

Team Searches for Marine Extracts Useful in Treating Cancer

A Sea Grant Team at the University of Oklahoma will continue its search for extracts of marine organisms that may be useful in treating cancer and leukemia, hypertension, and cardiovascular disease, under a \$90,000 grant announced today by the National Oceanic and Atmospheric Administration.

According to Dr. Robert B. Able, Director of the Commerce Department agency's Office of Sea Grant: "This research program is landlocked Oklahoma, the only non-coastal or non-Great Lakes state with a Sea Grant, is one of the most significant programs designed to discover and identify marine substances with potential medical applications."

Supported by Sea Grant since 1971, the Oklahoma team of chemists and pharmacologists has provided the National Cancer Institute with extracts from 1655 marine species for testing against experimental tumor systems.

Of these, 104 have been confirmed as active against leukemia in mice and 30 against human cancer cells in tissue culture. Some aspects of the University of Oklahoma program are funded by the National Cancer Institute.

Professors A.J. Weinheimer, L.S. Ciereszko, P.N. Kaul, and F.J. Schmitz and their students skin dive to collect their specimens for study. Marine plants and animals are collected from the tropical coral reefs of the Bahamas, Bermuda, Jamaica, Florida, and Eniwetok.

The team also obtains specimens from the Drug Development Branch of the National Cancer Institute.

The Oklahoma team first derives crude extracts from the specimens. After the extracts' pharmacological action has been confirmed, they are subjected to chemical study to isolate the pure compounds with potential usefulness as drugs, and the structure of these pure compounds is determined.

Larger quantities are then obtained - by harvesting or by synthesizing them in the laboratory - and referred to interested pharmaceutical companies for the preclinical and clinical studies required before new drugs may be introduced.

Under an agreement with the university, the Uphohn Company screens the marine extracts for certain types of bioactivity. Last year, preliminary results of the company's tests found one marine extract active against bacteria and another against viruses.

Marine organisms of the greatest interest to the Oklahoma scientists now are corals, sea whips, and sea fans, anemones, and other animals low on the evolutionary ladder.

The group also is studying two species of sponges, because extracts from these sponges lower blood pressure and improve the tone of the heart muscle.

Natural and synthetic chemical compounds with these properties are potentially useful in treating high blood pressure and heart disease.

A major objective of the Sea Grant team this year is development of streamlined standardized techniques for measuring the effects of the marine extracts. The team also will study the most potent non-proteinaceous marine toxin known - palytoxin.

(continued on page 9)

LEGAL NOTICE

NORTH SLOPE BOROUGH NOTICE OF SPECIAL ELECTION

Date of Election: July 29, 1975
2. Time of Opening and Closing of the Polling Places: The polling places shall be open between the hours of 8:00 A.M. and 8:00 P.M.

3. Location of Precincts, Polling places and Description of Voting Precincts by Boundary.

ANAKTUVUK PASS PRECINCT.

Beginning at the peak of Soapak Mt.; thence southerly to the peak of Kollituk Mt., thence easterly to the peak of Three River Mt.; thence northerly to the peak of Mt. Stuver; thence westerly to the peak of Soapak Mt., the point of beginning.

Polling place: School.

BARROW PRECINCT.

Beginning at 150 west longitude and the boundary of the State of Alaska in the Arctic Ocean; thence southerly along 150 west longitude to its point of intersection with 68 north latitude; thence westerly along 68 north latitude to its point of intersection with a north-south line drawn through Point Franklin on the west; thence northerly along the north-south line drawn through Point Franklin on the west; to the boundary of the State of Alaska in the Arctic Ocean; thence easterly along the boundary of the State of Alaska to 150 west longitude; the point of beginning excluding Browerville and Anaktuvuk Pass Precincts.

Polling place: Youth Center.

BARTER ISLAND PRECINCT.

That area beginning at a point on the International Boundary between Alaska and the Dominion of Canada and the intersection of the boundary of the North Slope Borough; thence northerly along the boundary common to the State of Alaska and Canada to the northernmost boundary of the State of Alaska; thence meandering westerly to its intersection with 150 west longitude; thence southerly along 150 west longitude to its intersection with 68 30' north latitude line to the easterly boundary of the State of Alaska on the International Boundary, the point of beginning.

Polling place: BIA School.

BROWERVILLE PRECINCT.

Beginning where the outlet of Tasigrook Lagoon empties into the Arctic Ocean; thence upstream in the center of said outlet to Tasigrook Lagoon; then along the south side of said lagoon and the southerly side of Isatkoak Lagoon to the most southerly point; thence due east to Elison Lagoon. This precinct includes Doctor Island, Deadmans Island, the Dew Line Installation, Arctic Research Laboratory, and the Pacific Architects and Engineers Incorporated site.

Polling place: Margie Nageak's.

NUISQUT PRECINCT.

Beginning at 150 59' 36" west longitude and 70 12' 30" north latitude at the south bank of Nechelek Channel thence meander southerly along the bluff for approximately one mile; thence westerly; northerly and easterly to the point of beginning to include all of that new townsite of

Nuisqut.

Polling place: Nuisqut Health Center.

POINT HOPE PRECINCT.

