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PUERTO RICO NUCLEAR CENTER -

GENERAL INFORMATION

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INO. AT (@0-1)-1833 FOR U. S. ATOMIC ENERGY COMMISSION.

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WOW U.S. STUDENTS AT PRIC

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ARGENTINA

Ortet Alva

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Sor Josefina Guerra

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ERY

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Sevit 8. Modeste Valerio

Sonia Elvira Oliva Guerrero

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Marta Mercedes Sat

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Ltdice Martine Tevares Lucas

Antonia Altagracia Vazquer

?SOUTH ArRICA

Paul Wetnbren

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Mareine Castells de Léper

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Gutllermo Castillo Castillo

Clenencia Gerefa Villantl

Manfred Hartung

Lita K, Merenfeld

R, Rentrex Martines

Modesto Rivero Gonsález

Marto Spinetti

Vernon Tang Yuk

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Zotle Cordero Video

Pedro Vargas Pernénder

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Gutllermo Rodrfguer Figueroa

Rdger Pi

Francisco Hernando Vésques Vasques

?ouBA

Carlos Victor Wheeler

Fausto Manor Ribadeneira

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Vicente A. Rodrigues

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Duarte 58

Barahona

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Nuclear Science and Technology

1957-58

Rafael Amaral Carrillo ...cessssesseses Puerto Rico.

Héctor Barceis REINEEIID puerto Rico

Leoner A. Lugo IIIT puree Rico

Alejandzo Rivera Irizarry s.cclisesiss Puerto Rico.

1958-59

Miguel, Angel Feyioe + Puerto Rico

Jaine Toro Gutiérrez: -... coloabis

1959-60

Jorge Alsina Alonso cuba

Nestor Azziz Jozant | Uruguay

Jose Roberto Bravo Silva. 1 wicaragua

Pedro Cruz Gonaale: . 1 Puerto Rico

Jorge Justiniano Bayrén 1 Puerco Rico

?Suan Lareigue Gordiilo Mexico

Vernon Tan Yuk Godoy 1 Venezuela

Julie A. Vela 1 Puerto Rico

= Puerto Rico

?A. Bonnet Diez ss. cs0 ss Puerto Rico

Alberto Guerrero Aimonacid? ...1.1 Colesbia

E. Sendoval Sandoval 1 Goloabie

MoClin Eeealera ..s.es0 Puerto Rico

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Richard Brown Campos seers Puerto Rico

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Bertberto Plaza Rosado

Juan R. Loper Alonso ..2..scss+

Nuclear Science and Technology

1962-63

» Puerto Rico

Puerto Rico

Kraft de Pee 2 Puerto Rico

Guillerso Rodrfuez Figueroa coloabia

Santiago Pinto Ve 2 Golosbse

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Wealth Physics

1959-60

Jense Partlle Calderon

Jose R, Martines Martine

Barl W. Robinson «

1960-61

Carlos Figueroa Orero .

Oscar Hidalgo Salvatierre ms

Alberto Jiméner Sanchez

Rleardo Mutior Burg

1961-62

Altcta Carlo de Net...

1962-63

Hose Julie Santiago de Moral

Janes B. McCandless se...

Puerto Rico

Veneruele

United States

Puerto Rico

Mearagua

Coloabia

Teuador

+ Puerto Rico

Puerto Rico

United States

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Muclear Cheatstry

1962-63,

Vicente Julio Medina sseses + Uruguay

seseseesees Puerto Rico

Milagros Mire Villerint

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Dr. Amador Cobas

Dr. Vfctor Marcial

Dr. Angel A. cinerén

Rivera

Dr. Juan D. Curet

?SCIENTIFIC MEETINGS

Plans for a Health

Physics Training Program

at the Puerto Rico

Nuclear Center

Cancer Morbidity in

Puerto Rico

Cancer in the Puerto

Rican Woman

@ Radiotherapy Dept.

Cobalt Teletherapy in

Cancer

4959

Hematology

Vitamin B₁₂ Absorp-

tion in Tropical sprue

fatness in 1,100 cases

of *Schistosoma mansoni*

?The Absorption of Gamma

?and Beta Rays by Weakly

Paramagnetic Substances

ITIFTG PAPERS PRESENTED BY PRNC STAFF AT

Place Presented

Mass Presented

Symposium on Health

Physics in Biology and

Medicine - May, 1958

San Juan, Puerto Rico

International Cancer

Congress, July, 1952

London, England

Meeting of the Puerto

Rico Medical Society

September 16, 1958

San Juan, Puerto Rico

Symposium on Health

2nd. Inter-American A

for-Peace Symposium

May, 1989 ~ Buenos /

Argentina

Regional Meeting of the

?American College of
Physicians - Oct., 197
San Juan, Puerto Rico

56th Annual Meeting ©
the Medical Association
of P.R. = Key, 1959
San Juan, Puerto Rico

Seventh Latin American
Chemical Congress
March 29-April 3, 1959
Mexico City, Mexico

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Dr. Victor Marcial Cancer of the Tongue

Lect. Latin American

October, 1939 - Buenos

Aires, Argenting

Cancer Control in P. R.- Séth Annual Meeting of

Ten Years Experience the Medical Assocation

of P. R. = Nov., 1959

San Juan, Puerto Rico

Imma Rischehoff The Denonstration of Seventh Latin American

Consuelo Russo Chemical Principles by Chemical Congres

Dr. ?Juan D, Curet the Use of Radio- March 25-april 3, 1959

Lnoeop Mexico City, Mexico

Dr. Fred V, Soltero Training in Radio Seventh Letin American

chemistry in the Puerto Chemical Congress

Rico Nuclear Center March 29-april 3, 1959

Mexico City, Mexico

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Dr. Iemsel Almod6var The Thorium Isotopes Meeting of the American

Me. T. Py Kobman Method for Dating Marine Chemical Society

Sedineters Septenber, 1960 - X.Y.

