

Dated: July 16, 2007.

Jeffrey Shuren,

Assistant Commissioner for Policy.

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DEPARTMENT OF HEALTH AND HUMAN SERVICES

Indian Health Service

Office of Urban Indian Health Programs

Announcement Type: Competitive Supplemental Grant Announcement.

Funding Opportunity Number: HHS-2007-IHS-UIHP-0001.

Catalog of Federal Domestic Assistance Number: 93.193.

Note: This funding opportunity has been amended to provide additional funds to support the supplemental competitive 4-in-1 Title V grants. The estimated total award amount increased from \$316,000 to \$350,000. Seven grant supplements will be issued under this announcement. As a result of the notice of amendment, the application deadline date has been revised to allow applicants at least 30 days to apply for the opportunity. The new application deadline date is August 20, 2007. This amendment supersedes the **Federal Register** Notice that was issued July 11, 2007, FR Doc. 07-3359.

Key Dates: Application Deadline Date: August 20, 2007. *Review Date:* August 23, 2007. *Earliest Anticipated Start Date:* August 31, 2007.

I. Funding Opportunity Description

The Indian Health Service (IHS), Office of Urban Indian Health Programs (OUIHP) announces competitive 4-in-1 Title V grant supplements responding to an Office of Minority Health, HIV/AIDS Initiative. This program is authorized under the authority of the Snyder Act and 25 U.S.C. 1652, 1653 of the Indian Health Care Improvement Act, Public Law 94-437, as amended. This program is described at 93.193 in the Catalog of Federal Domestic Assistance (CFDA).

This competitive supplement seeks to expand OUIHP's existing Title V grants to increase the number of American Indian/Alaska Native (AI/AN) with the awareness of his/her HIV status. This will provide routine and/or rapid HIV screening, prevention, pre and post test counseling, case management (if available) and data collection. Enhancement of urban Indian health program HIV/AIDS activities is necessary to reduce the incidence of HIV/AIDS in the urban Indian health communities.

The purpose of the announcement is to respond to the fact that communities of color have been disproportionately

affected by HIV and the need exists for access to early testing, diagnosis, treatment and prevention services. Over the past decade, the AI/AN community has developed and maintained a higher rate of HIV than Caucasians. It has also been demonstrated that AI/ANs have a decreased longevity once diagnosed compared to other races/ethnicities. These supplements will be used to enhance HIV testing, including rapid testing and/or standard HIV antibody testing and to provide a more focused effort to address HIV/AIDS prevention targeting some of the largest urban Indian populations in the United States.

The nature of these projects will require collaboration with the OUIHP to: (1) Coordinate activities; (2) participate in projects in other operating divisions of the Department such as CDC, SAMHSA, HRSA and the Office of Minority Health; and (3) submit and share data on HIV/AIDS testing, treatment and education.

II. Award Information

Type of Award: Title V Grant Supplements.

Estimated Funds Available: The total amount identified for Fiscal Year (FY) 2007 is seven supplement awards totaling \$350,000. The award is for one year in duration and the average award, per program is approximately \$50,000. Awards under this announcement are subject to the availability of funds.

Anticipated Number of Awards: Seven grant supplements will be made under the Program.

Project Period: April 1, 2007—March 31, 2008.

Award Amount: \$350,000.

A. Requirements of Recipient Activities

In FY 2007 each grantee's attempted goal shall include screening as many individuals as possible; however, increasing screening 10% or to a minimum of 200 American Indians/Alaska Natives (AI/AN) tested per program funded—adjusted due to variations in size of facility and user population may be required. This does not include counts of re-testing individuals in the same year. Each program shall also collect evidence, as part of the testing process, to potentially address utility and barriers of increased routine HIV screening within this population.

