



(3) The fractional uptake of  $I^{131}$  multiplied with the cardiac output will represent the partial blood flow to the entire head, while the fractional uptake of  $K^{42}$  times the CO will represent the partial blood flow to the noncerebral tissue of the head. Therefore, the partial blood flow through the brain will be determined as the difference between the fractional uptake of  $I^{131}$  and  $K^{42}$  multiplied by the cardiac output.

(4) The method will be evaluated under the conditions of hypoxia, hypo and hypercapnia which are supposed to affect the blood circulation in cerebral tissue dramatically.

SECOND: By amending and supplementing the delivery schedule under paragraph A, PART II, TIME OF PERFORMANCE AND DELIVERY INSTRUCTIONS, of the Schedule, as follows:

<u>Item</u>	<u>Date Due</u>
1 b (5) and c (Research)	31 March 1959
2 a (Informal Reports)	30 June 1958, 31 December 1958
b (Formal Reports)	31 March 1958, 30 September 1958
c (Formal Final Report)	30 April 1959

THIRD: By adding FIFTEEN THOUSAND FIVE HUNDRED THIRTY-NINE DOLLARS AND NO CENTS (\$15,539.00) to PART IV, ESTIMATED COST, of the Schedule, thereby increasing the total estimated cost to THIRTY-TWO THOUSAND FOUR HUNDRED THIRTY-NINE DOLLARS AND NO CENTS (\$32,439.00).

FOURTH: By deleting PARTS I and II of the General Provisions, effective the date of this Supplemental Agreement; and by substituting in lieu thereof the following PART I:

PART I - GENERAL PROVISIONS

All the provisions of Section A and B-2 (h) of Section B, with the word eighteen inserted after the word "within" in the second line and the words, The Scientific Findings under this contract, added following the word "designated" in the last line, of Basic Agreement Nr AF 18(600)-239, by and between the parties hereto, dated 15 April 1955, as amended by Supplemental Agreements 1, 2, and 3 thereto, dated 18 November 1955, 15 April 1957, and 30 December 1957, respectively, and any subsequent supplemental agreement hereinafter entered into modifying said Basic Agreement during the existence of this contract for the purpose of keeping said Basic Agreement in accord with current laws, executive orders, regulations or agreements between the parties thereto, are incorporated by reference with the same force and effect as though fully set forth herein. Subsequent supplemental agreements to said Basic Agreement shall operate prospectively only from the date of written execution and acceptance by the parties thereto.

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342 - 62 - A - 5057 - 4/4  
28 NOV 95

FIFTH: By changing the Negotiated Overhead Rates clause reference number in PART V, OVERHEAD RATE, of the Schedule, to read 27 in lieu of 32 and by continuing in effect the provisional overhead rate of 43% of direct salaries and wages, including vacation and sick leave pay but excluding consultant's salaries, as stated in PART V, OVERHEAD RATE, of the Schedule, as herein amended.

SIXTH: By deleting PART VIII, TRAVEL, of the Schedule, effective the date of this Supplemental Agreement and by substituting in lieu thereof the following PART VIII:

PART VIII - TRAVEL

With reference to Clause 3(a)(4) of the General Provisions, travel reimbursement will be made in accordance with the following:

Expenditures by the Contractor for the transportation of the persons directly engaged in the performance of the work hereunder, (including subject to the prior written approval of the Contracting Officer, technical and professional personnel interviewed with a view to employment under this Contract), and a per diem rate not exceeding \$12 per person for each calendar day or one-fourth thereof for each quarter day or part of each quarter day during the period of travel either (i) within the Continental limits of the United States or (ii) foreign travel outside the Continental limits of the United States; provided, that all such foreign travel shall be limited to persons directly engaged in the performance of the work hereunder and shall be authorized or approved in writing by the Contracting Officer; provided, further, that expenses for transportation hereunder by motor vehicle other than common carrier or rented automobile shall be reimbursed on an actual cost basis, or, at the Contractor's option, on a mileage basis at a rate not exceeding eight (8) cents per mile per vehicle, in lieu of the actual expenses of such transportation. In addition, if this contract is declared an "Urgent Defense Research Contract," the special costs contemplated by ARDC Supplement 2 to AFPI may be approved.

SEVENTH: By deleting PART XIII, REIMBURSEMENT FOR COST, added to the Schedule by Supplemental Agreement 1(58-80), effective the date of this Supplemental Agreement.

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342 - 62 - A - 5057 - 4/4  
28 NOV 95

EIGHTH: By adding PART XIV to the Schedule, effective the date of this Supplemental Agreement, as follows:

PART XIV - HUMAN SUBJECTS

It is hereby understood and agreed that any and all treatments and observations involving human subjects in connection with this contract shall be carried out within the limits of the accepted code of ethics of the American Medical Profession for clinical and laboratory investigations.

NINTH: By adding PART XV to the Schedule, as follows:

PART XV - ANTICIPATORY COSTS

All costs which have been incurred on or after 1 April 1958 by the Contractor, not exceeding ONE THOUSAND FIVE HUNDRED DOLLARS AND NO CENTS (\$1,500.00), in anticipation of this contract and prior to the signing thereof and which, if incurred after the signing of this contract, would have been considered allowable items of cost under Clause 3(a) of the General Provisions, shall be allowable items of cost hereunder.

Administrative Commitment Document (AFPI FORM 6B) dated 22 April 1958 is attached hereto and made a part hereof.

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342 - 62 - A - 5057 - 4/4  
28 Nov 95