

SABBATICAL LEAVE REPORT

SPRING 1975

Presented to the Faculty, Administration and
Board of Trustee's
of
Mt. San Antonio College

by

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Statement of Gratitude

To take a trip at such a beautiful time of the year could only have been accomplished through a sabbatical leave. I wish to thank all of those involved, especially the Board of Trustees for making my sabbatical leave possible and one of the most outstanding experiences of my life.

Many objectives were accomplished, but the most growthful experience had to be the completion of an 11,000 mile trip around the United States at a time of year when the weather was perfect and the campgrounds empty. Once again may I point out that I am very grateful for the opportunity to take such leave. Both Mt. San Antonio College and I will benefit from my experiences during this leave.

Objectives

As stated in my original request, my sabbatical leave was to combine classroom studies, visitations to hospitals and clinics, and travel in the United States. My teaching assignment involves a variety of areas within the biological sciences. Therefore my leave was designed to:

1. gain greater understanding of the role of the Respiratory Therapist and the Radiological Technologist in order that I might gear my Anatomy and Physiology course to their needs.
2. visit hospitals and clinics to see first hand some of the techniques, procedures, and tests I describe in class.
3. bring myself up to date in as many areas of biology as possible.
4. visit with people across the U.S. and gain their views of situations such as pollution.
5. see the results of pollution of the country side.
6. update and revise my lecture notes.
7. fulfill some life time dreams of seeing many parts of the great United States.

Procedure for Fulfillment of Objectives

The previous objectives were accomplished in the following ways:

A. Educational

Two courses were taken during my sabbatical leave.

1. The first was a course entitled Human Reproduction (Biology 311) and given by Dr. Miles D. McCarthy at California State University at Fullerton. This course was not taken for credit. The material presented served as a good review and updating. The course will be of value in teaching Health Science.
2. The second was a tremendous course entitled Clinical Immunobiology (Biology 580X) offered by California State Polytechnique University at Pomona, but was presented at the City of Hope by Dr. Ucy Blachman, PhD., Department of Clinical Pathology. Dr. Blachman was well organized and interesting. He was more than happy to show me around the labs and demonstrate many procedures presented in class. This course was taken for credit. The grade report and outlines of both courses appear later in the paper.

B. Visitations

1. Huntington Memorial Hospital

Each Monday for four weeks I visited this hospital to see exactly what respiratory therapists do. Here I learned that their responsibilities were much greater than I had previously thought. Seeing many of Mt. San Antonio College students and graduates doing such a fine job in this field was rewarding. I watched these individuals face critical situations and handle them in an effective manner. The knowledge gained here will help me to improve my anatomy and physiology course.

2. Intercommunity Hospital, Covina

This hospital was visited on two separate occasions for approximately four hours each. The first visitation was to observe an autopsy. I had never seen this procedure before this time. Seeing and feeling fresh human tissues will give greater meaning to my teaching of human anatomy.

The second visit was to learn more of the duties and responsibilities of a radiological technologist. One of the highlights of this visitation was the opportunity to observe first hand a procedure known as a cardiac catheterization. Dyes are injected into the blood vessels of the heart and pictures are taken to outline the circulation through the heart. This procedure requires a doctor and three trained technologists.

3. Tri-city Mental Health Clinic, Pomona

I visited and toured this facility with Mr. Amick of our Psychology Department. I was very interested in seeing the many services provided by this clinic. Also the need was pointed out for a closer relationship between this clinic and Mt. San Antonio College. The information gained there will be used in various ways, but principally in a mental health unit of Health Science.

4. Pomona Valley Hospital

The emergency facilities were visited to see how R.N.'s, Radiological Technologists, and Respiratory Therapists functioned in emergency cases.

Many other facilities were visited outside the state of California. These clinics and hospitals will be mentioned under travel.

C. Travel

The part of the sabbatical I really looked forward to was the two-month trip across and around the United States. The trip was to be longer but with increased cost of gas, etc., we had to cut it short. The trip more than filled all my expectations.

What we attempted to do was to see as much country as possible and at the same time to visit clinics and schools across the country. I can safely say that we accomplished more than I anticipated. The weather was fantastic, and the campgrounds clean and empty, and the people friendly.