III. Eligibility Information

1. *Eligible Applicants:* Urban Indian organizations, as defined by 25 U.S.C. 1603(h), limited to Urban Indian organizations which meet the following criteria:

a. Received State certification to conduct HIV rapid testing;

b. Health professionals and staff have been trained in the HIV/AIDS screening tools, education, prevention, counseling, and other interventions for American Indians/Alaskan Natives;

c. Attuned to the risk factors driving the HIV/AIDS epidemics among urban American Indians/Alaskan Natives;

d. Developed programs to address community and group support to sustain risk-reduction skills;

e. Implemented HIV/AIDS quality assurance and improvement programs; and

f. Must provide proof of non-profit status with the application.

2. *Cost Sharing or Matching:* This program does not require matching funds or cost sharing.

3. If the application budget exceeds \$50,000 it will not be considered for review.

IV. Application and Submission Information

1. Applicant package may be found in *Grants.gov* (www.grants.gov) or at:

http://www.ihs.gov/NonMedicalPrograms/gogp/gogp_funding.asp.

Information regarding the electronic application process may be directed to Michelle G. Bulls at (301) 443-6290.

2. *Content and Form of Application Submission:*

- Be single spaced.
- Be typewritten.
- Have consecutively numbered pages.
- Use black type not smaller than 12 characters per one inch.
- Contain a narrative that does not exceed 25 typed pages that includes the other submission requirements below. The 25 page narrative does not include the work plan, standard forms, table of contents, budget, budget justifications, narratives, and/or other appendix items.

Public Policy Requirements: All Federal-wide public policies apply to IHS grants with the exception of the Lobbying and Discrimination public policy.

3. *Submission Dates and Times:* The application from each Urban Indian organization must be submitted electronically through *Grants.gov* by 12 midnight Eastern Standard Time (EST).

If technical challenges arise and the urban Indian organizations are unable to successfully complete the electronic application process, each organization must contact Michelle G. Bulls, Grants Policy Staff fifteen days prior to the application deadline and advise of the difficulties that they are experiencing. Each organization must obtain prior

approval, in writing (e-mails are acceptable), from Ms. Bulls allowing the paper submission. If submission of a paper application is requested and approved, the original and two copies may be sent to the appropriate grants contact that is listed in Section IV.1 above. Applications not submitted through *Grants.gov*, without an approved waiver, may be returned to the organizations without review or consideration.

A late application will be returned to the organization without review or consideration.

4. Intergovernmental Review: Executive Order 12372 requiring intergovernmental review is not applicable to this program.

5. Funding Restrictions:

A. Pre-award costs are allowable pending prior approval from the awarding agency. However, in accordance with 45 CFR part 74, all pre-award costs are incurred at the recipient's risk. The awarding office is under no obligation to reimburse such costs if for any reason any of the Urban Indian organizations do not receive an award or if the award to the recipient is less than anticipated.

B. The available funds are inclusive of direct and appropriate indirect costs.

C. Only one grant supplement will be awarded to each organization.

D. IHS will acknowledge receipt of the application.

6. Other Submission Requirements:

Electronic Submission—Each Urban Indian organization must submit through *Grants.gov*. However, should any technical challenges arise regarding the submission, please contact *Grants.gov* Customer Support at 1-800-518-4726 or support@grants.gov. The Contact Center hours of operation are Monday–Friday from 7 a.m. to 9 p.m. EST. If you require additional assistance please call (301) 443-6290 and identify the need for assistance regarding your *Grants.gov* application. Your call will be transferred to the appropriate grants staff member. Each organization must seek assistance at least fifteen days prior to the application deadline. If each organization doesn't adhere to the timelines for Central Contractor Registry (CCR), *Grants.gov* registration and request timely assistance with technical issues paper application submission may not be granted.

To submit an application electronically, please use the *Grants.gov* Web site. Download a copy of the application package on the *Grants.gov* Web site, complete it offline and then upload and submit the application via the *Grants.gov* site. You may not e-mail

an electronic copy of a grant application to IHS.