All of that area draining into the Arctic Ocean from Cape Thompson to Cape Lisbourne, including the military site.

Polling place: Tigara Hall.

POINT LAY PRECINCT.

Beginning at 162 57' 30" west longitude and 69 45' 10" north latitude to include the new and old townsites of Point Lay and Kaktovik river delta.

Polling place: Amos Agnasagga's.

WAINRIGHT PRECINCT.

All of that area draining into the Arctic Ocean from Cape Lisbourne on the west to a north-south line drawn through Pt. Franklin on the east.

Polling place: National Guard Armory.

4. The qualifications of voters:

A person may vote who:

(1) is a citizen of the United States, qualified to vote in the State of Alaska elections;

(2) has been a resident of the North Slope Borough for 30 days immediately preceding the date of the election;

(3) is registered to vote in the State of Alaska elections;

(4) is not disqualified under Article V of the Constitution of the State of Alaska.

5. The type of election, general or special: The election is a special election.

6. The proposition submitted to the elector is:

PROPOSITION
Shall the North Slope Borough, Alaska; issue general obligation bonds in an amount not to exceed the sum of **TWELVE MILLION FIVE HUNDRED THOUSAND DOLLARS (\$12,500,000.00)** for the purpose of financing the cost, in whole or in part, of the construction, improvement, betterment, repair, reconstruction, or acquisition of sanitary facilities in Service Area 10 (the general area of the Prudhoe Bay Oil Development) in the North Slope Borough; including water and sewer treatment facilities, solid waste disposal facilities, facilities for the storage and distribution of water and storage and collection of sewage and solid waste, together with all necessary appurtenances, equipment, furnishings and facilities, and the acquisition of lands or rights in lands in connection therewith; the full faith, credit, and resources of the Borough shall be pledged to the payment of the principal and interest on such bonds; the bonds may also be paid from special assessments within Service Area 10 and from services charged to be paid by users of said facilities, all in accordance with and ratifying and approving the provisions of Ordinance 75-12 of the North Slope Borough Assembly on June 17, 1975.

7. Absentee Ballots may be obtained by ordering them from the Clerk of the North Slope Borough, Post Office Box 546, Barrow, Alaska 99723.

DATED: June 20, 1975.

LLOYD AHVAKANA, Clerk

North Slope Borough

Pub.: July 2, & 9, 1975.

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LEGAL NOTICE

INVITATION FOR BIDS

STATE OF ALASKA

DEPARTMENT OF HIGHWAYS

Sealed bids in single copy for furnishing all labor, materials and equipment, and performing all work on Project BWRP-031-2(36), Chester Creek Underpass described herein, will be received until 2:00 p.m. prevailing time, July 22, 1975 in the Commissioner's Office, Department of Highways, Island Center Building, Douglas, Alaska.

This project will consist of constructing a bikeway underpass of Ingra-Gambell Streets located in Anchorage, Alaska.

Principal items of work consist of the following: 610 tons of selected material; 417 tons of crushed aggregate base, grading C; 142 tons of hot asphalt pavement; 156 linear feet of 10'-10 1/2"x9" structural plate pipe-arch; 1,040 linear feet of type I, curb and gutter; Structure Illumination, Traffic Count Station, and Remove and Re-install luminaire pole and base, lump sum, all required; and miscellaneous items of work.

All work shall be completed in 125 calendar days.

Plans and specifications may be obtained by all who have a bona fide need for them for bidding purposes from the Chief Road Design Engineer, P.O. Box 1467, Juneau, Alaska 99802 at a charge of \$10.00 (non-refundable) for each assembly. Checks or money orders should be made payable to: State of Alaska, Department of Highways. Plans may be examined at Department of Highway Offices in Anchorage, Fairbanks, Valdez.

Walter B. Parker
Commissioner of Highways
Pub.: July 2, 9 & 16, 1975

LEGAL NOTICE

INVITATION FOR BIDS

STATE OF ALASKA

DEPARTMENT OF HIGHWAYS

Sealed bids in single copy for furnishing all labor, materials and equipment, and performing all work on Project RF-035-1(22), Wasilla to Big Lake Junction, Paving described herein, will be received until 2:00 p.m. prevailing time, July 24, 1975 in the Commissioner's Office, Department of Highways, Island Center Building, Douglas, Alaska.

This project will consist of reconditioning and hot asphalt pavement on 10.1 miles of roadway near Wasilla, Alaska.

Principal items of work consist of the following: 7,400 tons of crushed aggregate base, grading "C"; 537 stations of reconditioning; 22,800 tons of hot asphalt pavement; 1,369 tons of AR-10 asphalt cement; 57 tons of CRS-2 emulsified asphalt for tack coat; railroad crossing (asphalt) and railroad signal and relay case foundation, lump sum, all required; and miscellaneous items of work.

All work shall be completed in 150 Calendar Days.

Plans and specifications may be obtained by all who have a bona fide need for them for bidding purposes from the Chief Road Design Engineer, P.O. Box 1467, Juneau, Alaska 99802 at a charge of \$10.00 (non-refundable) for each assembly. Checks or money orders should be made payable to: State of Alaska, Department of Highways. Plans may be examined at Department of Highway Offices in Anchorage, Fairbanks, Valdez.

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