Dr. 1, Almodévar ?An Experimental Study Meeting of the American

Rev. T. Cantarell Of Fatigue in Photo- Chemical Society

ultipliers Sept., 1960 - New York

Meating of the American

Chentcal Society

Fatigue Bffects Sept., 1960 ~ Now York

De. A. Me Andino Radioactive Iodine 10th Annual Meeting of

Dr. AL L. Rodriguez Treatment in Hyper- the P. R. Chapter of the

thyroidisn (a review of American College of

the experience of Radio- Physicians = Oct., 1960

iodine therapy in 50 San Juan, Puerto Rico

cases of hyperthyrotidi se

De. Victor Marcial Treatment of Cancer of Sectional Meeting P. R.

the Tongue Chapter of the American

College of Surgeons

?August, 1960 - San Juan,

Puerto? Rico

Socto-econonie Aspects Conference on Society

of the Cancer Incidence Culture and Health in

in Puerto Rico the N.Y. Acadeny of

Sctences = June, 1960

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Serial In-Vitro Uptake
of Fe=59 by Bone
Marrow Suspensions in
Different Hematologic
Staves

The Puerto Rico
Wuclear Center Re-
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Characteristics and
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Fatigue in Photo-
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"Wealth Perspective

of our Radioactive

World" = The First

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29th Conference of the

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Physics Teachers = Jen.,

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29th Conference of the

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Paysies Teachers = Jan.,

1960 = Kew York

29th Conference of the
American Society of
Physics Teachers = Jan.,
1960 = New York

10th Annual Meeting of
the PLR. Chapter of the
American College of
Physicists ~ Oct., 1960
San Juan, Puerto Rico

P.R. Medical Association
Meeting = November, 1960
San Juan, Puerto Rico

Symposium on the Program-
ming and Utilization of
Research Reactors
October 16-21, 1961
Vienna, Austria

Meeting of the American

Nuclear Society = June,
1961 = Pittsburg, Penn.

Second General Session of
the American Public Health
Association, Eighty-Ninth
Annual Meeting; tov. 16,
1961; Detroit, Michigan

IAEA, Regional Symposium
for Educ. and Nuclear
Energy = November, 1961
San Carlos, Bariloche,
Argentina

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Henry

J. Couberg

De. Vfor A. Marctal,

on

Fission, Fusion and
Radiation Energy in «
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Cancer of the

Esophagus

Lor de La Citologta
para el Pronóstico del
Cancer Cérvico-Dterino

\dtoterapia del Céncer
Avanzado: Programa de
Control del Cancer en
Puerto Rico

Cancer of the Tongue

Carcinoma of the
Esophagus

Tastopo Telet

Cancer Control in

Puerto Rico, 12 years

Experience

Treatment of Cancer of
the Tongue

Cancer of the Esophagus

Place Presented

Samuel Sackatt Series of

lectures on Nuclear Energy

(st. Lectura) ~ oct. 1961

Chicago, Illinois

Annual Meeting P. R.

Chapter of the American

College of Surgeons,

Feb., 1961 ~ San Juan,

Puerto Rico

Ier. Congraso Nacional de
CAnker - Séptinas Joraa~
das Radiol6gicas ~ Aug.,
1961 = Sogoté, Colombia

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de Céncer - Séptinas
Jornedas Rediolégicas
?August, 1961 - Bogoté,
Colombia

?American Roentgen Ray
Society Meeting = Sept.,
1961 - Miami, Florida,

7th Interamerican Cong.
of Radiology = Sept., 1961
Sao Paulo, Brazil

7th Interamerican Cong.
of Radiology - Sept., 1961

Sao Paulo, Brasil

Instituto Nacional de Cáncer de Guatemala - Nov.,
1961 ~ Guatemala City,

XII Congreso Nacional de
Medicina del Colegio de
Médicos y Cirujanos de
Guatemala - Nov., 1961
Guatemala City, Guatemala

XI Congreso Nacional de
Medicina del Colegio de
Médicos y Cirujanos de
Guatemala - Nov., 1961
Guatemala City, Guatemala

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Dr. Victor A. Marcial

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Dr. A. Ly Rodrguez

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De. W. Hy Samant

Dr. Howard J. Teas

De. José M. Tomé

De. Mario Vuksanovic

Dr. JA. del Regato

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Carcinoma of the Pants,

?Therapeutic Problems

Common Ion Effect on

Solubility ~ 4 Demons

tration with Radio

Anotopes

The Role of Caletun
for the Intestinal Ab-
sorption of Vitamin

12 in Troptea sprue

The Thallous-Thallic
Exchange at Various
in Perch

Chenisery in Latin
America

Application of Atomic
Energy in Agriculture

Carcinoma of the
Anterior Two-Thirds
of the Tongue

Carcinoma of the skin
Overlying Cartilage

Place Presented

Annual Meeting of the
Radiological Society of
North America = Nov. 1961
Chicago, Tinote

Caribbean Chemistry
Conference ~ April, 1961
University College of the
West Indies, Kingeton,
Jamaica

Second Annual Meeting of
the University of P. Re,
School of Medicine Jun
1961 ~ San Juan, P. Re

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Conference ~ April, 1961
University College of the
West Indies - Kingeton,
Janaicn

1st. Interamerican Cong.
of Chemical Engineers
October, 1961 = San Juan,
Puerto Rico

Presented in Lincoln, Ne-
braska, October 1961 at
the joint invitation of
the AEC and the Governor
of Nebraska

Annual Meeting of the P.
R. Medical Association
November, 1961 - San Juan
Puerto Rico