Please be reminded of the following:

- Under the new IHS application submission requirements, paper applications are not the preferred method. However, if any Urban Indian organization has technical problems submitting the application on-line, please directly contact *Grants.gov* Customer Support at: <http://www.grants.gov/CustomerSupport>.

- Upon contacting *Grants.gov*, obtain a *Grants.gov* tracking number as proof of contact. The tracking number is helpful if there are technical issues that cannot be resolved and a waiver request from Grants Policy must be obtained. If any of the organizations are still unable to successfully submit the application on-line, please contact Michelle G. Bulls, Grants Policy Staff at (301) 443-6290 at least fifteen days prior to the application deadline to advise her of the difficulties you have experienced.

- If it is determined that a formal waiver is necessary, each organization must submit a request, in writing (e-mails are acceptable), to Michelle.Bulls@ihs.gov providing a justification for the need to deviate from the standard electronic submission process. Upon receipt of approval, a hard-copy application package must be downloaded from *Grants.gov*, and sent directly to the Division of Grants Operations (DGO), 801 Thompson Avenue, TMP 360, Rockville, MD 20852 by August 20, 2007.

- Upon entering the *Grants.gov* Web site, there is information available that outlines the requirements to each Urban Indian organization regarding electronic submission of application and hours of operation. We strongly encourage that each organization does not wait until the deadline date to begin the application process as the registration process for CCR and *Grants.gov* could take up to fifteen working days.

- To use *Grants.gov*, each Urban Indian organization must have a Dun and Bradstreet (DUNS) Number and register in the CCR. Each organization should allow a minimum of ten working days to complete CCR registration. See below on how to apply.

- Each organization must submit all documents electronically, including all information typically included on the SF-424 and all necessary assurances and certifications.

- Please use the optional attachment feature in *Grants.gov* to attach additional documentation that may be requested by IHS.

- Each organization must comply with any page limitation requirements

described in the program announcement.

- After you electronically submit your application, you will receive an automatic acknowledgment from *Grants.gov* that contains a *Grants.gov* tracking number. The DGO will retrieve your application from *Grants.gov*. The DGO will notify each organization that the application has been received.

- You may access the electronic application for this program on *Grants.gov*.

- You may search for the downloadable application package using either the CFDA number or the Funding Opportunity Number. Both numbers are identified in the heading of this announcement.

- To receive an application package, each Urban Indian organization must provide the Funding Opportunity Number: HHS-2007-IHS-UIHP-0001.

E-mail applications will not be accepted under this announcement.

DUNS Number

Applicants are required to have a DUNS number to apply for a grant or cooperative agreement from the Federal Government. The DUNS number is a nine-digit identification number, which uniquely identifies business entities. Obtaining a DUNS number is easy and there is no charge. To obtain a DUNS number, access <http://www.dunandbradstreet.com> or call 1-866-705-5711. Interested parties may wish to obtain their DUNS number by phone to expedite the process.

Applications submitted electronically must also be registered with the CCR. A DUNS number is required before CCR registration can be completed. Many organizations may already have a DUNS number. Please use the number listed above to investigate whether or not your organization has a DUNS number. Registration with the CCR is free of charge.

Applicants may register by calling 1-888-227-2423. Please review and complete the CCR Registration Worksheet located on <http://www.grants.gov/CCR> Register.

More detailed information regarding these registration processes can be found at *Grants.gov*.

V. Application Review Information

1. Criteria

The instructions for preparing the application narrative also constitute the evaluation criteria for reviewing and scoring the application. Weights assigned to each section are noted in parentheses. The narrative should include the first year of activities;

information for multi-year projects should be included as an appendix (see E. "Categorical Budget and Budget Justification") at the end of this section for more information. The narrative should be written in a manner that is clear to outside reviewers unfamiliar with prior related activities of the Urban Indian organization. It should be well organized, succinct, and contain all information necessary for reviewers to understand the project fully.

