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**SUMMARY REPORT OF GRANTS FUNDED  
BY THE FACULTY RESEARCH COMMITTEE  
July 1, 1978—June 30, 1979**

**Compiled by the 1979—80  
Faculty Research Committee**

**Morehead State University  
Morehead, Kentucky**

## TABLE OF CONTENTS

### Faculty Research

James R. Chaplin .....	1
<i>Preliminary Investigation for Micro-fossils in the Ohio and Sunbury Shales in the Morehead Area: A Possible Aid in Determining Age and Depositional Environment of these Carbon Rich Shales</i>	
Anna Lee Hicks .....	2
<i>Psychological Androgyny and its Relationship to Field Dependence/Independence</i>	
Victor B. Howard .....	3
<i>The Religious Sources of Radicalism During Reconstruction, 1865 - 1867</i>	
David Magrane .....	5
<i>Regulatory Factors of Isolated Adrenal Cells on Column Perfusion</i>	
Francis H. Osborne .....	6
<i>Temporal Variables Effecting Shuttle Sidman Avoidance</i>	
David J. Saxon .....	7
<i>Rutin and the Atherogenic Process</i>	



REPORT OF GRANT FUNDED  
BY THE FACULTY RESEARCH COMMITTEE

Name of grant recipient: James R. Chaplin

Department: Physical Sciences School: Sciences and Mathematics

Title of research: Preliminary Investigation for Micro-fossils in the Ohio and Sunbury Shales in the Morehead

Area: A Possible Aid in Determining Age and Depositional Environment of these Carbon Rich Shales

Date of final report: 12/79 Date grant was funded: 12/78  
(Mo. / Yr.) (Mo. / Yr.)

Amount for which grant was funded: \$ 1,665

*Use the space below for a single-spaced abstract of approximately 100 words. This should be a narrative summary of the final report of your grant.*

Research Summary:

Forty-nine black and green shales were collected from the Ohio Shale, Bedford Shale, and Sunbury Shale (Devonian-Mississippian age) at three localities on the Farmers, Kentucky geologic quadrangle map. The most rapid and successful disaggregation of the black, fissile, well-indurated oil shales was accomplished with a 10% concentration of sodium hypochlorite and sodium hydroxide; green shales were easily disaggregated with mineral spirits and sodium carbonate. Eighty-five percent of the processed shale samples contained microfossils including, in order of decreasing abundance, spores, conodonts, vertebrate teeth and plates, inarticulate brachiopods, woody plant fragments, microgastropods, ostracodes, and microgoniatites. These microfossils, some reported for the first time from the shales processed in this study, will prove useful in future regional surface and subsurface biostratigraphic correlations of these economically important Devonian-Mississippian oil shales.

*Final use of project results, e.g., Where was it published? At what professional meeting was it presented? How was it disseminated to the academic or regional community?*

A portion of this research has been published in the following reference:

Chaplin, J. R., 1979, Lithostratigraphy and biostratigraphy of Upper Devonian-Lower Mississippian strata in the Morehead, Kentucky area, p. 130-132; 138-162, in Ettensohn, F.R., and Dever, G. R., Jr., editors, Guidebook for Field Trip No. 4, Carboniferous geology from the Appalachian Basin to the Illinois Basin through Eastern Ohio and Kentucky, Ninth International Congress of Carboniferous Geology and Stratigraphy, University of Kentucky, Lexington, KY., 293 pp.

A paper regarding this research will be presented at the Fall 1980 meeting of the Kentucky Academy of Science.

Approximately 25 copies of the final report were sent to colleagues at universities and in industry who are interested in oil shale studies. A copy of the final report was also sent to the Honorable Carl D. Perkins who assisted in securing several pertinent publications to this study.

Richard T. Lewis, senior geology major, completed a 3-hour Special Problems class under Mr. Chaplin's supervision as an outgrowth of this research grant. Mr. Lewis will also present his findings at the Fall 1980 meeting of the Kentucky Academy of Science.



REPORT OF GRANT FUNDED  
BY THE FACULTY RESEARCH COMMITTEE

Name of grant recipient: Anna Lee Hicks

Department: Psychology and Special Education School: Education

Title of research: Psychological Androgyny and its Relationship to Field Dependence/Independence

Date of final report: 3/80 Date grant was funded: 11/78  
(Mo. / Yr.) (Mo. / Yr.)