Annual Meeting of the Ra-
diological Society of
Nek. = Nov 1961
Chicago, Illinois

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Dr. Antonie Bosch

Dr. Malcola Dantale

Dr. Juan Pacett

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De, Francis K.S. Koo

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Comparison of Rod Worth

by Period and Analog

Computer Methods

Elimination of Control

Rod Vibration Caused by

Water Flow

Detection of L-Triiodo-

thyronine in Altering

the Response of Kidneys

to Cobalt-60 Irradiation

Photochemistry of

Thyroid Solutions

Distribution of Radio-

active Antimony Formed

by Nuclear Transforma-

tion in Antimony Oxides

Utilization of Nuclear

Energy for Civilian

Purposes

Case Report of Patient

with Carcinoma of Thyroid

Treated with ^{131}I

?The Use of Resorcinol in

the Clinical Evaluation

of Carcinoma of the

Cervix Uteri

Polygene Variability

?Induced by Thermal

Neutron Irradiation

Place Presented

Conference on Light

Water Moderated Research

Reactors = June, 1962

Oak Ridge, Tennessee

Conference on Light

Water Moderated Research

Reactor ~ June, 1962

Oak Ridge, Tennessee

48th Annual Meeting of
the Radiological Society
of N.A. = November, 1962
Chicago, Illinois

Colloquium on Photo-
chemical Transformation
of Natural Products,
2nd, Nat. Symposium
September, 1962

Prague, Czechoslovakia

Eastern Regional Meeting
American Chemical Society
November, 1962

Tennessee

Ir Convention of the

PAU of Engineering

Societies = An

San Juan, Puerto Rico

59th Meeting of the P,

Medical Association

November 16, 1962

San Juan, Puerto Rico

4th Interamerican Sympo-

posium on the Peaceful

Application of Nuclear

Energy ~ April, 1962

Mexico City, Mexico

?Annual Meeting of the

Radiation Research Soc.

May, 1962 - Colorado

Springs, Colorado

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Dr.

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Author

Dusne B. Linden

Frank G. Loman

Victor Marcial

Pablo L. Morales

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REfects of Tontzing

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Plankton and their Pas-
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Tron, and Form of Nitro

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Cajanus indicus

Inelastic Scattering of

Iron Using « Neutron

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Acidities in Perchlorate

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Soctedad Americana de

Chencias Agricolas

October, 1962

Mayaguez, Puerto Rico

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Symposiua on Water
Pollution = Avg., 1962
Cimetnattt, Ohio

?Annual Meeting of the
Radiological Soc. of
P.R. and the Anertean
College of Radiology
February, 1962

San Juan, Puerto Rico

59th Annual Meeting
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San Juan, Puerto Rico

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San Juan, Puerto Rico

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September, 1962

Buenos Aires, Argentina

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De. José M, Tons

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Scientific Documentation

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?The Structure of Beta

Hydroxyulfides obtained
by the Oxidative Ad-
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Scientific and Tech
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Tropical Plante

Inhibition of Banana

Fruit Ripening by Gama

Radiation

Hodgkin's Disease: Our

Experience at the Dr- 1.

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Documentation in Latia

?Aserica sponsored by

?UNESCO, September, 1962

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Congrase of Chemtaty

Septeaber, 1962

Buenos Aires, Argentina

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September, 1962

Buenos Aires, Argentine

Seminar on Chemical

Industry of L.A. and

?the Common Market, 8th

Latin Anerican Congres

of Chentatry = Sept,

1962 ~ Buenos Aires,

Argentina

The Johns Hopkins
University ~ April, 1962
Baltimore, Maryland

Sociedad Americana
Ciencias Agrícolas
October, 1962
Mayaguez, Puerto Rico

Annual Meeting of the
Society for Economic
Botany = June, 1962
Washington, D.C.

2nd, International
Congress of Radiation
Research = Aug., 1962
Harrogate, England

59th Annual Meeting
Puerto Rico Medical
Association - Nov., 1962
San Juan, Puerto Rico

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Dr. Jeanne Ubinas

Dr, Jobo Villelle

Dr. J. A, Wethington

Dr. Charles Frazer

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Linden,

De. Robert Ay Loe

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Carcinoma of the Tonsil

Tamune Responses to
Irradiated Cercariae of
Schietonoma Mansoni

Dosimetry from Photon
Spectra and Pulse-Height
Distributions

1963

Magnetic Ordering in
Some Related
Orthorhoabic Ceca and
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Fat Absorption Study
with I-131 Labelled
Olete Acid in Patients
with Cancer of the
Cervix Uterine Receiving
Cobalt Radiation to the
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Acids in Aqueous Media

Resonance Radiation Ef-
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Monochromatic X-rays on
Catalase

Place Presented

?Anoval Meeting of the
Radiological Socity of
Puerto Rico and the
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Radiology, Peb., 1962
Sen Juan, Puerto Rico

American Socity of
Parasitologiets and

the Helminthological
Society ~ June, 1962
Washington, D.C.

2nd. International
Congress of Radiation
Research = Aug., 1962
Harrogate, England

Symposium on Ferroag-
netism and Ferroelec-
tricity - May 30 to
June 5, 1963
Leningrad, Russia

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Meeting of the Puerto
Rico Dieterte Assoc.
June 6, 1963

San Juan, Puerto Rico

Hleventh Annual Meeting
of the Radiation Research
Society = May 27-29, 1963
Milwaukee, Wisconsin

Conference on Basic
Mechanisms in the Radia-
tion Chemistry of Aqueous
Media = May 8-10, 1963
Gatlinburg, Tennessee

Eleventh Annual Meeting
of the Radiation Research
Society ~ May 27-29, 1963
Milwaukee, Wisconsin

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Dr. Victor Marcial

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Radiotherapy in Carct-
noma of Cervix Utert

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Photons-Neutron

Conversion Device for
Half Life Measurements

?Annval Meeting of the

Western Branch of the

P, R, Medical Assoc.

april 4, 1963

Mayaguez, Puerto Rico

american Physical
Society ~ Jan, 23-26,
1963 ~ New York City

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Modification of the Neutron Flux Distribution in the Thermal Column of the
Parte Rico Nuclear Center Reactor by Orlando Angleré and J. A. Wethington.

