



THE FRANKLIN INSTITUTE
RESEARCH LABORATORIES

THE BENJAMIN FRANKLIN PARKWAY

PHILADELPHIA, PENNSYLVANIA 19103

(215) 448-1000

January 23, 1978

Timothy M. Finnegan, Esquire
Jacob & Medinger
1270 Avenue of the Americas
New York, New York 10020

Subject: FIRL Proposal No. 19210-I (Rev.)

Dear Mr. Finnegan:

The Franklin Institute Research Laboratories (FIRL) is pleased to submit the enclosed proposal to carry out work on the isolation of a quantity of "TGP" from cigarette smoke condensate (CSC) and from tobacco leaf, by the procedure of Dr. Karl Becker, in accordance with the discussions between you and Drs. Paul Kronick and L. A. Lee of FIRL on December 20, 1977, *et seq.*

This revised proposal is offered on a cost-plus-fee basis in the amount of \$51,650, as set forth in the enclosed Agreement. If the proposal and the Agreement are accepted, please countersign and return one copy. Please note that the Agreement provides for an advance payment equal to approximately one-fourth of the total cost to accompany the countersigned copy. Costs will be invoiced every four weeks, and the initial payment will be applied to the final costs of the project. This Agreement replaces the one originally submitted with our proposal dated January 6, 1978.

The total estimated amount will not be exceeded without your prior written authorization.

For replies to technical questions concerning this proposal, please contact Dr. L. A. Lee, Manager, Chemistry and Biosciences Section (215/448-1328). Mr. E. B. Rosenberg, Proposals Manager (215/448-1215), will answer any contractual questions.

The acceptance period for this revised proposal is 30 days.

Very truly yours,

ORIGINAL
SIGNED BY
K. E. Dotychu
Vice President

KED:rjk
enc.

Proposal No. 19210-I (Rev.)

ISOLATION OF "TGP" FROM CIGARETTE SMOKE CONDENSATE AND FROM TOBACCO LEAF

We propose to carry out the preparation of the cigarette smoke condensate (CSC) fraction and the tobacco leaf fraction known as "TGP," according to the published directions of Dr. Karl Becker and in accordance with discussions held on December 20, 1977 in a meeting at FIRL attended by you, Dr. Russell Stedman, Dr. R. A. Lloyd, Dr. L. A. Lee, Dr. Paul Kronick, and Dr. Louis Pytlewski.

The work will be performed on the premises of FIRL, in laboratories of the Chemistry and Biosciences Department, using CSC and leaf supplied by you.

It is agreed and understood that Dr. Russell Stedman will, as your representative, follow the course of the work, will make technical recommendations, and in general will be available for consultation, as appropriate.

We propose to accomplish the work as follows:

1. Task 1. Small-scale Pilot Preparation

Following the directions of Becker as closely as possible, we will attempt to prepare a small quantity of TGP from CSC.

2. Protocol for Larger-scale Preparation

During the execution of Task 1 and immediately following, we will prepare a written protocol for the preparation of the bulk of the TGP. Any proposed deviations from the Task 1 procedure (and thus from Becker's procedure) will be noted and rationalized. Upon acceptance of the protocol, the remaining tasks will be initiated.

3. Task 2. Preparation of 5g of TGP from CSC

We will undertake the preparation of approximately 5 grams of TGP, from CSC to be supplied by you, after Becker's procedure, as modified

by the provisions of the protocol. Analytical verification of the similarity of the material prepared will be sought, using Becker's methods. Delivery of the TGP will conclude this Task.

4. Task 3. Preparation of 5g of TGP from Tobacco Leaf

As close in time as feasible to the initiation of the preparation of TGP from CSC, we will undertake the preparation of approximately 5 g of TGP from leaf, to be supplied by you, preferably in a physical state suitable for solvent extraction. Becker's procedure, as modified by the provisions of the protocol, will be used. Analytical verification of the similarity of the material prepared will be sought, using Becker's methods.