A thirty-page diary of our adventures is the written result of our trip. I'll try to condense it somewhat. A map showing our route is included. We traveled from April 26, 1975, until June 18, 1975, and covered 11,402 miles through 31 states. The mode of transportation was a 1965 Chevrolet pickup with an 8-foot cabover camper.

We had a general plan of our trip and the names of several clinics and colleges we wanted to visit. But for the most part we did and went where we wanted.

Our first destination was the Navajo Indian Hospital in the heart of the Navajo Reservation, Tuba City, Arizona. It took two days to get there and on the way we visited Hoover Dam and naturally the Grand Canyon. At Tuba City we found that their new hospital had not been completed but it was going to be a beautiful facility that was much needed. We learned of the special problems of these people, particularly dietary deficiencies.

Then we proceeded to Mesa Verde Natl. Park, Colorado, pointing toward the next target, the University of Colorado at Boulder. One of the highlights was a tour through the Air Force Academy, near Colorado Springs. At the University we visited the Biology Department and then received a special treat when we visited their clinical psychology labs.

We were very fortunate to witness an experiment in Bio-feedback, an area dealing with brain wave control that both Kathy and I became interested in during our trip.

From Boulder we proceeded to Menninger's Mental Health Clinic in Topeka, Kansas. I can't begin to describe the extensive facilities of this clinic. It covers acres of land and deals with all phases of mental illness. The people that work there were very helpful and again we had another fortunate experience. This experience came in the form of an interview with Judy Green, a researcher at the clinic, and a pioneer in the field of Bio-feedback.

Next on the list was the Biological Institute of Sex in St. Louis, Missouri. This was somewhat of a disappointment in that no one was available to show us around or describe the services available. We then decided to head south to New Orleans. On the way we visited the Civil War Battlefield at Vicksburg, Mississippi. In New Orleans we visited Tulane University, Audobon Park, and the Wildlife Museum. New Orleans proved not to be as great as we expected so we took off for Destin, Florida. As we found the beaches beautiful, we stayed and relaxed for a couple of days. We then pushed on to Atlanta, Georgia. On the way, we had a good time touring many southern plantations and learning about their history. Outside Atlanta I visited Kennesaw Community College. The courses they offered were very similar to ours. They were the best equipped community college I have seen. The instructors were interested in California schools and asked me more questions than I could ask them.

Smoky Mountain Natl. Park was the next major point of interest. We spent two days in the park taking hikes and studying as much flora and fauna as possible. It would take two months to do an adequate job. Many stages of plant succession can be seen in this park since it burned in 1934.

From the Smokies we headed toward Williamsburg, Virginia. On our way we made a stop to visit Duke University in Durham, North Carolina. The South with all its history was very interesting.

It was also inspiring to visit places where some of our great leaders made important decisions concerning our future.

On our way to Washington, D.C., we visited George Washington's home at Mt. Vernon. I feel the highlight of our trip was the visit to Arlington Cemetery and our Capital City. During the two days we visited this area, the weather was gorgeous and the crowds light. The tours through the White House, Capitol Hill and the various memorials exceeded my expectations. We both hope to return to this city some day.

Our trip through New York City was an experience that would take too long to tell here. I would like to say that we did see and go through the Statue of Liberty, went to the top of the Empire State Building, and rode the subways. We conversed with many New Yorkers and found them friendly and helpful. They were not cold and inconsiderate as we had been told.

After New York we journeyed up to Greenwich, Conn., through Rhode Island to Plymouth, Mass., on up to Boston and then started back across to Niagara Falls, New York. While in Mass. we visited Harvard, Lexington and Concord. The countryside was to Niagara Falls was absolutely beautiful. Seeing the Falls fulfilled another life-long dream. We then headed down the shore of Lake Erie to Cleveland, Ohio. As we made the trip, I talked with several people regarding the pollution in Lake Erie. It was rewarding to see that they were interested and that something had been done to curb pollution. Fishing and swimming were once again taking place in Lake Erie.

We made a quick trip down to Muncie, Indiana, to visit Kathy's relatives and then came back up to South Bend, Indiana. Here we toured the University of Notre Dame. We were again very fortunate because besides getting a tour of the campus we got a special tour of the Biology building. Needless to say the Department was well equipped and had tremendous physical facilities for graduate students.