Theoretical and Experimental Study of Fatigue in Photomultiplier Tubes by
Father I. Centarelli.

Smear Effect of S-Bromodeoxyuridine and Gamma Rays on Chromosomes by
S. E. P. G. Koo, submitted to SCIENCE for publication.

---Page Break---

Additional Sources of Paramutation Induction Ability from South American
Races with Variegated Aleuropes by Dr. Duane B. Linden, submitted to Genetics
Society of America, 1963,

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PRNG VEEFLY SEMINARS AT REACTOR SUILDING

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Dr. J. L. Garete de Quevedo

Associate Director

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Berkeley, California

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School of Medicine, UPR

Dr. Werminio Brau

Radioisotopes Application

Divisione

Mr. J, Peretti catierén

Health Physter Division®

Dr. Louis frushole

Dee. of Biology

University of Loussvitte

De. David copson

College of Agriculture &

Mechanic ares, Mayaguee

7, Puerto Rico

TITS oF wectun:

Observations on Nuclear Energy

Research in Europe

Report on the AEA Regional

Symposium on Education and

Nuclear Energy Held in Argentina

Neutrons

Study of the n, α Reaction with

the PRNG Reactor

Radiation in Control of Parasitic

Disease Cycles

Mutation and Saccharin ion

Tumor-host Relationship Studies

in vivo and in vitro

Applied Research to Alcohol

Technology

Dosimetry of X and Gamma Radiation

Aquatic Radioecology

Some Aspects of Darcy's Law and

Microwaves

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Division?

Mr. F. Motor Ribsdeneire

Nuclear Science & Technology

Division?

Mr. Hector Baxcels

Head, Reactor Division

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Marine Biology Progras*

Dr. V. ¥, Renan

Physics Dept., College of

Agriculture & Mechanic Arts

Mayaguee

Dr. J. Ae Rivero

Biology Dept., CAMA

Mayagues,

TIM oF ecrURE

Effects of Ionizing Radiation

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Marine Contamination

Principles of Quantum Field

Theory,

The Role of Sound in the Behavior

of Frogs

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LECTURER

Dr. D, Welker

Biology Depe., CAMA

Mayaguer

Prof. Elser Oliviert intron

Civil Engineering Dept.

CAMA, Mayaguez

Dr. M, Garcta Morén

Head, Chemistry Dept.

UPR.

Dr. Peter Glynn

Marine Biology, CAMA

Mayaguez

Dr. Eddie Oreie

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Marine Biology Progrant

Dr. M. Garcta Morin

Chemtscry Depe., U.P.R,

Dr. M, Dfas PiFerror

Biology Dept., CAMA

Mayaguez

Dr. H. Harry Senant

Radioisotopes Application

Divistont

Me. Rubén Freyee

Federal Experiment Station

Mayaguer

Dr. M, Diaz Pi¥errer

?Biology Dept., CAMA

Mayaguez

De. W. P. Stuckt

Agricultural Bio-Sciences

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Control of Insects by

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Magnética del Proton en 1a

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Reproductive Cycles and the

Dynamics of Marine Communities

Método Experimental para

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Investigación con

Tephrosia vogelii

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De. O, H. Wheeler

Nuclear Science & Technology

Division®

De. B.C. Frazer

Nuclear Science & Technology

Division®

Me. Gonzalo Gonsalez

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Mr. O, Anglers

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Health Physics Division*

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Agriculture & Mechanic Arts

Mayaguez

Me. Raul Meclin

Marine Biology Program

Me. J. Parriite calderoa

Health Physics Division®

Me, Juan G. Gontslez

Biology Depe., CAMA

Mayaguee,

De. H. He Smith

Biology Dept., Brookhaven

National Laboratory

Dr. Fs Vazquez

Muclear Science & Technology

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Wuclear Science & Technology

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Isotope Effect in Chemical

Kinetics

Neutron Diffraction

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Modificacion de un Flujo 4

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Shielding Against Fallout

Radiation

?Te Importance of Phytoplankton

?and Microscopic Algae in the

Productivity of Quahog Pond,

Salnouth, Mass.

Comparative Cytogenetic Studies
with Neurons

?Técnicas Empleadas en el Estudio
de Resonancia en los Efectos de
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br, Morris Rockstein

University of Miami

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Mrs, ReJ, Santiago de Morales

Hecith Physics Diviaton?

Dr. Philip Sadtler

Pres., Sadtler Research

Laboratories, Pennsylvania

Dr. Joseph H. Simons

Professor of Chesirery

University of Florias

Mr. J. ParriLla Celderon
Research Associee
Health Physics Division*

De. Hy J, Gonbers,
Deputy Direccor*

De, David walker
Asociate Professor
Bology Dept., U.P.R,

Dr. Frank Martin
Federal Experimenc Station
Mayaguer

Miss Milagros Miro
Nuclear Seience & Technology
Division®

De. Joho Dy Weaver
Professor, Geology Section

CAMA, UAPR.

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Inseructor, Physics Dept.

UPR.

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Aging at Influenced by External

Factors (Radiation, etc.)

