Center for Biocatalysis

(National Center for the Design of Molecular Function)

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Established as a center in 1988. At the present time, no one has been able to isolate the interaction of molecules during a chemical reaction because of the speed at which it occurs. Instruments are being developed by the center that will store large amounts of information occurring simultaneously. By understanding the sequence of events during a chemical reaction, different molecules may be "programmed" for specific tasks. These "biomedical microchips" could benefit society in cancer research, industrial and environmental monitoring and waste management.

Overview

Current State Contract	$0
FY92 Matching Funds	$2,465,000
Cumulative	$3,189,030
Total Jobs Created	20
Industry	0
Center	20
Direct Center Spin-off	1
Total Benefiting Utah Companies	4
License Agreements	1
Patents Applied	3
Patents Issued	0

Technologies

*Parallel processing electronics

*Spectroscopic Technology

*Biocatalysis

*Infrared imaging

*Molecular design

*Bioanalytical instrumentation

*Molecular components and portable instrumentation for specialized monitoring

*Elucidate bio-catalytic processes involving metals and develop synthetic analogs

*New technology in automation data analysis and handling

Status

*Established as National Institutes of Health Biomedical Research Resource Center

*New breakthrough in infrared imaging

*Approximately $2.25M in equipment installed

*"TransAcq" parallel processing module (powers up a PC to be equal to a VAX 8650)

*Software written linking module to standard X windows format

*Two-color photothermal spectroscopy developed

Economic Impact

*"TransAcq" module being licensed to CSA, a Provo Co.

*Breakthrough in infrared imaging could make significant contribution in early disease detection

*"WhetStone", a center spin-off will use technology in risk assessment management

*ENVIROL, INC. A new center start-up company will use the center technology in the contaminated soils area.

*New spectroscopy instrumentation being developed with local industries for special biomedical applications

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