A. Understanding of the Need and Necessary Capacity (30 Points)

1. Understanding of the Problem

a. Define the project target population, identify their unique characteristics, and describe the impact of HIV on the population.

b. Describe the gaps/barriers in HIV testing for the population.

c. Describe the unique cultural or sociological barriers of the target population to adequate access for the described services.

2. Facility Capability

a. Briefly describe your clinic programs and services and how this initiative complements and/or expands existing efforts.

b. Describe your clinic's ability to conduct this initiative through:

- Your clinic's own resources.
- Describe collaboration with other providers.

• Identify and describe partnerships established to accept referrals for counseling, testing, and referral and confirmatory blood tests and/or social services for individuals who test HIV positive.

• Identify and describe partnerships established to refer out of your clinic for specialized treatment, care, confirmatory testing (if applicable) and counseling services.

B. Work Plan (40 Points)

1. Project Goal and Objectives

Address all of the following program goals and objectives of the project. The objectives must be specific as well as quantitatively and qualitatively measurable to ensure achievement of goal(s).

- President's Initiative for HIV/AIDS

Explain how the continuation program addresses the President's Initiative for HIV/AIDS objective requiring testing of those who do not know their status. For a more direct and relevant program initiative, this proposal will be enumerated in the development of the new IHS HIV/AIDS Strategic Plan.

- HHS Strategic Plan Support

Describe how implementing, expanding and making routine HIV/

AIDS direct service opportunities in your clinic ensures an innovative approach towards achievement of two most critical HHS Strategic Plan Objectives relative to the health status of AI/AN:

Objective 3.4—Eliminate racial and ethnic health disparities

Objective 3.6—Increase access to health services for AI/AN

- Office of the Secretary Minority AIDS Initiative

Address how the Minority AIDS Initiative Goals/Objectives will be supported. If a goal/objective is not applicable to your program, explain why it is not applicable. Provide quantitative and qualitative objectives for each of the following.

1. Expand Services

a. Increase the number of clients receiving services;

b. Increase the number of clients that receive an HIV test and are provided results and know their status; and

c. Increase the number of clients treated and/or referred into the system for medical care.

2. Build Capacity

a. Identify the number of providers that have expanded their:

- Knowledge of HIV screening methods;
- Knowledge of streamlining procedures; and
- Collaboration with outside entities such as CDC, HRSA, and/or State health departments.

3. Best Practices Models

a. Identify best practice models of implementation of expanded services.

4. Enumerate lessons observed and address barriers to care.

- IHS Strategic Plan Support

Describe how this project integrates with the IHS Strategic Plan which includes concepts surrounding:

1. Building and sustaining healthy communities
2. Providing accessible, quality health care, and
3. Fostering collaboration and innovation across the Indian health network.

- IHS HIV/AIDS Administrative Work Plan Goals

Describe how the IHS HIV/AIDS Administrative work plan goals will be supported. If a goal is not applicable to your program, explain why it is not applicable.

1. Assist AI/AN in becoming aware of serostatus;

2. Reduce the transmission of HIV through behavior change, prevention education and open discussion;

3. Ensure access (and linkages) to services for those living with HIV/AIDS and those at risk;

4. Make routine HIV/AIDS services and ensure quality HIV/AIDS care is delivered within the Indian health system;

5. Reduce stigma and discrimination surrounding HIV/AIDS; and

6. Form sustainable collaborations and integrative approaches (i.e. STD and HIV integration) to build capacity and maximize resources for surveillance, prevention, treatment and mitigation.

- Implementation Plan

1. Identify the proposed program activities and explain how these activities will meet the needs of the target population.

2. Describe any anticipated outcomes that may be achieved from this project plan.

3. Provide a timeline for implementation.

4. Has the program identified and agreed to follow the State regulations for HIV testing in their state?

5. How will individuals be selected for testing to identify selection criteria and which group(s)—if any—will you be able, via State regulations, to offer testing in an opt-out format?