Radtoastronomy and the

Terrestrial Tonosphere

Determinación de Fenoles Libres

y Combinados en Plantas Tradied

Infrared - A Powerful Tool

Spece, Tise and Energy

Colorimetric Determination of

Energy Absorption Buildup Factor

Resonance in Radiation Effects

Sterilization of Insects

A Theory of the Physiological
and Genetic Control of Unilateral
Incompatibility

Effect of the Sulfate Caprice on the
Stabilities of the Dosimeter of
Cerium Sulfate

Changing Sea Levels in the
Caribbean

High Energy Neutron
Conversion Device for Half Life
Measurement

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Agriculturel Bio-Seiences

Division

Dr. Juan Colon Avien

Agronomy Dept, CAMA

USPS

Dr. George W. Miskinen

Federal Experinent Station

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Father Ignacio Cantorell

Buclear Scence & Technology

Divieton?

Dr, carlos Amuayo

Biology Dept., CAMA

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Isotope Dilution in Sugarcane

Research

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PRNG WEEKLY SEMINVRs AT TRE BIOMEDICAL SUTLDING

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vEcTuRER

De. John C, Bugher

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Dr. Howard J, fess

Head, Agricultural Bic~

Scterees Division

De. Sergio Irizerry

Reed, Clintei Appi lestions

Division

De. José A. Ferrer-Honge

Read, Health Physic Giv.*

be. Robert As

Asociate Seient?

Agricultural Bto-

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or, Amador cose

Astociete Dizectort

Dr. Conrado F. Asenjo

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Nutrition, School of

Medicine, J.P.R.

Dr. Carlos Gereta center

Dept. of Biology, UPR.

Dr. Heraino M. Bras

Radioisotopes Division

Padre Egnacio Gancareit

Nuclear Science & Technology

Division

Dr. Daniel Alsodover

Head, Nuclear Science &

Technology Division

Director of work.

Some Probability Considerations

Ap Experimental Biology

DFA Gases and Radiation

1 Body Counting in Metallic

Substances and Clinical Diagnosis

Chemical Changes on Leaves and

their use in Dosimetry

Enzyme Inactivation by Ultraviolet

and Visible Radiation

Physico-Chemical Aspects of the

Interaction of Radiation with

Water

Focal Point and Tropical Sprites

on the Increase of Sites for
Chromosome Exchange Formation
After Chromosome Duplication

Applied Research in Alcohol
Technology

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Compounds

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Agricultural Experisent

Station, Alo Piedras

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Medicine Laboratory

Dr. Leopoldo R, Cerecedo

School of Medicine, U.P.R.

Dr. Fawin Rote

Head, Radioisotopes

Application Division?

Dr. Victor Marcial

Head, Radiotherapy and

Cancer Division

982

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Experimental Agricultural

Station, Río Piedra

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Dean, Faculty of Natural

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College of Natural Sciences

UPAR.

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Dr. Raúl Marcial

Dept. of Pathology

School of Medicine, UPR.

Dr. b. del Rosario

Dept. of Physics

College of Natural Sciences

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Biological Dosimetry

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Evaluation of Radiation Response

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Dr. R, Garete Polntort

School of Medisine, U.P.A.

Miss M, Pslactos

Radiotaerapy & Cancer

Diviniont

Dr. J. by Garefe de quevedo

Aatociete Director

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De. Ls Haddock

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School of Medicin

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Miss H. Paden

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Theory and Application

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Experimental Studies in

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LECTURER,

Dr. F, Ranos Moral

School of Medicine, U.P.R.

Me. Jose Janer

Dept, of Health of P. K.

De, Bicardo Méndes ryan

Depe. of Medicine

School of Medicine, .?.R.

De. R, Santint

School of Medicine, U.P.R.

Dr. Jose del Castillo

Depe. of Pharaacolosy

School of Medicine, U.P.R.

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Head, Nedical Sciences &

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Agricultural Bio-Setences

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Clinteal Applications Div.*

Mr. Heccor Barcelé

Head, Reactor Division

De. R, Levins

Dept. of Biolosy

Facuity of Natural Setene

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The Hoantog of che Bilharsia

Infection

Demographic changes in Puerto

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Core-Physice Studies of PRNC

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Optimum Genetic Systems

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Dr. Paul Weinorer

Read, Medical sciences %

Radiobiology Division

Dr. José Maldonado

School of Medicine, U.P.R.

Dr. fi. Hemewole

Biology Dept., Faculty of

Natural Sciences, U.P.R.

Dr. Nalcós Daniels

Radioisotopes Division

dr, Evelina Ortiz

Biology Dept., Faculty of

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Dept. of Biology, U.P.R.

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Dept. of Biology, Faculty

of Natural Sciences, U.PLR.

Dr, Andrew Maretaky

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causaion of Arthreped-borue

viruses,

Bioiogtes! Studies on Sehistosons

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Solution, « Survey

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Dr. Marcelo Uertholds

CLinteal Anplicetio:

De. B, Toro Goy:

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Veterans Adaini

Hospital, San Juan

De. Juan 9, Curet

Dean, College of Natural

Seiaices, -P-R.

De, Ortel Alva

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De. Joke As Mechington

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University of Florida

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CLinteat Applications Div.*

Dr. Julio V. Rivera

Radiosocopes Service

Veverans Adniniecraton

Hospital, San Juan

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Mrs. Gracela Candelas

Dept. of Biology, U.P.R.

