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News Release

GRADUATE RESEARCH CENTER OF THE SOUTHWEST
SOUTHWEST CENTER FOR ADVANCED STUDIES

P. O. Box 30365 Dallas, Texas 75230 ADams 1-1471



Al Mitchell
Director of Information

RELEASE IMMEDIATELY

GRCSW SCIENTIST TURNS ELECTRON MICROSCOPE ON DNA TO STUDY ITS FORM
AND STRUCTURE

Dallas --

The Graduate Research Center of the Southwest has received a \$23,000 grant from the National Science Foundation to support a two-year program in studying the form and structure of DNA. Principal investigator is Asst. Prof. Dimitrij Lang of the Division of Biology. DNA is that somewhat mysterious biological molecule which is believed to play an important part in transmitting the hereditary characteristics of human beings.

Professor Lang is using an electron microscope to study DNA. This highly powerful instrument enables him to capture distinct pictures, or micrographs, of the DNA molecules, from which biologists can draw valuable information.

The DNA molecule is an acid which is carried by proteins in the nucleus of living cells. All genes contain DNA, which scientists believe carries within it all the information that will be a major factor in the development of a human being.

Professor Lang explains, "All living organisms contain essential large molecules. Of particular interest are the nucleic acids, DNA and RNA, which are the structural key substances determining the activity, inheritance, and evolution of living cells. Electron microscopy allows the direct observation of the size and shape of single biopolymers. Two general items of study with nucleic acids are anticipated: Physico-chemical behavior in solution and biologically significant properties and effects related to molecular morphology.

Morphology is the study of the form and structure of plants and animals, their systems, organs, tissues, and cells. While morphology is concerned with form, physiology deals with function.

(MORE)

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The method Dr. Lang uses in making pictures of DNA avoids undue bunching of the molecules and a distorting effect as the film dries.

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