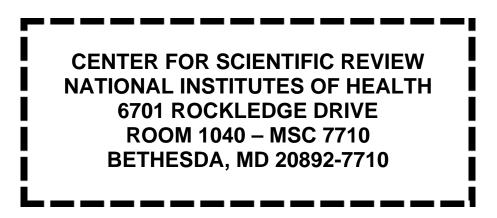
RFA

Mailing address for application

Use this label or a facsimile

All applications and other deliveries to the Center for Scientific Review must come either via courier delivery or via the USPS. Applications delivered by individuals to the Center for Scientific Review will no longer be accepted.

Applications sent via the USPS EXPRESS or REGULAR MAIL should be sent to the following address:



NOTE: All applications sent via a courier delivery service (non-USPS) should use this address, but <u>CHANGE THE ZIP CODE TO 20817</u>

The telephone number is 301-435-0715. C.O.D. applications will <u>not</u> be accepted.

For application in response to SBIR/STTR

Use this label or a facsimile

IF THIS APPLICATION IS IN RESPONSE TO AN SBIR/STTR Solicitation, be sure to put the SBIR/STTR Solicitation number in line 2 of the application face page. In addition, after duplicating copies of the application, cut along the dotted line below and staple the appropriate SBIR or STTR label to the bottom of the face page of the original and place the original on top of your entire package. If this SBIR or STTR application is in response to an RFA, be sure to also include the RFA No. in the space provided below.