On our way to the Museum of Science and Industry in Chicago we studied the plant life on the Indiana Sand Dunes. From the museum we headed for the Mayo Clinic in Rochester, Minnesota. We had a very interesting tour of this extensive facility.

By the time we left Rochester it was June and we noticed the highways and campgrounds getting more and more crowded. After visiting the Mayo Clinic, we decided to head home and leave our planned visit to Canada for another time. We still had time to see such places as the Badlands and Mt. Rushmore of South Dakota. We camped at Cody, Wyo., and then headed into Yellowstone National Park. As luck would have it, we met Kathy's aunt and uncle, whom she hadn't seen for years. Because of this meeting we extended our stay in the Park and had many rewarding experiences in seeing a variety of wildlife.

As both of us were getting homesick about this time, we really started pushing homeward. Quick visits were made to the Grand Tetons, Jackson Hole, and Salt Lake City, Utah. After a fantastic trip we arrived home safe and sound on Monday, June 16, 1975.

General Comment

This trip served to convince me that this is a great country filled with beautiful people. We have our "bad apples", but overall I found the people more than concerned about our ecological problems and our political affairs. Again I thank the Board of Trustees for giving my wife and me this chance to see this country that we are proud to pledge our allegiance.

Summary

This sabbatical leave has rendered me more effective to Mt. San Antonio College in the following ways:

1. It allowed me to see many ways I can improve my anatomy and physiology course as well as other courses I teach.
2. It broadened my knowledge of the medical profession and the role of the paraprofessionals that I instruct.
3. It exposed me to some special areas of biology such as clinical immunobiology and bio-feedback.
4. I became a more informed individual regarding various conditions in this country.
5. It supplied me with many experiences and slides that can be used in the classroom.
6. It rejuvenated me and gave me a deeper appreciation for my teaching and for Mt. San Antonio College.

List of Different Facilities that were Visited

City of Hope
Huntington Memorial Hospital
Intercommunity Hospital, Covina
Pomona Valley Community Hospital
Tri-city Mental Health Clinic
Hoover Dam
Grand Canyon Caverns
Grand Canyon
Navajo Hospital
Navajo Natural Monument
Mesa Verde National Park
Royal Gorge
Presidents Wax Museum, Mantiou Springs, Colorado
Cave of the Winds, Colorado
Cripple Creek Mining Town, Colorado
Air Force Academy, Colorado
University of Colorado, Boulder
Coors Brewry, Golden Springs, Colorado
Eisenhower Library and Museum, Abilene, Kansas
Menninger's Mental Health Clinic, Topeka, Kansas
Botanical Gardens, St. Louis, Missouri
Biological Institute of Sex, Missouri
Vicksburg National Park, Mississippi
Tulane University, Louisiana
Audobon Park, Louisiana
Wildlife Museum, New Orleans, Louisiana
USS. Alabama, Battleship, Mobile, Alabama
Underground Atlanta, Georgia
Kennesaw Community College, Georgia
Kennesaw Mt. National Monument
Stone Mountain, Georgia
Lake Russel, Georgia
Smoky Mountain National Park, Tennessee
Lake James, North Carolina
Duke University, North Carolina

Williamsburg, Virginia
Jamestown, Virginia
Mt. Vernon, Virginia
Arlinton Cemetary, Virginia
Washington D.C.

White House
Capitol Building
Justice Building
Library of Congress
Natural History Museum
Smithsonian Institute
Lincoln Memorial
Washington's Monument
Jefferson's Memorial

Cheesequake Park, New Jersey
Statue of Liberty
Empire State Building
Mystic Harbor, Conn.
Plymouth Rock, Mass.
Harvard University, Mass.
Lexington and Concord, Mass.
Harold Parker State Forest, Mass.
Niagara Falls, N.Y.
Lake Erie
Indian Sand Dunes State Park
University of Notre Dame
National Museum of Science and Industry, Chicago
Mayo Clinic, Rochester, Minnesota
Mankato State College, Minnesota
Badlands National Monument
Mt. Rushmore National Monument
Buffalo "Bill" Museum, Cody, Wyoming
Yellowstone National Park
Biological Museum, Jackson Hole, Wyoming