6. How will you ensure that clients receive their test results, particularly clients who test positive?

7. How will you ensure that individuals with initial HIV-positive test results will receive confirmatory tests? If you do not provide confirmatory HIV testing, you must provide a letter of intent or MOA with an external laboratory documenting the process through which initial HIV-positive test results will be confirmed.

8. What are your strategies to linking potential seropositive patients to care?

9. What are your quality assurance strategies?

10. How will you train, support and retain staff providing counseling and testing?

11. How will you ensure client confidentiality?

12. How will you ensure that your services are culturally sensitive and relevant?

- Staffing Plan

Describe the existing or proposed positions to be funded and provide names and roles of the key position(s) carrying out this project, their qualifications and how they relate to the organizations, with regard to supervision and quality control.

C. Project Evaluation (10 Points)

1. Evaluation Plan

The grantee shall provide a plan for monitoring and evaluating the HIV rapid test and/or standard HIV antibody test.

2. Reporting Requirements

The following quantitative and qualitative measures shall be addressed:

- Indicators (quantitative)
 1. Number of tests offered and number of test refusals
 2. Number of clients who refused due to prior knowledge of status
 3. Number of individuals tested with breakdown of rapid versus standard antibody test
 4. Number of negative results
 5. Number of false negatives and/or false positives after confirmatory testing
 6. Number of reactive tests and confirmed seropositive (actual and proportion)
 7. Number of individuals receiving their confirmatory test results
 8. Number of clients linked to care/treatment or referrals for prevention counseling
 9. Number of post-test counseling sessions
 10. Number of pre-test counseling sessions (brief)
 11. Number of prevention counseling sessions (more depth) due to higher risk populations
 12. Number of missed follow up after rapid test is reactive
 13. Transmission category (if known)
 14. Measures in place to protect confidentiality

- Qualitative Information

1. Identify Testing Methodology
 - a. Will testing be rapid or standard?
 - b. Opt-out format should be utilized. Unless otherwise determined by State regulations—please explain.
 - c. Is your methodology based on risk-based screening? Based on what risk criteria? Are you offering more routine screening? What are the criteria for offering tests if any?
2. Identify barriers of implementation
 - Plan for obtaining knowledge, attitudes, and behavior data.

D. Organizational Capabilities and Qualifications (10 Points)

This section outlines the broader capacity of the organization to complete the project outlined in the work plan. It includes the identification of personnel responsible for completing tasks and the chain of responsibility for successful completion of the project outlined in the work plan.

1. Describe the organizational structure.
2. Describe the ability of the organization to manage the proposed project. Include information regarding similarly sized projects in scope and financial assistance as well as other grants and projects successfully completed.
3. Describe what equipment (i.e., phone, websites, etc.) and facility space

(i.e., office space) will be available for use during the proposed project. Include information about any equipment not currently available that will be purchased throughout the agreement.

4. List key personnel who will work on the project.

- Identify existing personnel and new program staff to be hired.

- In the appendix, include position descriptions and resumes for all key personnel. Position descriptions should clearly describe each position and duties indicating desired qualifications, experience, and requirements related to the proposed project and how they will be supervised. Resumes must indicate that the proposed staff member is qualified to carry out the proposed project activities and who will determine if the work of a contractor is acceptable.

- Note who will be writing the progress reports.

- If a position is to be filled, indicate that information on the proposed position description.

- If the project requires additional personnel beyond those covered by the supplemental grant (i.e., IT support, volunteers, interviewers, etc.), note these and address how these positions will be filled and, if funds are required, the source of these funds.

- If personnel are to be only partially funded by this supplemental grant, indicate the percentage of time to be allocated to this project and identify the resources used to fund the remainder of the individual's salary.

E. Categorical Budget and Budget Justification (10 Points)

This section should provide a clear estimate of the project program costs and justification for expenses for the entire grant period. The budget and budget justification should be consistent with the tasks identified in the work plan.

