

AD-A141 781

DEFENSE ADVANCED RESEARCH PROJECTS AGENCY

R & D STATUS REPORT.

ARPA ORDER NO.
#4507

PROGRAM CODE NO.
#N00019

CONTRACT NO.
N00014-82-K-0680

CONTRACT AMOUNT
\$438,905.00

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SHORT TITLE OF WORK

ULTRASENSITIVE DETECTION OF CHEMICAL SUBSTANCES

REPORTING PERIOD
JULY 1, 1983 - SEPTEMBER 30, 1983

EFFECTIVE DATE OF THE CONTRACT
JULY 1, 1982

EXPIRATION DATE OF THE CONTRACT
SEPTEMBER 30, 1983

PRINCIPAL INVESTIGATOR
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SCHOOL OF MEDICINE

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I. PROGRESS REPORT PERIOD FOR JULY 1, 1983 TO SEPTEMBER 30, 1983

In the first quarter of our extension we have concentrated our efforts on tasks 4 and 6. We have made good progress and have nearly completed both tasks.

TASKS

Tasks 1, 2, 3 and 5

As stated in our previous report, these tasks are considered complete.

Task 4

Progress is reported on (1) the

Production selection and characterization of monoclonal antibodies with specificity for trapped target molecules *and (2) the*

The purchase of additional equipment and use of new procedures of sterilization and glassware cleaning has helped eliminate problems of contamination. While contamination continues to occasionally occur, it has not been as severe as past episodes. With contamination reasonably in check we have completed 17 fusions resulting in several hundred fused cells that have been cloned and selected for IgG antibody against AChE-DFP conjugate. The result of this effort has been the selection of 5 stable clones that have been producing monoclonal antibody (IgG) against AChE-DFP conjugate for several weeks. Supernatants from these clones have been taken and purified by ammonium sulfate precipitation and filter sterilized. Immunoelectrophoresis has shown the monoclonal antibody produced by the 5 hybridomas belongs to at least 3 different classes of mouse IgG molecule. Further characterization of these monoclonal antibodies will be carried out in the coming weeks together with more fusions and hybridoma selection. Within the next quarter we expect to bind these monoclonal antibodies to fluorescent spheres. These spheres will then be used to identify AChE-DFP conjugates bound to polystyrene plates.

Task 6

Production of fluorescent loaded antibody signal packets

We have continued to quantitate and improve our goat anti-rabbit/rabbit IgG assay. We have determined the number of molecules of goat anti-rabbit IgG bound to polystyrene plates and found a linear range of binding depending on the concentration of GAR in the binding solution. We have also bound rabbit IgG to fluorescent spheres and tested the reactivity of these beads with antibody bound to polystyrene plates. Technically we have met the requirements of task 6 by binding antibody to our fluorescent spheres, however, we believe the contract will be best served if we can demonstrate binding of these antibody prepared beads to a surface antigen. We expect to have photographs of beads bound to surface antigen within the next quarter.

I. Changes in personnel

Jeannette Rampone-Gulder has left her position as staff assistant with our group and moved to Colorado. Karan Thompson is our new staff assistant. Karan is well qualified and in her first month of work has done an excellent job.

II. Fiscal Status Report

Please see attached reports. Fiscal reports are not yet available for the month of September from the university.

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MONTHLY REPORT

ACCOUNT NUMBER (UNM): 282-540-100

TODAY'S DATE: September 30, 1983

ACCOUNT NAME: DARPA

SUBMITTED TO: Warren Heffron, M.D.

REPORT FOR PERIOD ENDING: 7/31/83

PERIOD OF AWARD: 7/1/82-6/30/83

CATEGORY	APPROVED BUDGET	EXPENDITURES FOR July	EXPENDITURES TO DATE	OUTSTANDING TODAY	BALANCE	BUDGET TRANSFERS
REVENUE (100)						
S TECH.(115)	2,133.00	614.08	581.76		937.16	
S W-PROF.(117)	122,729.00	8,793.15	97,829.74		16,106.11	
MAT'L S & SERVICES(120)	41,806.00	4,156.75	39,951.85	374.73	(2,337.33)	
ANIMALS(122)	2,034.00		2,202.33		(168.33)	
EQUIPMENT(130)	124,476.00		64,510.28	51,421.45	8,544.27	
TRAVEL(140)	10,000.00		2,766.00		7,234.00	
FRINGE BENEFITS(150)	21,080.00	1,427.38	15,801.57		3,851.05	
CONSULTANTS(180)	17,504.00		3,372.64		14,131.36	
OTHER(188)	13,590.00	109.39	7,255.03	8.75	6,216.83	
INDIRECT COSTS(190)	83,553.00	6,191.31	69,554.01		7,807.68	
	438,905.00		303,825.15	51,804.93	62,322.80	
MONTHLY TOTALS		21,292.06				

BUDGET TRANSFERS NEEDED IN FOLLOWING CATEGORIES: Budget transfers were requested in September for the following

categories: 117, 120, 122, and 190 to cover necessary expenses until the grant is renewed.

COMMENTS OR QUESTIONS:

ACCOUNT NUMBER (UNM): 282-540-100
 ACCOUNT NAME: DARPA
 REPORT FOR PERIOD ENDING: 8/31/83

TODAY'S DATE: October 11, 1983
 SUBMITTED TO: Warren Heffron, M.D.
 PERIOD OF AWARD: 7/1/82-9/30/83

CATEGORY	APPROVED BUDGET	EXPENDITURES FOR August 1983	EXPENDITURES TO DATE	OUTSTANDING TODAY	BALANCE	BUDGET TRANSFERS
REVENUE (100)						
S/W-TECH.(115)	2,133.00	646.40	1,842.24		290.76	
S/W-PROF.(117)	136,364.00	8,793.15	115,416.04		20,947.96	7,504 - 10/7 4,131 - 9/28
MAT'L S & SERVICES(120)	48,914.00	4,146.38	48,254.98	1,912.56	-1,253.54	7,108 - 9/28
ANIMALS(122)	2,784.00	294.54	2,496.87		287.13	750 - 9/28
EQUIPMENT(130)	116,972.00	52,443.13	116,953.41		18.59	(7,504) - 9/28
TRAVEL(140)	3,142.00		2,766.00	415.76	-40.76	(6,858) - 9/28
FRINGE BENEFITS(150)	21,080.00	1,422.89	18,651.84		2,428.16	
CONSULTANTS(180)	13,373.00		3,372.64		10,000.36	(4,131) - 9/28
OTHER(188)	6,090.00	577.00	5,648.42	59.87	381.71	(5,500) - 9/28
INDIRECT COSTS(190)	88,053.00	6,511.00	82,256.32		5,796.68	(4,500) - 9/28
MONTHLY TOTALS	438,905.00	74,834.59	397,658.76	2,389.19	38,857.05	

BUDGET TRANSFERS NEEDED IN FOLLOWING CATEGORIES: Budget transfers were requested to cover encumbrances in categories

120 and 122, and to pay salaries until the grant is renewed.

COMMENTS OR QUESTIONS: