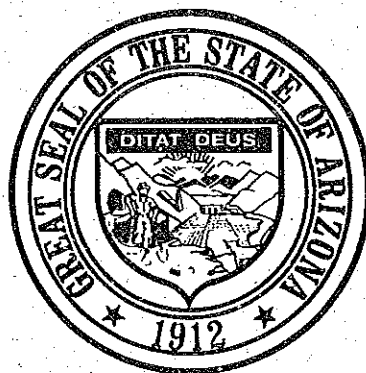


**ARIZONA DISEASE CONTROL RESEARCH COMMISSION**

**ANNUAL REPORT**



**FY 1988-89**



Rose Mofford  
Governor

# ARIZONA DISEASE CONTROL RESEARCH COMMISSION

## MESSAGE FROM THE CHAIRMAN OF THE COMMISSION

### COMMISSIONERS

EX-OFFICIO MEMBER  
AND CHAIRMAN  
Ted Williams

GENERAL PUBLIC  
Jane Aiken, J.D.  
James Matthews  
Jay Robertson

MEDICAL COMMUNITY  
Herbert Abrams, M.D.  
William Crisp, M.D.  
Jon Rubach, M.D.

SCIENTIFIC RESEARCH  
COMMUNITY  
Emmanuel Akporiaye, Ph.D.  
Robert Gilsdorf, M.D.  
Mary Hendrix, Ph.D.

EXECUTIVE ASSISTANT  
Robert Byars, Ph.D.

January 15, 1990

The Arizona Disease Control Research Commission (ADCRC) was established by the Arizona Legislature in 1984. The ADCRC provides funds for research on the causes, epidemiology, diagnosis, treatment, and prevention of diseases affecting Arizonans. The Commission is unique in the United States in its expenditure of public funds for basic research on a wide range of medical and health concerns. Funds are appropriated annually from penalties or interest on delinquent taxes. By statute, the Commission must prepare and submit a report on or before January 15 of each year to the Governor, the President of the Senate and the Speaker of the House of Representatives.

During 1988-89, the Commission awarded twenty-six new contracts for medical and health research in Arizona. Forty-eight contracts were continued from the previous year. Summaries of the progress of the fifty-eight projects in force during 1988-89 are presented in the second issue of ABSTRACTS, a copy of which may be obtained from the Commission.

As Chairman of the Arizona Disease Control Research Commission, I am pleased to report on the progress of this unique State program. The Commissioners deserve our thanks for the time and energy they have devoted to the task of reviewing and awarding the research contracts. The improvement of the health of Arizona citizens through research by Arizona scientists and clinicians continues to be the primary mission of the ADCRC.

Ted Williams

## COMMISSION MEMBERS:

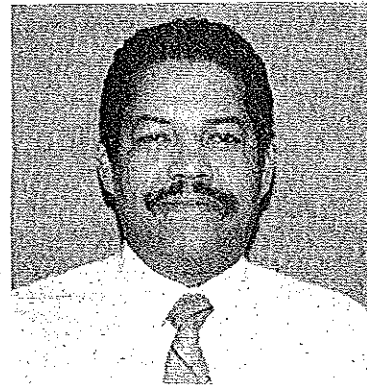
The Governor appoints the nine members who serve on the Commission. Three members represent the medical community, three represent the scientific research community and three represent the general public. Members are appointed for three year terms. The Director of the Department of Health of Services serves as ex-officio member and chairs the Commission.

Members as of the end of Fiscal Year, 1988-89, include:

### Ex-Officio Member and Chairman

*Ted Williams*

Director  
Arizona Department of Health Services  
1740 West Adams, Room 407  
Phoenix, AZ 85007



*Ted Williams was appointed Director of the Arizona Department of Health Services (DHS) in January, 1987. Mr. Williams has extensive experience in state government. He has served as Deputy Director of DHS, Deputy Director of the Arizona Department of Transportation, and consultant to the Arizona Legislature. Prior to his appointment as DHS Director, Mr. Williams was Executive Vice President of Baptist Hospitals and Health Systems.*

### General Public Representatives

*Jane H. Aiken, J.D.*

College of Law  
Arizona State University  
Tempe, AZ 85821



*Ms. Jane Aiken is Associate Professor of Law at Arizona State University. She was admitted to the Arizona Bar in 1986. Before joining the law faculty at ASU in 1985, Ms. Aiken was an Advocacy Fellow at the Center for Applied Legal studies at Georgetown. She is a member of the Arizona Civil Liberties Union, a board member of Mobilization Against AIDS (Phoenix), and she serves on the Medical Ethics Board of Phoenix Indian Hospital. Ms. Aiken chaired the*

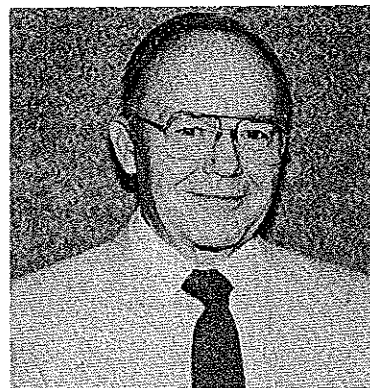
*Governor's Task Force on AIDS. She was appointed to the ADCRC by Governor Mofford in June, 1988; her term expires in January, 1991.*

*James B. Matthews*  
AZ Corporation Commission  
1200 West Washington  
Phoenix, AZ 85007



*Mr. Matthews has served as Executive Secretary for the Arizona Corporation Commission since 1985. Prior to this, Mr. Matthews was Deputy Director of the Arizona Health Care Containment System (AHCCCS) and a policy advisor in the Department of Health Services. From 1979-1983, Mr. Matthews was a special assistant to Governor Bruce Babbitt. He received his Bachelor's degree in Education and Political Science from the University of New Mexico and his Master of Public Affairs degree from Arizona State University. Mr. Matthews' term expires in January, 1992. He was appointed by Governor Mofford in January of 1989.*

*Jay W. Robertson*  
1002 E. Myrtle  
Phoenix, AZ 85020

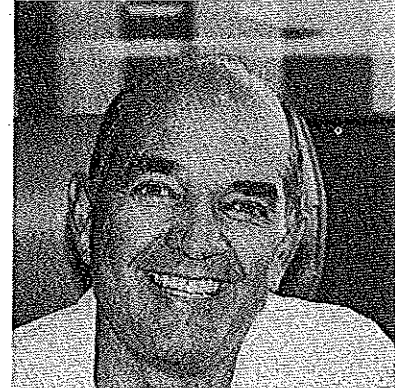


*Mr. Robertson has lived in Arizona since 1961. He is a retired Project Manager of Honeywell Information Systems. Prior to his position at Honeywell, Mr. Robertson was an engineer with the General Electric Company for 25 years. He brings to the Commission a strong interest in medical issues and a wealth of experience in reviewing grant applications. Mr. Robertson was appointed to the Commission in March, 1987. His term expires in January, 1990.*

## Medical Community Representatives

*William E. Crisp, M.D.*

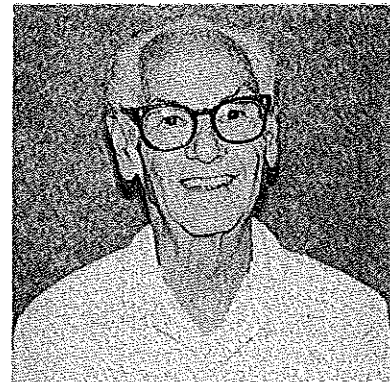
1144 E. McDowell Road  
Suite 300  
Phoenix, AZ 85006



*Dr. William Crisp currently holds a number of positions. He is Clinical Associate Professor at the University of Arizona College of Medicine. At the Maricopa County Hospital, Dr. Crisp is Chairman of the Department of Obstetrics and Gynecology, Director of Oncology, Director of the Research Committee, and Director of the Cryobiology Laboratory. He is Chairman of the Department of Obstetrics and Gynecology at Good Samaritan Hospital. Dr. Crisp has served as President of both the Arizona Medical Association and the Maricopa Medical Society. He was appointed to the Commission by Governor Mofford in June, 1988; his term expires in January, 1991.*

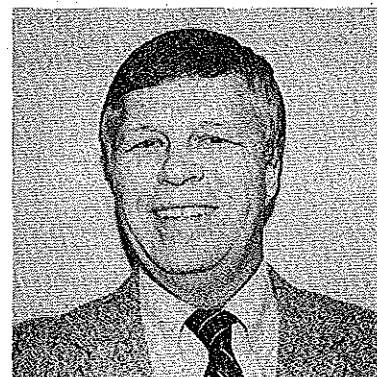
*Herbert K. Abrams, M.D.*

College of Medicine  
Department of Family and Community Medicine  
The University of Arizona  
Tucson, AZ 85724



*Dr. Herbert Abrams was the founder and Head (1968-1978) of the Department of Family and Community Medicine at the University of Arizona College of Medicine. From 1978 to 1983, he was Director of the Arizona Center for Occupational Safety and Health, which he also founded. Dr. Abrams, currently, is Professor of Family and Community Medicine at the University of Arizona. He has been an Arizona resident for 20 years. Dr. Abrams was reappointed to the Commission in 1987. His term of office expires in January, 1990.*

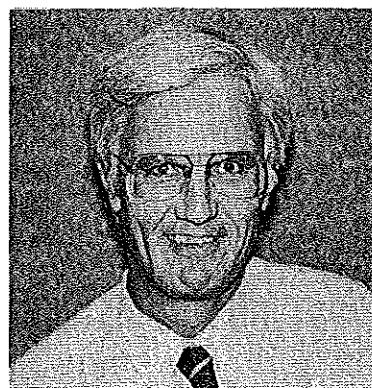
*Jon P. Rubach, M.D.*  
 1500 S. Dobson Road, Suite 119  
 Mesa, AZ 85202



*Dr. Jon Rubach was appointed to the Commission by Governor Mofford in January of 1989. He has been a private practitioner in medical oncology in Mesa since 1976. He received his medical school training at the State University of New York at Buffalo from 1969-1973, and his internal medicine and oncology training at Affiliated Hospital in Buffalo from 1973-1976. Dr. Rubach served as Secretary of the Maricopa County Medical Society in 1988 and is President-Chief of Staff of Desert Samaritan Hospital in Mesa. He also holds a law degree from the University of Notre Dame and a Bachelor of Science degree in Biology from Siena College. Dr. Rubach's term expires in January, 1992.*

#### Scientific Research Community Representatives

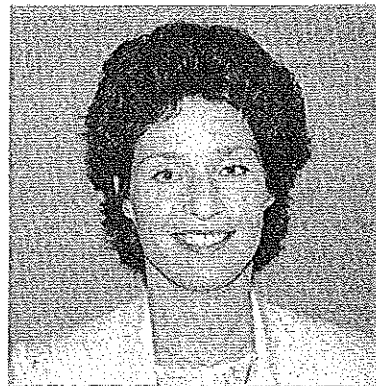
*Robert B. Gilsdorf, M.D.*  
 1300 N. 12th Street  
 Suite 407  
 Phoenix, AZ 85006



*Dr. Robert Gilsdorf is Director of Integrated Medical Specialties, a private multi-specialty clinic, specializing in the treatment of catastrophic illnesses. He is also a Clinical Professor of Surgery at the University of Arizona College of Medicine. Dr. Gilsdorf has been a resident of Arizona for 14 years. He was appointed to the Commission in March, 1987; his term of office expires in January, 1990.*

*Mary J. C. Hendrix, Ph.D.*

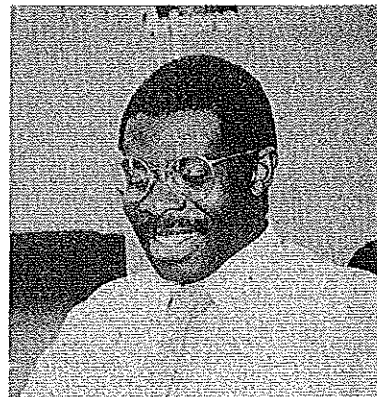
Department of Anatomy  
University of Arizona  
Tucson, AZ 85724



*Dr. Mary Hendrix received her Ph.D. in Anatomy from George Washington University in Washington, D. C. She is currently Associate Professor of Anatomy at the University of Arizona College of Medicine. Dr. Hendrix also serves as Adjunct Researcher in the Department of Pathology at the University of California School of Medicine in San Francisco. She has been a resident of Arizona for seven years. Dr. Hendrix was first appointed to the Commission in March, 1985. She was reappointed by Governor Mofford in 1988. Her term of office expires in January, 1991.*

*Emmanuel T. Akporiaye, Ph.D.*

Department of Biological Sciences  
Northern Arizona University  
Flagstaff, AZ 86011



*Dr. Emmanuel Akporiaye was appointed to the Commission by Governor Mofford in January, 1989. He was born in Nigeria and is currently on the Biological Sciences faculty at Northern Arizona University. Dr. Akporiaye is a microbiologist with a special emphasis in cancer biology and the immune response system. He received his Master of Science degree in Biology from New Mexico Highland University in 1978 and his Doctorate in Pathogenic Microbiology from the University of New Mexico in 1983. Dr. Akporiaye's term expires in January of 1992.*

## Activities of the Commission - FY 1988-89

### July - September

Robert S. Byars, Ph.D., the newly appointed Executive Assistant to the Commission, began work in mid-July. Contracts were mailed to those researchers receiving new awards for 1988-89, and to those receiving continuing contracts. The Commission met in August and acted to simplify reporting requirements for contractors.

The Request for Proposals (RFP) for 1989-90 awards was mailed out to 533 researchers on August 24, one month earlier than last year. Approximately \$660,000 was available for new contract awards for FY 1989-90.

Toshie Isogai was recruited to fill the position of Administrative Assistant.

### October - December

After serving from the start-up days of the agency, Commissioner Maxine Marshall resigned from the Commission in order that a new person could be named to replace her in plenty of time to begin work on the awards for 1989-90.

The Commission received 81 proposals by November 4th, in response to the Request for Proposals. Attachment 5 presents a summary of the research applications received. Attachment 6 contains a listing of the proposals received, by category and priority Area. After review by Commission staff, all fully developed proposals were then sent to panels of scientific and medical experts recruited along lines of scientific disciplines and disease areas for peer evaluation and review.

A new publication, Abstracts, was prepared and released at the end of December. The publication contains summaries of research projects supported by the ADCRC which were completed during the previous fiscal year. The purpose of the publication is to inform the scientific and medical research communities, and the general public about the health and medical studies being conducted in Arizona, under ADCRC sponsorship. The circulation of the annual publication was aimed at advancing the frontiers of knowledge as a result of the circulation of the new ideas and scientific findings. The January 1990 edition has been expanded to include summaries of all projects sponsored by the ADCRC during FY 1988-89, including multi-year awards still in process. A copy of the 1990 edition (Volume 2) is available upon request.

A review of the files in December revealed more than 60 publications in scholarly journals from projects receiving Commission support during the

first three to four years of the Commission's existence. Numerous other manuscripts were in various stages of the publication process.

#### January - March

The terms of two other long-serving Commissioners ended in January-- Dr. John Schaefer of Tucson and Dr. Louis Newton of Phoenix. Governor Mofford appointed three new Commissioners to fill the three vacancies on the ADCRC. The Governor appointed Dr. Jon Rubach, a Mesa physician, to represent the medical community; James Matthews, Executive Secretary of the Corporation Commission, to represent the general public; and Dr. Emmanuel Akporiaye, an immunologist from Northern Arizona University, to represent the scientific research community. The names were sent to the Senate for confirmation. The names of three other Commissioners, appointed last June but still unconfirmed, were also sent to the Senate for confirmation. They included the reappointment of Dr. Mary Hendrix, anatomy professor from the University of Arizona; and the appointments of Jane Aiken, a law professor at Arizona State University; and Dr. William Crisp, a physician from Phoenix.

The Commission received 400 proposal evaluations from 90 out-of-state reviewers. They were distributed to the Commissioners in February, along with the proposals, for their review. The nine Commissioners formed three sub-committees to facilitate the review process.

During FY 1988-89 there were 58 active research contracts between the Commission and principal investigators. The Executive Assistant to the ADCRC, conducted site visits to 50 of the projects during the third quarter. There were no unusual research problems or delays reported. The enthusiasm and productivity of the principal investigators and researcher teams was noted. He found that the State was receiving a good return on its investment in health and medical research in terms of: articles in professional journals; the capture of larger research awards from national funding sources; the advancement of medical knowledge; the discovery of new drugs and treatments; the recruitment of skilled and competent professional staff to Arizona's teaching and medical research institutions; and the training of future medical researchers and physicians.

#### April - June

Site visits were made to six more projects during the month of April. The two large cancer research projects at the University of Arizona and Arizona State University were asked to make oral progress reports to the Commissioners.

The Commissioners met on May 4, 1989 to select the award-winning proposals from the 81 submitted. Twenty-six proposals were funded, and a complete list of those selected for new awards may be found in Attachment 3. The largest numbers of new awards were in the following priority areas: cancer, or malignant neoplasms (6); heart and vascular diseases (5); neuro-

logical, mental and behavioral disorders (5); and infectious and immunological diseases (4).

A majority of the applications (46) were submitted by researchers at the University of Arizona, which received 18 (39%) of the new awards. Arizona State University researchers entered 10 proposals and received 3 (30%) awards. Researchers at Northern Arizona University sent six proposals and received one award. The following non-academic organizations received one award each: St. Joseph's Hospital and Medical Center, the Barrow Neurological Institute, the Institute for Biogerontology Research, and the Southwest Biomedical Research Institute. Continuing awards for 1989-90 are listed in Attachment 4. During the 1989-90 fiscal year, the ADCRC will be managing a record number of contracts--74.

The remainder of the fourth quarter was occupied primarily with the notification of proposal writers and the preparation of contracts for the 1989-90 fiscal year. Cost reimbursement contracts replaced the old fixed price contracts, enabling the ADCRC to retain unexpended project funds. Work began on revision of the Policy Guidelines and the Request for Proposals (RFP), which is scheduled for release on August 23, 1989.

## ATTACHMENTS

- 1 New Award Summary for FY1989-90
- 2 New Awards for FY1989-90, by Category and Priority Area
- 3 List of New Awards for FY1989-90
- 4 List of Continuing Awards for FY1989-90
- 5 Research Proposals Received for FY1989-90 Awards: Summary
- 6 Research Proposals Received for FY1989-90 Awards: by Priority Area

**ATTACHMENT 1**

ARIZONA DISEASE CONTROL RESEARCH COMMISSION  
FY 1989-90 Contract Proposals

**Proposals Submitted**

**Total = 81**

<u>Priority Area</u>	<u>Number Submitted</u>	<u>% of Total Submitted</u>
A. Cardiovascular and Other Circulatory Diseases/ Disorders	11	14%
B. Health Effects of Environmental Pollutants	9	11%
C. Health Promotion and Disease Prevention	12	15%
D. Infectious and Immunologic Diseases/Disorders	13	16%
E. Malignant Neoplasms	18	22%
F. Metabolic and Endocrine Disorders	9	11%
G. Neurologic, Mental and Behavioral Diseases and Disorders	7	9%
H. Respiratory Diseases	<u>2</u>	<u>2%</u>
TOTALS	81	100%

<u>Institution</u>	<u>Number Submitted</u>	<u>% of Total Submitted</u>
University of Arizona*	46	57%
Arizona State University	10	12%
Northern Arizona University	6	7%
Harrington Arthritis Research Center	6	7%
Barrow Neurological Institute	4	4%
St. Joseph's Hospital and Medical Center	3	3%
Institute for Biogerontology Research	1	1%
Mesa General Hospital Medical Center	1	1%
National Institutes of Health	1	1%
Phoenix Integrated Surgical Residency Foundation	1	1%
Southwest Biomedical Research Institute	1	1%
No Affiliation	<u>1</u>	<u>1%</u>
TOTALS	81	100%

\*Includes Veterans Administration Medical Center

**ATTACHMENT 2**

**ARIZONA DISEASE CONTROL RESEARCH COMMISSION**  
**Applications Funded for FY1989-90 Awards**  
**By Category and Priority Area**

Total Number of Proposals Submitted: 81

Total Number of Proposals Funded: 26

Total Amount Awarded for New Contracts: \$660,000

Total Number Funded, by Category:

Category I (\$25,000 or Under; One Year): 19 (73%)  
 Category II (\$25,000 or more; Multi-Year): 7 (27%)

Total Number Submitted and Funded by Priority Area and Category:

Priority Area	Category	Submitted	Funded
A) Cardiovascular and other Circulatory Diseases/ Disorders	I	8	3
	II	3	2
B) Health Effects of Environmental Pollutants	I	5	0
	II	5	1
C) Health Promotion and Disease Prevention	I	10	2
	II	1	0
D) Infectious and Immunologic Diseases/Disorders	I	11	2
	II	2	2
E) Malignant Neoplasms	I	13	5
	II	5	1
F) Metabolic and Endocrine Disorders	I	7	1
	II	2	1
G) Neurologic, Mental and Behavioral Disorders	I	6	5
	II	1	0
H) Respiratory Diseases	I	2	1
	II	0	0
		81	26

**ATTACHMENT 3**

Arizona Disease Control Research Commission

New Awards for FY 1989-90

<u>Principal Investigator</u>	<u>Institution</u>	<u>Project Title</u>	<u>Award Amount</u>
Beggs	St. Joseph's Hospital and Medical Center	Diabetic Complications: Fate of Diabetic-Induced Tissue Changes Following Pancreas Transplant	24,300
Brady	Institute for Biogerontology Research	Neuropathology of Memory Associated Regions in Alzheimer's Diseased Brain	21,000
Burt	University of Arizona	Role of Gap Junctions in Vascular Responses	36,800
Fajardo	University of Arizona	Prospective Comparison of Mammography Guided Fine Needle Aspiration Cytology of Suspicious Breast Lesions with Surgical Biopsy Pathology	12,100
Finley	University of Arizona	The Use of Recombinant DNA Technology and Restriction Fragment Length Polymorphism in the Study of Hemophilia A (Factor VIII Deficiency) and Carrier States in Arizona	24,900
French	University of Arizona	Cellular Neurobiology of Psychosis Producing Drugs of Abuse: A Model for Schizophrenia	21,000
Frink	University of Arizona	Prospective Comparison of Intrapleural Bupivacaine and Intravenous Narcotics for Hepatobiliary Interventional Radiologic Procedures	2,200
Galgiani	University of Arizona	Purification and Application of Antigens from <u>Coccidioides immitis</u> , Phase II	40,000
Glisky	University of Arizona	Training Patients with Organic Memory Disorders for a Computer Data-Entry Job	24,950
Griffin	Arizona State University	Marital Support as a Mediating Factor in the Effectiveness of the Treatment of Parkinson's Disease	24,800
Grimes	University of Arizona	Biochemical Studies of the LAK Phenomenon	30,000
Guilbeau	Arizona State University	Evaluation of Pericardial Substitutes	25,000
Joens	University of Arizona	Investigations into the Invasive Properties of <u>Campylobacter jejuni</u>	19,000
Kearfott	Arizona State University	Radon Mitigation Demonstration: Southwest Tucson	22,200