Amount for which grant was funded: \$615

*Use the space below for a single-spaced abstract of approximately 100 words. This should be a narrative summary of the final report of your grant.*

Research Summary:

This study was designed to study the relationship between sex role and sex and the personality dimensions of internality/externality and field dependence-independence. The hypothesis that sex role (high masculinity would be more predictive of internality/field independence and high femininity would be more predictive of externality/field dependence) was not confirmed. The data suggested that sex was a more reliable predictor with males being high on the internality/field independence dimension and females high on the externality/field dependent dimension.

*Final use of project results, e.g., Where was it published? At what professional meeting was it presented? How was it disseminated to the academic or regional community?*

To be submitted for publication.



REPORT OF GRANT FUNDED  
BY THE FACULTY RESEARCH COMMITTEE

Name of grant recipient: Victor B. Howard

Department: History School: Social Sciences

Title of research: The Religious Sources of Radicalism During Reconstruction, 1865-1867

Date of final report: 10/79 Date grant was funded: 12/78  
(Mo. / Yr.) (Mo. / Yr.)

Amount for which grant was funded: \$1,640

*Use the space below for a single-spaced abstract of approximately 100 words. This should be a narrative summary of the final report of your grant.*

Research Summary:

*"The Civil War in Kentucky: The Slaves Claim Their Freedom"*

When the War came in Kentucky, slaves identified with the Union Army, and despite all that the slaveholders could do the slaves refused to stay out of the Union lines. The slaves believed that the Army was coming in response to a providential deliverance.

The folk history among the slaves was deeply imbedded in their tradition that the day of Liberation was coming and the slaves were convinced that the Civil War would bring the "Day of Jubilee".

During the invasion of Kentucky by Bragg in 1862, the extensive movement of troops through the state caused a general stampede of slaves which destroyed the authority of slavery in the State. Long before the Thirteenth Amendment was ratified in December, 1865, the Kentucky slaves ceased to act the part of slaves. The controls over slavery broke down in 1862 due to the mass movement of slaves into the Union camps and the cities in the State.

- a) The slaves claimed the right of freedom of movement.
- b) Some asked for wages and deserted the system when wages were not forthcoming.
- c) Many slaves refused to accept physical punishment any longer.

The Thirteenth Amendment simply confirmed the realities of the death of slavery and the slave would have resisted enslavement by force of arms.

*"Lincoln's Slave Policy in Kentucky"*

At the beginning of the war, in accord with Congress, Lincoln took the position that the North was fighting to preserve the Union and there would be no interference with local institutions. The evangelical religious groups felt that the war had come as an act of retribution for the Nation's tolerance of slavery: that slavery was the cause of the war which would not end until the cause was removed.

To meet the demands of Kentucky, Lincoln revoked Fremont's proclamation freeing the slaves and forced the withdrawal of Cameron's annual report recommending the Emancipation and arming of the slaves. A massive religious protest came from all parts of the North. Lincoln was forced to revise his slave policy in Kentucky by urging the border states to move to voluntary Emancipation with Federal compensation.

Kentucky refused to accept Lincoln's Proposal and the religious community intensified its pressure on Lincoln and insisted on the urgency of the Proclamation freeing the slave. After the Proclamation was issued the Union began to have military successes in 1863, and the religious community became united in the belief that a Providential deliverance of the slaves was taking place. Lincoln ultimately accepted the idea of the Northern Churches that he was guided by a Divine hand in all his acts, but he continued to deal with Kentucky as a special case.

Continuous pressure from the churches led Lincoln to take the leadership in abolishing slavery through the Thirteenth Amendment. His slave policy in Kentucky was continuously revised to keep abreast of moral conviction of the North.



*Final use of project results, e.g., Where was it published? At what professional meeting was it presented? How was it disseminated to the academic or regional community?*

1. "The Civil War in Kentucky: The Slaves Claim their Freedom" Paper, Afro-American History Convention, New York, October 27, 1979.
2. "The Kentucky Slave: The Coming of the Day of Jubilee" (published version) *The Journal of Negro History*, Pending.
3. "Lincoln's Slave Policy in Kentucky", Paper, American Historical Convention, December 31, 1979, New York.
4. "Lincoln's Slave Policy in Kentucky: A Study of Pragmatic Strategy" (published version) *Journal of Illinois History*, Pending.

REPORT OF GRANT FUNDED  
BY THE FACULTY RESEARCH COMMITTEE

Name of grant recipient: David Magrane

Department: Biological Sciences School: Sciences and Mathematics

Title of research: Regulatory Factors of Isolated Adrenai Cells on Column Perfusion

Date of final report: 3/80 Date grant was funded: 11/78  
(Mo. / Yr.) (Mo. / Yr.)