Instructor:
Dr. P. J. McCarthy
January 1975

HUMAN REPRODUCTION
Biological Science 211
Winter Session 1975

Human Reproduction and Social Change
Harold D. Swanson

Course Outline

- Part I
- A. Male reproductive anatomy
 - 1. External and internal morphology
 - 2. Physiology of structures
 - 3. Vascular distribution
 - 4. Nervous system control
 - B. Female reproductive anatomy
 - 1. External and internal morphology
 - 2. Physiology of structures
 - 3. Vascular distribution
 - 4. Nervous system control
 - C. Meiosis (maturation of germ cells)
 - 1. Spermatogenesis - testicular function - hormone control and production
 - 2. Oogenesis - ovarian cycle - hormone control and production
 - D. Menstrual cycle - morphological and physiological changes:
 - 1. Ovaries
 - 2. Tubes, uterus and vagina
 - 3. Mammary glands
 - 4. Circulatory system
 - 5. Behavioral
- Quiz - On Part I
- 3 out of 77
- Part II
- A. Heterosexual intercourse
 - 1. Male physiology - dysfunction - film ✓
 - 2. Female physiology - ectopic - film ✓
 - B. Conception
 - 1. Female reproductive system factors
 - 2. Ovary, cervix, uterus, metabolic state of
 - 3. Junction - internal function of acrosome, middle piece, and tail
 - 4. Time of conception

C. Sex determination

1. Genetic control
2. Methods of influencing

D. Abortion

1. Spontaneous
2. Therapeutic
3. Elective

E. Contraception

1. Methods of
2. Advantages and disadvantages of the several methods

Part III.

Quiz - on Part II

1 out of 25

- A. Nidation (implantation)
- B. Development of extra-embryonic membranes and placenta
- C. Outline of embryogenesis - histogenesis and organogenesis
- D. Parturition (the birth process) **FILM**

Quiz - on Part III

2 out of 30

Part IV

- A. Reevaluation of human sexual relations in light of world population problems
- B. Differing life styles - homosexuality, group sex, etc.
- C. Sexual variation
- D. Sexual laws
- E. The V.D. epidemic

Quiz - on Part IV

CLINICAL IMMUNOBIOLOGY*

Week	Subject
1 Jan 9	1. Introduction 2. Antigens 3. Antibodies Structure and Function.
2 Jan 16	4. Antibodies Structure and Function, con't. 5. Anatomy of the Immune System. T-cells, B-cells, Macrophages: <i>K cell</i> 6. Lymphoid Centers and Cellular Elements
3 Jan 23	7. The Immune Response 8. Memory; Tolerance; Immunosuppression 9. Antigen - Antibody Interaction: Primary, Secondary & Tertiary
4 Jan 30	10. Antigen - Antibody Reactions. I. Immunoprecipitation 11. Antigen - Antibody Reactions. II. Electrophoresis and Immunelectrophoresis 12. Antigen - Antibody Reactions. III. Agglutination; IV. Neutralization.
5 Feb 6	13. The Complement System <i>Complement</i> 14. Antigen - Antibody Reactions. V. C'-Dependent Cytolytic Assays 15. Fluorescent Microscopy
6 Feb 13	16. Antigen - Antibody Reactions. VI. Immunofluorescent Techniques 17. Antigen - Antibody Reactions. VII. Radioimmunoassays (RIA) 18. RIA Techniques
7 Feb 20	19. Mechanisms of Immunologic Injury. I. Inflammation and Phagocytosis. 20. Mechanisms of Immunologic Injury. I. Inflammation and Phagocytosis, con't 21. Mechanisms of Immunologic Injury. II. Antibody-Dependent (Immediate-type) Hypersensitivity
8 Feb 27	22. Mechanisms of Immunologic Injury. III. Cell-Mediated (Delayed-type) Hypersensitivity. 23. Mechanisms of Immunologic Injury. IV. Resumé. 24. Immunopathologic Syndromes. I. Immunodeficiency Diseases and Autoimmunity.
9 Mar 6	25. Immunopathologic Syndromes. II. Approached by Organ System Involved, 26. Tumor Immunology 27. Transplantation Immunology
10 Mar 13	28. Clinical and Laboratory Diagnosis of Immunologic Disorder. I. T-cells. 29. Clinical and Laboratory Diagnosis of Immunologic Disorders. II. B-cells. 30. Party

* Final examination will be of the take-home type