## New Awards for FY 1989-90

Page 2

Keller	Barrow Neurological Institute	Screening for Normalcy of Arterial Vasculature in Human Necks by Magnetic Resonance Angiography	19,000
Lam	University of Arizona	Antigen-directed Immunotherapy in B-cell Lymphoma	21,000
MacDonald	Southwest Biomedical Research Institute	Role of Arachidonoyl-Diacylglycerol Kinase in Fatty Acid Homeostasis: Effects on Inhibitors on Cellular Functions Related to Cardiovascular Disease	21,000
Martinez	University of Arizona	The Role of Orally and Parenterally Administered Growth Factors in Lung Development	20,950
Morkin	University of Arizona	Actions of Thyroid Hormone on the Heart: A New Basis for Treatment of Congestive Heart Failure	70,000
Prior	Northern Arizona University	Neural Modulation of Central and Peripheral Targets	20,000
Schram	University of Arizona	A New Approach to Diagnosis of HIV Infection and Staging of AIDS Based on Analysis of Urinary Nucleosides by GC-MS	30,000
Seftor	University of Arizona	Modulation of Cell Surface Dramatically Effects Tumor Cell Invasions: Analysis of Specific Composition and Structural Changes	24,800
Unger	University of Arizona	Liposomal MR Contrast Agents	25,000
Valenzuela	University of Arizona	Prehospital Triage of Children with Non- Traumatic Illness--A Comparison of Three Groups	24,000
Wright	University of Arizona	Pathways of Drug Excretion	35,000
Yocum	University of Arizona	Characterization of Epidermal Growth Factor Regulation in Rheumatoid Arthritis	21,000

**ATTACHMENT 4**

Arizona Disease Control Research Commission

Continuation Awards for FY 1989-90

<u>Principal Investigator</u>	<u>Institution</u>	<u>Project Title</u>	<u>Award Amount</u>
Barber	University of Arizona	Neurochemical Substances Which Generate or Block Brainstem Unitary Responses Concerned with Food Intake	24,500
Blanchard	University of Arizona	Procedures for Monitoring Free Theophylline Blood Levels: Evaluation of Binding Variability in Patients on Regular Theophylline Therapy	33,000
Bloom	University of Arizona	Cholinergic Mechanisms in Bronchoconstriction	24,500
Bogardus	National Institutes of Health	A New Method to Measure Physical Activity in Man: Relationship with Age and Diabetes Mellitus	23,000
Bogardus	National Institutes of Health	Glucose 1, 6-bisphosphate Content and Glycogen Synthase Activity in Human Skeletal Muscle and Their Relationship to Carbohydrate Metabolism in Normal and Non-Insulin Dependent Diabetic Subjects	25,000
Brannon	University of Arizona	Aging and Digestive Function of the Pancreas	25,000
Braun	University of Arizona	Kidney Stones: A Basic Model to Elucidate the Development of Kidney Stones in Humans	24,500
Burke	Arizona State University	Genetic Manipulation of Mosquitocidal Bacteria	22,500
Buseck	Arizona State University	Health Effects and Characterization of Particulate Air Pollutants in Arid, Urban Envrionments: Phoenix and Tucson	100,000
Cluff	Arizona State University	Effects of Hearing Protection on Communication	18,500
Dillenberg	Department of Health Services	A Project to Assess the Actual Fluoride Levels in Arizona Water Supplies and to Determine the Knowledge About and Appropriate Utilization of Dietary Fluoride Supplements by Helath Care Providers of Children	45,000

Dillenberg	Department of Health Services	Arizona State Pathfinder Survey	20,000
Dorson	Arizona State University	Augmented Hemoperfusion for the Treatment of Hyperbilirubinemia	65,000
Duffy	University of Arizona	Hyperthermia Induced Polyamine Acetylation	24,500
Egen	University of Arizona	A Technique for Identifying and Quantifying Specific Rattlesnake Venom in Envenomated Patients	24,500
Feinberg	University of Arizona	Molecular Markers of Hemostatis in Cerebrovascular Disease	24,500
Friedman	University of Arizona	Further Development of Rapid Diagnostic Tools for Identification of Bordetella Pertussis	47,250
Gmitro	University of Arizona	In-Vivo Diagnosis and Localization of Disease via NMR and Optical Spectroscopy	25,000
Goldberg	University of Arizona	Cardiac Teratogenicity of Halogenated Aliphatic Hydrocarbons and Chromium in Avian and Mammalian Models	90,000
Gruener	University of Arizona	Ion Channel Behavior of Cycstic Fibrosis Epithelial Cells	50,000
Harrison	University of Arizona	Validation of Objective Measures of Adherence to Low-Fat Diets	24,500
Hill	University of Arizona	Enhanced Isolation of Cis-Platinum-Resistant Mutants from Human Tumor Lines Following DNA Synthesis Inhibition	25,000
Jacobs	Arizona State University	Mechanism of Induction of Virus-associated Diabetes Mellitus	24,500
Jeevanandam	St. Joseph's Hospital and Medical Center	Metabolic Responses to Trauma in Obese Subjects and the Nutirtional Implications	25,000
Korc	University of Arizona	Control of Neoplastic Growth by Modulation of Growth Factor Receptor Expression and Activation	24,500
Kruelen	University of Arizona	Antihypertensive Diuretic Drugs: Neurovascular Sites and Mechanisms of Action	60,000