SEILE OF 1aoruRE,

Potentialities

Medical Re

of Autoradiography

arch in Puerto Rico

Uptake of Radioactive

Trifluoromethine by erythrocytes

uses and Linde's

Enhancement of Inorganic

Solubility of the Type K₂CO₃,

Radiobiology of the Eye

Dosimetry from Photon Spectra and

Pulse-Height Distribution

Aspects of Ascorbic Acid Metabolism

from Acerola

Space, Thermal Energy

Potentialities of Autoradiography

in Medical Research in Puerto Rico

Tetolein Absorption

Introduction to Human Gene~

Radiography

Nephritis Post-radiation

602 Fixation in Marine

Invertebrates

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26 be. B,J. Gonder

Deputy Director*

May 3 Mige Zenaida Frias

Radiotherapy & Cancer Div.*

8 be. 1. Ys Rhenolkar

Director Emeritus

Tette Cancer Research

Institute, Bombay, India

17 Dr. Edwin Rot.

Head, Radiotherapy Div.*

2% Dr. Jose Me Tome

Radiotherapy & Cancer Div.*

31 Dr. Amador Gobas

Associate Director*

June 7 Dr. Mes, HiMsPalactos de Lozane

Radiotherapy & Cancer Div.*

Dr. B. H. Samant

Radiotherapy Application

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21 Dr. Richard Bled?

Plant Physiology Institute

University of Vienna

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28 be, cherles Gifford

Professor of Conperative

Physiology, alfred Univ.

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* Puerto Rico Nuclear Center

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The Photochemistry of Thyzine

Solutions

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Projects in the Redtotsotop

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PUERTO RICO NUCLEAR CENTER

SUIMARY OF RESEARCH ACTIVITIES

?Tabulated September, 1963

Director: Jobn C. Bugher (M. D., University of Michigan)

Deputy Director: Henry J. Gonberg (Ph. D., University of Michigan)

TT, MAYAGUEZ DIVISIONS AND PROGRAMS

A. Nuclear Science and Technology Division - Oven H. Wheeler (Ph. D., London)

L. Hot Atom Chemistry of Organic Fhosphorus Compounds - Investigator: Milagros Santos Sanchez under the guidance of Oven H. Wheeler (Ph. D., London)

2. Reactivity of Ring Compounds and the Ease of Ring Formation - Investigator:

London)

Rosita Baez Galib under the guidance of Owen H. Wheeler (Ph. D.,

(Thesis Research)

3. benzene - Investigators: John A. Wethington

(Ph. D., Florida), Owen H. Wheeler (Ph. D., London), and Ferdinand Rosa

Gontledge (Thesis Research)

4. Thermal Aromatic Rearrangements - Investigator: Owen H. Wheeler (Ph. D.,

London) and Ileana Casanova (Thesis Research)

5. Sulfur peroxide

London) with Hilda

of Steroids - Investigator: Owen H. Wheeler (Ph. D.,
Ile and César Reyes (Thesis Research)

6. Ferroelectric Behavior of Triglycine Sulfate - Investigators: Julio Gonzalo
(Ph. D., Madrid) and Francisco Ruiz (Thesis Research)

7. Photomultiplier Fatigue - Investigator: Rev. Ignacio Centarell (Lic. Physics,
Madrid) and Efraim Rosario (Thesis Research)

8. Design of a Thermal Neutron Shutter. This will be used for irradiating
experimental animals and other materials with thermal neutrons - Investigator:
Eddie Ortiz (Ph. D., Texas A. and M.) and Carlog V. Wheeler (Thesis Research)

9. Effect of Radiation on the Thermal Emissivity of Graphite - Investigator:

Kenneth Soderstrom (H. S., Univ. Florida) and Carlos Reoyo (Thesis Research)

10,

Differential Energy Range of Fission Products on Aluminum - Investigators:

Ismael Alsodévar (Ph. D., Carnegie Inst. Tech.) and Edgar Paez (Thesis Research)

11, Range Energy Relations of Fission Products in Different Materials - Investi-

gators: Ismael Alsodévar (Ph. D., Carnegie Inst. Tech.) and Nyole Paez

(Thesis Research)

Gamma Radtolysis of Organte Compounds - Investigator: Owen H. Wh

(Ph. D., Londonywith Rafsel Montalvo (Thesie Research)

---Page Break---

13. Spin-Spin Proton Coupling in Aromatic ©:

Wheeler (Ph. D., London) in co-operation with Dr. J. L. Mateos (National University of Mexico)

16, Compton Scattering - Investigator: Eddie Ortiz (Ph. D., Texas A. and M.)

15, Chemical Dosimetry - Investigators: Fausto Muflor (B.S.C.E, Polytech. Int Quito, Ecuador) atsisted by Pedro Osorio

16. Wierasonics and Mass Jransfer - Investigators: Fausto Mutloz (8.8.C.E. Polytech. Inst., Quito, Ecuador), Rafael Motor Candelario (Ph. D., Brockiyn Polytech. Inst} and David Gonzdiez

17. Szilard-Chalners Reaction in Inorganic Compounds - Investigator: Juan F.

Pacetti (Ph. D., Asunción) with Elisa Trabal

18. Search for New Nuclides - Investigator: Juan Facetti (Ph. D., Asunción)

with Elisa Trabal and Sigfredo Torres

19. Radiation Effects in Ferroelectric Properties of Rochelle Salt - Investigators: Kenkichi Okada (Ph. D., Kyoto), and Ricardo Vega

20. Relaxation Frequencies in Ferroelectric Crystals - Investigator

Relaxation Frequencies Seystale,

Ferroelectric Jule

Gonzalo (Ph. D., Madrid) and Kev, J. M. Brusi (Theis Research)

Neutron Diffraction Program - Principal Investigator: Lenael Almodovar (Ph. D., Carnegie Inst. Tech.) with guest scientist Helmut Bielen (Ph. D., Bonn) and Kenkichi Okada (Ph. D., Kyoto) in cooperation with Dr. B. C. Frazer and

Dr. Walter Hamilton of Brookhaven National Laboratory, Dr. J. Martinez Picé (Chemistry Department, College of Agriculture and Mechanic Arts), and

Dr. Mortimer Kay (Georgia Tech.)