Delivery of the TGP will conclude this Task.

5. Task 4. Isolation of TGP from Cigarette Smoke Trapped in Saline (CSS)

At the conclusion of the major preparative tasks, or simultaneously during their execution if feasible, we will use Becker's procedure for obtaining CSS (Ref. 1, p. 1713).

Sufficient cigarettes will be smoked in a small smoking machine, to be supplied by you, to obtain condensate for isolation of sufficient TGP for analytical verification. It is not intended to prepare gram-quantities of TGP for delivery to you; the objective of this task is to attempt to reproduce the published procedure, as a demonstration of the technique in the Becker publication.

An additional two weeks time is provided for the completion of this task.

6. Reports

We will summarize the details of the laboratory work in a final report to be prepared within two weeks of completion of the preparative work. Interim phone reports and short progress summary letters may be submitted as appropriate.

7. Timing

Our objective will be to deliver the required quantity of CSC-derived TGP within two months after the inception of the contract. The quantity of TGP from leaf will require a longer period, up to a total of three months after the inception of the contract.

We anticipate the pilot run (Task 1) can be carried out within three weeks after receipt of condensate, assuming no delays in equipment assemblage. Such delays are not expected.

Task 2 (CSC) probably can be started before Task 1 is completed, assuming initial steps of the separation procedure are not affected by the protocol to be developed.

Similarly, Task 3 can probably be started after Task 2 has been initiated. That is, it will not be necessary to complete Task 2, before beginning work on Task 3.

Overall elapsed time, therefore, is estimated at 3.5 months plus two weeks for report preparation.

Cost Estimate

The estimated cost for the 4-month effort to isolate about 5g of TGP from both leaf and CSC, an analytical size quantity of CSS, and submit a report is \$51,650.

The cost component breakdown is as follows:

Direct Labor	\$13,764
Indirect Labor	17,067
Other Direct Costs (materials and supplies, communication, etc.)	5,000
Burden and Fee	<u>15,819</u>
	\$51,650

Date: January 23, 1978
Agreement No. 19210-I (Rev.)

THE FRANKLIN INSTITUTE

AGREEMENT



THE FRANKLIN INSTITUTE

AGREEMENT

THE FRANKLIN INSTITUTE, a corporation of the Commonwealth of Pennsylvania, hereinafter called THE INSTITUTE, proposes to exert its best efforts to conduct for _____

Jacob & Medinger

1270 Avenue of the Americas

New York, New York 10020

hereinafter called THE SPONSOR, research, development and/or engineering in vestigations relating to _____ and in accordance with FIRL Proposal No. 19210-I (Rev.) dated January 23, 1978 entitled "Isolation of 'TSG' from Cigarette Smoke Condensate and from Tobacco Leaf." _____

This agreement is to become effective on the date signed by THE SPONSOR, and to terminate four months thereafter, and will become a contract between the parties hereto under the following terms and conditions:

1. THE SPONSOR desires that THE INSTITUTE undertake the project as set forth above together with such additional projects as are subsequently requested in writing by THE SPONSOR. THE INSTITUTE agrees, under the terms and conditions set forth herein, to devote such time and attention thereto and to any such additional requests which shall have been accepted in writing by THE INSTITUTE, as is reasonably needed for their sufficient conduct.

2. In consideration of the undertaking of the above mentioned project by THE INSTITUTE, THE SPONSOR agrees to reimburse THE INSTITUTE for:

- (a) Salaries and wages of Institute personnel directly devoted to the project plus the usual fringe benefits such as vacation, holiday, social security, etc.

- (b) An additional sum for overhead expenses not to exceed 105% of item (a)
- (c) Consulting services
- (d) Materials and supplies
- (e) Miscellaneous expenses such as telephone (toll and long distance) telegraph and other items directly applicable to the project.
- (f) Special equipment necessary for the project, subject to written approval by THE SPONSOR. At the termination of this agreement such equipment shall become the property of THE SPONSOR.
- (g) Traveling expenses, freight and express charges directly applicable to the project.
- (h) A General and Administrative charge on all costs.
- (i) A fee to cover costs not included in our standard overhead and General and Administrative rates.