## Continuation Contracts for FY 1989-90

Page 3

Laird	University of Arizona	Mechanism of Benzodiazepine Modulation of Normal and Malignant Cell Growth	24,500
McCuskey	University of Arizona	Role of Kupffer Cells in Liver Pathophysiology	24,500
Meltzer	University of Arizona	Molecular Analysis of B-Cell Neoplasia	25,000
Montgomery	University of Arizona	Regulation of Lymphocyte Proliferation by Prolactin-Like Proteins	24,500
Mufson	Institute for Biogerontology Research	Somatostatinergic System in Aged and Alzheimer's Disease Brain	24,500
Perednia	University of Arizona	Computerized Skin Scanning for Early Detection, Evaluation, and Treatment of Skin Disease	25,000
Petersen	University of Arizona	Comprehensive Data Collection and Statistical Analysis of HIV Infected Patients in Arizona	24,500
Pettit	Arizona State University	Discovery and Development of New Anticancer Drugs	175,000
Rogers	Institute for Biogerontology Research	Brain-Immune Interactions in Alzheimer's Disease	24,500
Ryan	University of Arizona	Molecular Methods for Detection and Characterization of Shigella Species	24,000
Salmon	University of Arizona	Arizona Cancer Center Research Program	750,000
Santosham	Johns Hopkins University	BPIG Prophylaxis of Pneumococcal and Other Infections	70,000
Schiller	St. Joseph's Hospital and Medical Center	Evaluation of Biochemical Markers of Catabolism in Trauma	25,000
Schiller	St. Joseph's Hospital and Medical Center	Metabolic Responses to Multiple Trauma in Elderly and the Nutritional Implication	37,000
Smothers	University of Arizona	The Effect of Aluminum Contaminated Water Supply in Man: An Experimental Approach	24,500

## Continuation Contracts for FY 1989-90

Page 4

Sommerfeld	Arizona State University	Urban Lakes: Potential Sinks for Biohazardous Substances	24,500
Spetzler	Barrow Neurological Institute	Familial Cavernous Malformations: Study of the Natural History	20,000
St. John	University of Arizona	ALS and Factors That Block Death of Motoneurons	24,500
Udall	University of Arizona	Development of a New Method to Assess Lactose Malabsorption	20,000
Witte	University of Arizona	Boosting Extrasplenic Splenomimetic Function to Avert Fatal Post-Splenectomy Sepsis	24,500
Witte	University of Arizona	Effect of Alcohol on the Hepatic Microvasculature in Vivo and in Vitro	24,500
Yamamura	University of Arizona	Evaluation of Novel Opioid Drugs Using Cultured Neuroblastoma Cells	24,500

**ATTACHMENT 5**

**ARIZONA DISEASE CONTROL RESEARCH COMMISSION**  
New Awards--1989-90

Total Number of New Awards: 26

<u>DISEASE CATEGORIES</u>	<u>NO. OF AWARDS</u>	<u>% OF TOTAL AWARDS</u>
A) Cardiovascular and other Circulatory Diseases	5	19%
B) Health Effects of Environmental Pollutants	1	4%
C) Health Promotion/Disease Prevention	2	8%
D) Infectious and Immunologic Diseases/Disorders	4	15%
E) Malignant Neoplasms	6	23%
F) Metabolic and Endocrine Disorders	2	8%
G) Neurologic, Mental and Behavioral Disorders	5	19%
H) Respiratory Diseases	1	4%
TOTAL	26	100%

<u>INSTITUTION</u>	<u>NO. OF AWARDS</u>	<u>% OF TOTAL AWARDS</u>
University of Arizona	18	69%
Arizona State University	3	12%
Northern Arizona University	1	4%
St. Joseph's Hospital	1	4%
Barrow Neurological Institute	1	4%
Institute for Biogerontology Research	1	4%
Southwest Biomedical Research Institute	1	4%
TOTAL	26	101%*

\*Totals more than 100% because of rounding.

**ATTACHMENT 6**

## FY 1989-90 Contract Proposals

## Cardiovascular and Other Circulatory Diseases/Disorders

<u>ID No.</u>	<u>Principal Investigator</u>	<u>Institution</u>	<u>Project Title</u>	<u>Yrs</u>	<u>Budget Amount</u>
026	Burt	University of Arizona	Role of Gap Junctions in Vascular Responses	3	83,089 86,412 89,859
066	Carter	University of Arizona	Evaluation of Heparin and Tissue Plasmiogen Activator Therapy for the Treatment of Embolic Stroke	1	61,733
059	Graham	University of Arizona	Characterization of Accelerated Coronary Atherosclerosis in Cardiac Transplant Patients	1	24,334
053	Guilbeau	Arizona State University	Evaluation of Pericardial Substitutes	1	25,000
013	Keller	Barrow Neurological Institute	Screening for Normalcy of Arterial Vasculature in Human Necks by Magnetic Resonance Angiography	2	21,744 23,412
032	Litwin	University of Arizona	Diabetic Cardiomyopathy: Time Course of Changes in Mechanical Function and Response to Therapy	1	24,963
063	MacDonald	Southwest Biomedical Research Institute	Role of Arachidonoyl-Diacylglycerol Kinase in Fatty Acid Homeostasis: Effects on Inhibitors on Cellular Functions Related to Cardiovascular Disease	3	25,000 25,000 25,000
006	Marcus	University of Arizona	An Evaluation of the Safety, Efficacy, and Pharmacokinetics of Regional Antiarrhythmic Drug Delivery	2	25,000 25,000
028	Markle	Northern Arizona University	Studies of Aortic Wall Substance P and Permeability	3	25,000 25,000 25,000
033	Morkin	University of Arizona	Actions of Thyroid Hormone on the Heart: A New Basis for Treatment of Congestive Heart Failure	3	115,608 121,364 128,646
015	Nolan	University of Arizona	Clinical Pharmacokinetics of Amiodarone in the Elderly, Obese and in Individuals with Hepatic Disease	3	23,802 24,785 24,983