1. Categorical budget (Form SF 424A, Budget Information Non-Construction Programs) completing each of the budget periods requested.

2. Narrative justification for all costs, explaining why each line item is necessary or relevant to the proposed project. Include sufficient details to facilitate the determination of cost allowability.

3. Budget justification should include a brief program narrative for the second and third years.

4. If indirect costs are claimed, indicate and apply the current negotiated rate to the budget. Include a copy of the rate agreement in the appendix.

2. Review and Selection Process

In addition to the above criteria/requirements, the application will be considered according to the following:

A. The submission deadline: August 20, 2007. The application submitted in advance of or by the deadline and verified by the postmark will undergo a preliminary review to determine that:

- The applicant is eligible in accordance with this grant announcement.
- The application is not a duplication of a previously funded project.
- The application narrative, forms, and materials submitted meet the requirements of the announcement allowing the review panel to undertake an in-depth evaluation; otherwise, it may be returned.

B. The Objective Review date is August 23, 2007.

The application requirements that are complete, responsive, and conform to this program announcement will be reviewed for merit by the Ad Hoc Objective Review Committee (ORC) appointed by the IHS to review and make recommendations on this application. Prior to ORC review, the application will be screened to determine that programs proposed are those which the IHS has the authority to provide, either directly or through funding agreement, and that those programs are designed for the benefit of IHS beneficiaries. If an Urban Indian organization does not meet these requirements, the application will not be reviewed. The ORC review will be conducted in accordance with the IHS Objective Review Guidelines. The application will be evaluated and rated on the basis of the evaluation criteria listed in section V.1. The criteria are used to evaluate the quality of a proposed project and determine the likelihood of success.

3. Anticipated Announcement and Award Dates

Anticipated announcement date is August 20, 2007 with an Award Date of August 24, 2007.

VI. Award Administration Information

1. Award Notices

The Notice of Award (NoA) will be initiated by the DGO and will be mailed via postal mail to the Urban Indian organization. The NoA will be signed by the Grants Management Officer and this is the authorizing document under which funds are dispersed. The NoA, is the legally binding document, will serve as the official notification of the grant award and will reflect the amount of Federal funds awarded for the purpose

of the grant, the terms and conditions of the award, the effective date of the award, and the budget/project period.

2. Administrative Requirements

Grants are administered in accordance with the following documents:

- This Program Announcement.
- 45 CFR Part 74, "Uniform

Administrative Requirements for Awards to Institutions of Higher Education, Hospitals, Other Non-Profit Organizations, and Commercial Organizations."

- Grants Policy Guidance: HHS Grants Policy Statement, January 2007.

- "Non-Profit Organizations" (Title 2 Part 230).

- Audit Requirements: OMB Circular A-133, "Audits of States, Local Governments, and Non-Profit Organizations."

3. Indirect Costs

This section applies to indirect costs in accordance with HHS Grants Policy Statement, Part II-27. IHS requires applicants to have a current indirect cost rate agreement in place prior to award. The rate agreement must be prepared in accordance with the applicable cost principles and guidance as provided by the cognizant agency or office. A current rate means the rate covering the applicable activities and the award budget period. If the current rate is not on file with the awarding office, the award shall include funds for reimbursement of indirect costs. However, the indirect costs portion will remain restricted until the current rate is provided to DGO.

If an Urban Indian organization has questions regarding the indirect costs policy, please contact the DGO at (301) 443-5204.

4. Reporting

A. Progress Report. Program progress reports are required semi-annually. These reports will include a brief comparison of actual accomplishments to the goals established for the period, reasons for slippage (if applicable), and other pertinent information as required. A final report must be submitted within 90 days of expiration of the budget/project period.

B. Financial Status Report. Semi-annual financial status reports must be submitted within 30 days of the end of the half year. Final financial status reports are due within 90 days of expiration of the budget period. Standard Form 269 (long form) will be used for financial reporting.