3. THE SPONSOR agrees to reimburse THE INSTITUTE under the following terms: Invoices shall be rendered by THE INSTITUTE at four-week intervals for the expenses incurred on behalf of THE SPONSOR during that period. THE INSTITUTE operates on a 13-period accounting system annually. THE SPONSOR agrees to pay the invoices of THE INSTITUTE so rendered within thirty days after the date of THE INSTITUTE's invoice. The INSTITUTE reserves the right to discontinue work on the project accepted hereunder if THE SPONSOR fails to pay within the time herein specified any invoices rendered by THE INSTITUTE.

4. THE SPONSOR agrees to make available hereunder a sum of \$51,650* to cover the estimated cost of this project, and THE INSTITUTE agrees not to expend more than said amount without securing the written approval of THE SPONSOR.

5. THE INSTITUTE agrees that during the period of this agreement all information obtained by THE INSTITUTE through work on the project will be made available to THE SPONSOR at any reasonable time during THE INSTITUTE's working hours and agrees to communicate to THE SPONSOR, in the form of written progress reports, information pertinent to the project.

6. THE INSTITUTE agrees that unless specifically authorized in writing by THE SPONSOR, it will not conduct for any other sponsor during the term of this agreement, investigations within the scope of the project, provided, however, that the limitation of this paragraph does not apply to any contract now extant or that may be entered into in the future between THE INSTITUTE and the United States Government.

*An advance payment of \$12,912.50 should accompany the countersigned copy of this Agreement. Costs will be invoiced at four-week intervals, and the initial payment will be credited to the final costs of the project.

7. THE INSTITUTE represents that each of the scientific and technical employees of its Research Laboratories has entered into a contract of employment which provides for assignment to THE INSTITUTE of all discoveries and inventions made by such employee during the course of his employment.

8. THE INSTITUTE agrees that if during the period of this agreement, any employee of its Research Laboratories shall, to the knowledge of THE INSTITUTE, make a discovery or invention relating to and arising out of work on the project sponsored under this agreement, THE INSTITUTE will promptly make such discovery or invention known to THE SPONSOR. THE INSTITUTE further agrees to assign to THE SPONSOR any and all rights THE INSTITUTE may have or may assert to such discovery or invention. The application for Letters Patent shall be made at the expense of THE SPONSOR and through Attorneys named by THE SPONSOR and it is mutually agreed that any and all expenses, including staff time and travel, for and in connection with the preparation, filing, prosecution, assignment and recording of such application are payable by THE SPONSOR. All said expenses incurred by THE INSTITUTE under this paragraph shall be separately invoiced to and paid by THE SPONSOR without reference to any other sums provided for in this contract. It is understood that THE INSTITUTE does not and can not assume any responsibility for patent infringements for products manufactured and/or sold by THE SPONSOR in areas of work developed or investigated by THE INSTITUTE.

9. THE SPONSOR agrees to submit to THE INSTITUTE all proposed advertising, sales promotion, technical publication and other publicity matter referring to the project or results of the research project or information obtained therefrom wherein the name of THE INSTITUTE is mentioned or implied. THE SPONSOR further agrees not to publish or use said advertising, sales promotion, technical publication or other publicity matter until same shall have received the approval in writing of THE INSTITUTE. THE INSTITUTE agrees not to publish or make known to others the subject or results of said research project or information obtained therefrom without approval in writing from THE SPONSOR.

10. THE SPONSOR shall have the right to terminate this contract at any time upon 30 days written notice. THE SPONSOR agrees to reimburse THE INSTITUTE for commitments that have been made up to and including the date of termination.

ACCEPTED

THE SPONSOR

THE INSTITUTE

By _____

By K. E. Dorsch

Title _____

K. E. Dorsch
Vice President, FIRL

Date _____

Date January 23, 1978