## FY 1989-90 Contract Proposals

## Health Effects of Environmental Pollutants

<u>ID No.</u>	<u>Principal Investigator</u>	<u>Institution</u>	<u>Project Title</u>	<u>Yrs</u>	<u>Budget Amount</u>
039	Brower	University of Arizona	Development Toxicity of Heavy Metals: An Insect Model System	3	24,677 22,309 23,670
067	General	Mesa General Hospital Medical Center	Correlation of Organophosphate Pesticide Exposure and Neuropsychological Deficits	1	24,416
052	Kearfott	Arizona State University	Radon Gas in Arizona Homes	3	39,450 54,803 55,891
055	Lantz	University of Arizona	Synergistic Effects of Oxidant Air Pollutants and Coal Fly Ash on Pulmonary Alveolar Macrophages	3	24,233 24,998 23,073
027	Lindstedt	Northern Arizona University	Scaling of DNA Replication Rates in Mammals	1	25,000
001	Park	University of Arizona	Food Safety: Reduction in Health Risks Posed by Aflatoxin Contamination	2	24,936
009	Pepper	University of Arizona	Health Risks Associated with Land Disposal of Municipal Sludge in Arizona	3	24,993 81,982 80,828 85,333
014	Rose	University of Arizona	Gene Probe Technology for Rapid Monitoring of Giardia in Reused Wasted Water	2	37,848 35,797
004	Schwartz	Barrow Neurological Institute	Dietary Induction of Neurofibrillary Tangles in Rabbits	1	29,524

## FY 1989-90 Contract Proposals

## Health Promotion and Disease Prevention

<u>ID No.</u>	<u>Principal Investigator</u>	<u>Institution</u>	<u>Project Title</u>	<u>Yrs</u>	<u>Budget Amount</u>
023	Eblen	Harrington Arthritis Research Center	Assessment of Two Experimental Walkers on Independence in Daily Living	1	24,686
022	Eblen	Harrington Arthritis Research Center	The Longitudinal Influence of Stressful Life Events Upon Symptomatology in Juvenile Rheumatoid Arthritis (JRA)	1	24,952
003	Finley	University of Arizona	The Use of Recombinant DNA Technology and Restriction Fragment Length Polymorphism in the Study of Hemophilia A (Factor VIII Deficiency) and Carrier States in Arizona	1	24,937
007	Girsh	Harrington Arthritis Research Center	Milk Antigen Induced Arthritis	2	24,402 22,294
029	Hughes	Northern Arizona University	An Assessment of the Relationship Between the Level of Volunteer Activity, and Health Related Factors in Elderly Anglo and Native American Populations	3	22,716 22,716 22,716
050	Kearfott	Arizona State University	Radon Mitigation Demonstration: Southwest Tucson	2	50,509 59,476
080	Keller	Arizona State University	Development and Testing of an Illness Behavior Model	2	18,566 15,351
074	Keller	Arizona State University	Perceived Seriousness and Vulnerability and Their Relationships to Cardiovascular Disease Risk Behaviors Among Black Women	2	22,904 22,608
082	Rappaport	University of Arizona	The Hemodynamic Effect of Alcohol on Experimentally Produced Liver and Spleen Injuries in the Pig Model	1	25,125
043	Stini	University of Arizona	Bone Mineral Density Longitudinal Study, Sun City, Tucson and Pinal County	1	28,867
041	Valenzuela	University of Arizona	Prehospital Triage of Children with Non-Traumatic Illness--A Comparison of Three Groups	1	24,021
049	Weiss	University of Arizona	Relationship Between Illiteracy and Health Care Costs among Patients in the AHCCCS Program: Implications for Preventive Health Education	1	63,375

## FY 1989-90 Contract Proposals

## Infectious and Immunologic Diseases/Disorders

<u>ID No.</u>	<u>Principal Investigator</u>	<u>Institution</u>	<u>Project Title</u>	<u>Yrs</u>	<u>Budget Amount</u>
034	Galgiani	University of Arizona	Purification and Application of Antigens from <u>Coccidioides immitis</u> , Phase II	3	87,436 91,230 97,436
056	Hoffman	University of Arizona	Isolation of Anti-Infective Agents from Plants	3	24,795 25,000 25,000
008	Howard	Harrington Arthritis Research Center	The Presence of Mycoplasma Antibodies in Rheumatoid Arthritis; Its Prevalence and Scope as a Diagnostic Marker	2	22,944 24,977
020	Husemann	Northern Arizona University	Stochastic Models of Plasmid Copy Number	3	25,000 23,122 23,881
012	Joens	University of Arizona	Investigations into the Invasive Properties of <u>Campylobacter jejuni</u>	3	22,157 23,044 23,969
047	Schifman	VA Medical Center and University of Arizona	Rapid Antibiotic Susceptibility Testing in Urinary Tract Infection by Bioluminescence Assay of Bacterial Adenosine Triphosphate	1	25,000
038	Schleiger	None	Drugs of Acquired Immune Deficiency Syndrome in Arizona	3	23,000 26,300 28,930
061	Schram	University of Arizona	A New Approach to Diagnosis of HIV Infection and Staging of AIDS Based on Analysis of Urinary Nucleosides by GC-MS	2	60,688 52,387
011	Scuderi	University of Arizona	The Effect of Ethanol on Macrophage Cytokine Production and Activity	3	25,000 25,000 25,000
021	Wheeler	Northern Arizona University	Electrochemical Dissolution of Metals in Physiological Fluids	1	25,000
018	Witte	University of Arizona	AIDS and HIV Infection in the United States in 1968	3	24,750 24,750 15,000
072	Yocum	University of Arizona	Characterization of Epidermal Growth Factor Regulation in Rheumatoid Arthritis	2	25,000 25,000
071	Yocum	University of Arizona	Characterization of Natural Killer Cells in Patients with Rheumatoid Arthritis	1	25,000