A. Crystal Structure Determination of Inorganic Compounds

2. Magnetic Structure Determination of Compounds of Transition Metals

3. Low Temperature Crystal Structure Determination of substances That Are Liquids at Room Temperature

on Effects Program - Principal Investigator: Henry J.

Univ. Michigan) with the collaboration of Robert A. Luse

(Ph. D., Univ. California), Florencio Vazquez (Ph. D., Madrid), and Rosa

Santiago de Morales (M. S.) U.P.R.)

Agricultural Bio-Sciences Division - John C. Bugher (M. D., Univ. Michigan)

1, Acerola Metabolism - Investigator: Andreu Mareteki (Ph. D., Penn.State)

2, Mechanism of Back Mutation - Investigator

Francie K. S. Koo (Ph. D.,

= Investigators:

Francis K. S. Koo (Ph. D., Univ. Minnesota) and Edith Robles de Irizarry

(Thesis Research)

---Page Break---

?- Synthetic Enzymes - Investigators: Robert A. Luse (Ph. D., Univ. California)
and W. Harry Senent (Ph. D., Purdue Univ.)

5- Biochemistry of Sugar Cane - Investigator: Robert A. Luse (Ph. D., Univ.
California)

& Insect Control by Induced Sterility - Investigator: David Walker (Ph. D.,

Washington State Univ.)

? Rearing, and Radiation Studies of Diptera Saccharalis - Investigators:

David Walker (Ph. D., Washington State Univ.) and Adela V. de Aleassy

and Miguel Figueroa? (thesis Research)

7+ Tealling Indigo Project - Investigator: Jean arcta (Ph. D., Univ. Wisconsin)

8. Radtossctope Applications in Plant Study - Investigator: Robert A. Luse
(@h. D., Univ. California) and Fernando Luna

Faramutation Research Frogran - Investigator: Duane B. Linden (Ph. D.,
Univ. Minnesota)

1. Survey of South American Races of Maize for Paremutation Abltity - Tavesti-
ors Duane B. Linden (Ph. D., Univ. Minnesota) and Vicante Redrfgues
(Thesis Research)

2. Radiation Effects on Paramutation - Investigators

Duane B. Linden and

oué Cuevas Ruiz (Thesis Research)

+ Marine Biology Program - Principal Investigator: Frank G. Lowman (Ph. D.,

Univ. Washington)

1, Biological Productivity by

Metabolism

2. Stable Trace Element Analysis in Sea water, Marine Organism and Bottom

Sediments = Investigators: Milagros Miré (Wt. Sc., College of Arts and Sciences,

Arts), Lydia Quinones, and Vilma Rondón de Vega

Method Correlated with Trace Element

3. Uptake Studies of Marine Organisms - Investigators:

Iraida Oliver de Padovani

Edgar Ramos Seda

4, Background Radiation Levels in the Mari

Edgar Ramos Seda and Carlos Folch

5. Background Oceanographic Measurements - Investigator:

(Ph. D., Univ. Washington) and Edgar Ramos Seda,

Environment - Investigators:

Frank G. Lowman

&- Bincén Ecological Studies - Investigators: Robert A. Stevenson (Ph. D.,
Univ. Hawaii) and Frank C. Lowman (Ph. D., Univ. Washington)

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98 Ferrer Monge (Ph. D., Louisiana State Univ.)

Pediation Exvposure to the Gonads During Diagnostic

Investigato:: Analia Vélez Paradis under the guidance

Arrille Galderén (B.S. J., College of Agr. and Mech. Arts) (Thesis Research)

2, Determinal Background Radiation Levels in the Vicinity of the

Reactor Site Investigator: José Ferrer Monge (Ph. D., Louisiana

State Univ.) with the assistance of Pedro Cruz (M. S., College of Agr. and

Mech, Arts), Fernando Vallecillo, and Marfa Luisa Cort

3, Biological Study of the Wetland Zone of Puerto Rico - Principal Investigator:

José Ferrer Monge (Pa. U., Louisiana State Univ.)

?Theoretical Study of Reactor Engineering - Investigator: J. Parrille Calderéa

(H.S., College of Agr. and Mech. Arts)

H, Reactor Division ~ Hector Barcelé (M. S., College of Agr. and Mech. Arts)

1, Reactor Development and Monitoring Studies - Investigator: Héctor Barcelé

College of Agr. and Mech, Arts

?TL, RIO PIEDRAS DIVISIONS AND PLOGRAYS

A. Radioisotopes Division - Edwin Roig (Ph. D., Univ. Penn.)

1. Organic Chemistry Research - Principal Investigator: H. Harry Samant

(Ph. D., Purdue Univ.)

4, Synthesis of Organic Boron Compounds-Potential Use in Neutron Activation
Therapy ~

(2) Derivatives of Boric Acid - Investigator: A. Carrasquillo

(2) Derivatives of Diboron - Investigator: J. P. Pazoe

b, Substitution of

v

hydroxyl Groups in Polyfunctional Alcohols-Potential

as Antineoplastic

(Q) Inidete Reactions - Investigator: E. P. Olavarrsa

(2) Reactive Dichloro Compounds

Investigator: L. ortiz

. Organic Sulfur Compounds-Potential U

as Radiation Protective Agents

(1) Beta-hydroxy sulfoxides - Investigator: J. J. Rigueu

(2) Reduction of Sulfoxides - Investigator: O. Cox

(G) Association of Sulfoxides - Investigator: R. Figueroa

(4) Sulfolactone Reaction - Investigator: L. Fernandez

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(5) Sulfolactone Reaction - Investigator: R. Cabrera

4. Chromic Acid Oxidation of Hydrocarbons

Project approved - Research Assistant not appointed so far

fe, Solvent Effects in Chemistry

(1) Wolff-Kishner Reaction - Investigator: M. Ronda

(2) Absorption Spectra - Investigator: J. Vaillant

2, Photochemistry and Radiation Chemistry* - Principal Investigator: Malcolm

Daniels (Ph. D., Durham)

4, Photochemistry of Aqueous Nitrate Solutions at 3130 f - Investigator:

R Vicki Meyers (HM. S., Wisconsin)

b. Absorption Spectrum and Photochemistry of Periodate - Investigator:

B. V. Belardo (B. S., Philippines) and J. J. Rabelo (B. S., U.P.R.)

?. Photochemistry and Radiation Chemistry of Alkaline Permanganate -

collaborator to be appointed

4. Construction and Testing of Flash Photoly

Ronald Collins (Honor Program Physics, U.