Amount for which grant was funded: \$1,620

*Use the space below for a single-spaced abstract of approximately 100 words. This should be a narrative summary of the final report of your grant.*

Research Summary:

Adrenal glands from adult female rats were evaluated for their adrenal cortical response to exogenous adrenocorticotrophic hormone (ACTH) and the synthetic drug Danazol. Results indicate that ACTH acts through an intracellular mediator (CAMP) to activate the synthesis of a protein needed to convert cholesterol to pregnenalone, the first enzymatic step in the synthesis of adrenal steroids. Blockage of protein synthesis with the antibiotic cycloheximide inhibits ACTH stimulated steroid synthesis. Analysis of the effects of Danazol *in vivo* showed a decrease in adrenal weight, a reduction in zona glomerulosa histology, and significant alterations in plasma and urine electrolyte concentrations. These data suggest a possible inhibition of aldosterone secretion.

*Final use of project results, e.g., Where was it published? At what professional meeting was it presented? How was it disseminated to the academic or regional community?*

Parts of this research were presented at the Kentucky Academy of Science Meeting on November 1, 1979 entitled "Danazol as a Steroid Enzyme Inhibitor in Rat Adrenal Glands".



REPORT OF GRANT FUNDED  
BY THE FACULTY RESEARCH COMMITTEE

Name of grant recipient: Francis H. Osborne

Department: Psychology and Special Education School: Education

Title of research: Temporal Variables Effecting Shuttle Sidman Avoidance

Date of final report: 11/79 Date grant was funded: 11/78  
(Mo. / Yr.) (Mo. / Yr.)

Amount for which grant was funded: \$2,335

*Use the space below for a single-spaced abstract of approximately 100 words. This should be a narrative summary of the final report of your grant.*

Research Summary:

This study systematically investigated the joint effects of shock intensity and shock delay as determined by the subject in a shuttle Sidman avoidance task. Each response delayed shock by 5 to 30 seconds depending on state of training. The results indicated that increased shock intensity, contrary to the results of other variants of Sidman avoidance, led to poorer performance especially when briefer shock delay intervals were employed (i.e., 5 or 10 seconds). Similarly, shorter delay intervals resulted in poorer avoidance efficiency especially when greater shock intensity was employed (i.e., 2.0 mA). The results suggest that as the task became more difficult (shorter shock delay conditions), increased motivation (greater shock intensity) interfered with rather than facilitated performance.

*Final use of project results, e.g., Where was it published? At what professional meeting was it presented? How was it disseminated to the academic or regional community?*

Paper presented at the Kentucky Academy of Science, Northern Kentucky University, November, 1979.



REPORT OF GRANT FUNDED  
BY THE FACULTY RESEARCH COMMITTEE

Name of grant recipient: David J. Saxon

Department: Biological Sciences School: Sciences and Mathematics

Title of research: Rutin and the Atherogenic Process

Date of final report: 12/79 Date grant was funded: 11/78  
(Mo. / Yr.) (Mo. / Yr.)

Amount for which grant was funded: \$1,825

*Use the space below for a single-spaced abstract of approximately 100 words. This should be a narrative summary of the final report of your grant.*

Research Summary:

**EFFECT OF QUERCETIN-3-B-RUTINOSIDE ON HEMOSTASIS, LIPOPROTEINS AND THE DEVELOPMENT OF ATHEROCLEROTIC LESIONS IN SWINE.** *David J. Saxon, Milford C. Jarrells and Jimmy R. Salyer.*

Quercetin-3-B-rutinoside (rutin), a component of tobacco, is previously reported to activate a hemostasis component, Factor XII, which is bound to vessel subendothelial surfaces. Also, cigarette smoking is indicated to change blood lipoprotein levels. This study uses swine, on a normal diet, to investigate these parameters in the atherogenic process. Swine were divided into 4 groups: (1) control, (2) rutin injections, (3) aortic catheter denudation, and (4) aortic catheter denudation and rutin injections. Rutin administration produced an increase in euglobulin lysis times and a decrease in partial thromboplastin times. Thrombocyte counts remained virtually unchanged. Serum cholesterol was significantly increased by rutin administration, while high density lipoprotein levels were significantly decreased. Thus rutin administration did yield changes which could be effective in the atherogenic process. Gross and histological examination of aortae, after 45 days of treatment, did not reveal atherosclerotic lesions.

*Final use of project results, e.g., Where was it published? At what professional meeting was it presented? How was it disseminated to the academic or regional community?*

Presentation of Paper

American Society of Biological Chemists/Biophysical Society, June, 1980.