## FY 1989-90 Contract Proposals

## Malignant Neoplasms

<u>ID No.</u>	<u>Principal Investigator</u>	<u>Institution</u>	<u>Project Title</u>	<u>Yrs</u>	<u>Budget Amount</u>
077	Fajardo	University of Arizona	Prospective Comparison of Mammography Guided Fine Needle Aspiration Cytology of Suspicious Breast Lesions with Surgical Biopsy Pathology	1	12,100
054	Frink	University of Arizona	Prospective Comparison of Intrapleural Bupivacaine and Intravenous Narcotics for Hepatobiliary Interventional Radiologic Procedures	1	2,200
076	Gillies	University of Arizona	The Role of Na <sup>+</sup> /H <sup>+</sup> Exchange in the Proliferation of Human Fibroblasts	3	27,946 27,981 29,437
081	Grimes	University of Arizona	Biochemical Studies of the LAK Phenomenon	3	69,134 67,264 66,714
017	Johnson	Barrow Neurological Institute	Improved Classification of Astrocytomas	1	25,188
057	Lam	University of Arizona	Antigen-directed Immunotherapy in B-cell Lymphoma	3	25,000 25,000 25,000
005	Lukas	Barrow Neurological Institute	Studies on Induced Differentiation of A Human Brain Tumor Cell Line	3	48,235 53,059 58,365
065	Mufti	University of Arizona	Mechanisms of Tobacco-Alcohol Carcinogenesis in Human Exfoliated Oral Mucosal Cells	2	34,068 30,072
060	Payne	University of Arizona	Quantitative X-Ray Microanalysis and Morphometry in Cancer Diagnosis	3	24,739 24,739 24,739
073	Pettit	Arizona State University	Discovery of Naturally Occurring Antiviral and Anticancer Drugs	3	178,294 187,209 196,569
079	Schmidt	Arizona State University	Detection of New Anticancer Drugs with Human Tumor Cell Growth Inhibition Assays	3	25,000 25,000 25,000
040	Seftor	University of Arizona	Modulation of Cell Surface Dramatically Effects Tumor Cell Invasions: Analysis of Specific Composition and Structural Changes	2	24,844 24,602

## Malignant Neoplasms

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036	Shimizu	University of Arizona	Mechanisms Involved in the Lack of EGF Receptor Gene Expression in Small Cell Lung Carcinoma	3	21,000 22,010 25,010
078	Smith	Arizona State University	Anti-Tumor Effects of Interferons and Other Cytokines	3	25,000 25,000 25,000
068	Spier	University of Arizona	Modulation of Antigen Expression in Malignant Lymphoma: A Model System for Study of Its Therapeutic Potential	1	22,676
045	Unger	University of Arizona	Liposomal BCNU for the Treatment of Glioblastoma	2	27,870 29,217
048	Unger	University of Arizona	Liposomal MR Contrast Agents	1	25,000
037	Yohem	University of Arizona	Mechanisms Governing the Expression of Class I and II Histocompatibility Antigens during Tumor Cell Invasion: Modulation with Retinoic Acid and Interferon-Gamma	2	24,921 24,921

## FY 1989-90 Contract Proposals

## Metabolic and Endocrine Disorders

<u>ID No.</u>	<u>Principal Investigator</u>	<u>Institution</u>	<u>Project Title</u>	<u>Yrs</u>	<u>Budget Amount</u>
016	Beggs	St. Joseph's Hospital and Medical Center	Diabetic Complications: Fate of Diabetic-Induced Tissue Changes Following Pancreas Transplant	1	24,316
075	Dorson	Arizona State University	Continuous Ambulatory Peritoneal Treatment of Diabetes: Research, Simulation and Design Feasibility of the Hybrid Artificial Pancreas	2	24,995 24,963
010	Gilles	Phoenix Integrated Surgical Residency Foundation	A Comparison of a Fixed Formula to Computer Managed Linear Logic in Prescribing the Nutrients in Total Parenteral Nutrition	1	24,137
002	Jeevanandam	St. Joseph's Hospital and Medical Center	Altered Protein Synthesis Efficiency in Acute Major Injury	3	26,950 32,967 35,219
051	Kirkwood	National Institutes of Health	Glucose Transporters and Skeletal Muscle Morphology and Ultrastructure in Diabetic and Non-Diabetic Caucasians and Pima Indians	3	25,000 25,000 25,000
064	Koeneman	Harrington Arthritis Research Center	Internal Calibration for CT Bone Mineral Density	2	41,325 50,907
024	Longo	Harrington Arthritis Research Center	The Effect of Diphenylhydantoin on Bone Healing Response	3	25,000 25,000 25,000
058	Mooradian	University of Arizona	Age-related Changes in Tissue Specific Gene Expression	3	25,000 25,000 25,000
025	Wright	University of Arizona	Pathways of Drug Excretion	3	77,329 80,422 83,639

## FY 1989-90 Contract Proposals

## Neurologic, Mental and Behavioral Diseases and Disorders

<u>ID No.</u>	<u>Principal Investigator</u>	<u>Institution</u>	<u>Project Title</u>	<u>Yrs</u>	<u>Budget Amount</u>
046	Brady	Institute for Biogerontology Research	Neuropathology of Memory Associated Regions in Alzheimer's Diseased Brain	3	25,000 25,000 25,000
044	French	University of Arizona	Cellular Neurobiology of Psychosis' Producing Drugs of Abuse: A Model for Schizophrenia	3	25,000 25,000 25,000
062	Glisky	University of Arizona	Training Patients with Organic Memory Disorders for a Computer Data-Entry Job	1	24,979
030	Griffin	Arizona State University	Marital Support as a Mediating Factor in the Effectiveness of the Treatment of Parkinson's Disease	1	24,806
042	Gruener	University of Arizona	Volatile Anesthetic Action on Ion Channels from Brain and Heart	1	25,000
035	Johnsen	St. Joseph's Hospital	Identification of Risk Factors and Pathogenesis of Navajo Neuropathy	3	55,000 55,000 55,000
019	Prior	Northern Arizona University	Neural Modulation of Central and Peripheral Targets	3	23,910 22,236 23,353

## FY 1989-90 Contract Proposals

## Respiratory Diseases

<u>ID No.</u>	<u>Principal Investigator</u>	<u>Institution</u>	<u>Project Title</u>	<u>Yrs</u>	<u>Budget Amount</u>
070	Martinez	University of Arizona	The Role of Orally and Parenterally Administered Growth Factors in Lung Development	3	24,960 24,952 24,965
031	Seeley	University of Arizona	Pilot Study to Evaluate the Efficacy of Developing Computer Programs to Aid Radiologists as Consults during Diagnosis and in Training Medical Students and Radiology Residents	3	24,996 24,549 24,961