Failure to submit required reports within the time allowed may result in suspension or termination of an active

agreement, withholding of additional awards for the project, or other enforcement actions such as withholding of payments or converting to the reimbursement method of payment. Continued failure to submit required reports may result in one or both of the following: (1) The imposition of special award provisions; and (2) the non-funding or non-award of other eligible projects or activities. This applies whether the delinquency is attributable to the failure of the organization or the individual responsible for preparation of the reports.

Telecommunication for the hearing impaired is available at: TTY 301-443-6394.

VII. Agency Contacts

For program-related information: Phyllis S. Wolfe, Director, Office of Urban Indian Health Programs, 801 Thompson Avenue, Suite 200, Rockville, Maryland 20852, (301) 443-4680 or phyllis.wolfe@ihs.gov.

For general information regarding this announcement: Danielle Steward, Health Systems Specialist, Office of Urban Indian Health Programs, 801 Thompson Road, Room 200, Rockville, MD 20852, (301) 443-4680 or danielle.steward@ihs.gov.

For specific grant-related and business management information: Denise Clark, Senior Grants Management Specialist, 801 Thompson Avenue, TMP 360, Rockville, MD 20852, 301-443-5204 or denise.clark@ihs.gov.

VIII. Other Information

None.

Dated: July 16, 2007.

Robert G. McSwain,

Deputy Director, Indian Health Service.

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BILLING CODE 4165-16-P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Government-Owned Inventions; Availability for Licensing

AGENCY: National Institutes of Health, Public Health Service, HHS.

ACTION: Notice.

SUMMARY: The inventions listed below are owned by an agency of the U.S. Government and are available for licensing in the U.S. in accordance with 35 U.S.C. 207 to achieve expeditious commercialization of results of

federally-funded research and development. Foreign patent applications are filed on selected inventions to extend market coverage for companies and may also be available for licensing.

ADDRESSES: Licensing information and copies of the U.S. patent applications listed below may be obtained by writing to the indicated licensing contact at the Office of Technology Transfer, National Institutes of Health, 6011 Executive Boulevard, Suite 325, Rockville, Maryland 20852-3804; telephone: 301/496-7057; fax: 301/402-0220. A signed Confidential Disclosure Agreement will be required to receive copies of the patent applications.

Photosensitization by Nuclear Receptor-Ligand Complexes and Cell Ablation Uses Thereof

Description of Technology: Androgen receptors (AR) mediate the effects of male steroid hormones and contribute to a wide variety of physiological and pathophysiological conditions. Prostate cancer development and progression are mediated through AR, a ligand-dependent transcription factor, and it is present in all stages of prostate carcinoma. Increased levels of PSA, an AR-induced prostate tumor-specific protein, are indicative of prostate cancer. Benign, non-cancerous conditions are also AR-dependent and can be therapeutic targets as well.

This technology is a method to cause AR-induced cell death (apoptosis) through photoactivation of a non-steroidal androgen receptor antagonist 1,2,3,4-tetrahydro-2,2-dimethyl-6-(trifluoromethyl)-8-pyridono[5,6-g]quinoline (TDPQ). Upon TDPQ binding to AR, a highly potent photocytotoxic reaction induced once the TDPQ-AR complex is exposed to visible light irradiation of a specific wavelength. The inventors have cell-culture results demonstrating that cell death is a function of TDPQ, AR and light irradiation. This treatment method can potentially target AR-containing cancerous cells, while sparing nearby cells that lack AR.

The process has been extended to other nuclear receptors by choice of other photoactivatable ligands for these receptors. Certain suitable ligands are marketed drugs.

Applications: Therapeutic compounds to treat AR related conditions such as prostate cancer, baldness, hirsutism, and acne; Potential therapeutics for progesterone and glucocorticoid receptor ligand related conditions such as breast and brain cancers, lymphoma, leukemia and arthritis; Method to treat androgen,