Apparatus - Investigator:

Re)

e. Photochemistry of Thymine at 2537 Å and 1849 Å - Investigators: Alec

Grimison (Ph. D., London) and A. Ronda de Sandoval (B. S., U.P.R.)

£, Photochemistry of Uracil and Cytosine - Investigator:

(Ph. D., London) and Marie Adele Mouaked (U.P.R.)

Alec Grimson

8. Hyperchromicity and Viscosimetric Studies on D.N.A. - Investigators:

Alec Grimson (Ph. D., London), A. Lugo Vazquez and German Santi.

W.PR)

hh. Fluorescence and Phosphorescence Studies on Pyrimidines and D.NA, -

Investigator: . V. Belardo (B. S., Philippines) temporary. Full time

collaborator to be appointed.

These activities are supported by A.E.C. program divisions and the

D.N.A. work is supported by an N.I.H, grant to the University of

Puerto Rico.

3. Solution chemistry of Thallium - Principal Investigator: Edwin Roig (Ph. D.,

Univ. Penn.) with the collaboration of RaGI Figueroa (B. S., U.P.Re)

4, Solid State Physics of Organic Crystals - Principal Investigators: Amador Gobas (Ph. D., Columbia Univ.) and H. Harry Samant (Ph. D., Purdue Univ.) with the collaboration of Concepciés Zuazaga (B. S., U.P.R.)

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B, Clinteal Applications Division ~ Sergio Irizarry (M. D., Univ. Buffalo)

1, Study of Thyroid Gland Function Under the Influence of a Combination of Estrogenic and Progestational Substances in Puerto Rican Women - Investigators: Sergio Trizarry (M. D., Univ. Buffalo), Dr. Gregory Pincus (Director Of Research, Worcester Foundation for Experimental Biology), Dr. Manvel E. Paniagua (P. R. Family Planning Association) and Mr. José L. Janer (Biostatistics Div., School of Public Health, School of Medicine, U-P-R.), and Zenaida Frias (MPH, Univ. Michigan)

2

Isotope Li

ion Studies - Investigator: Sergio Irizarry (M. D., Univ.
Buffalo)

Equipment Modification

>, Tumor Localization and Organ Visualization

3. Eat Absorption Studies:

Intestinal Absorption of Patients Undergoing Radiotherapy - Tavesti-
Gacorsr Victor havctat (0, bos harvard} Sosy ts TTS Ga, Dee bal,
Buffalo), and A. A. Cintrén Rivera (M. ., Univ, Michigan)

b, Triple Simultaneous Measurement of Intestinal Absorption with Vitamin A,
?Gig-Oleic Acid, and Xylose - Investigators: Sergio Irizarry @. D.,
Univ. Buffalo) and A. A. Cinteén Rivera (M.D.

Univ. Michigan)

+ The Effect of the Unblocked Hyperthyroid Gland on Radio-Oleic Acid

od Levels (Absorption Curve) - Investigator: Sergio Irizarry Gi. D.,
Univ. Buffalo)

4, Studies on the Use of In Vitro Tests for the Assessment of Thyroid Function

Investigator: Weinbren (B.H.8, ch., London) and Sergio Irizarry
(De, Univ. Buffalo)

5. Renogram Follow Up Studies Cancer of the Cervix - Investigator: Sergio

Irizarry (M. D., Univ. Buffalo)

6. Studies of Blood Biochemical Changes in Patients Undergoing Radiation -

Investigators: Barbara Weinbren (B.N.B.Ch., London), Sergio Irizarry (M.D.,

Univ. Buffalo), and Victor Marcial (M. D., Univ. Harvard)

7. Thyroid Function Studies With In Vitro Techniques Using Red Cells and

Hesin for the Uptake of ^{131}I Triiodothyronine - Investigator: Barbara

Weinbren (B.S.B.Ch., London)

8. Experimental Exudative Gastritis in Dogs Induced by "Diol" - Investigators:

Dr. A. Rodriguez Olleros (Prof. of Biochem

(K. D.L., Univ. Buffalo)

9. & Comparative Study of In Vitro Thyroid Function Test Using Resin Uptake Method and Red Cells Triiodothyronine and Uptake by Red Cells - Investigators: Dr. E. Toro Goyco (Biochemistry Dept., Veterans? Administration Hospital) and Sergio Irizarry (M. D., Univ. iuffalo)

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©. Radiotherapy and Cancer Division - Victor A. Marcial (M. D., Harvard Univ.)

1. Bvaluation of Radiation Response in Cases with Cancer of the Cervix Uteri Treated with Radiotherapy by Means of Exfoliative Cytology = Tereacistn
Victor A. Marcial (WH. D., Harvard Univ.)

2. Uae of Fluorods for Radiation Dosimetry - Investigator: Marfa P. Lozano
(Univ. Rochester)

3+ Leukemia Study - Investigator: Victor Marcial (H. D., Harvard Univ.) in collaboration with the Department of Epidemiology of the School of Public Health, Harvard University)

4+ Aeradiation of the Eye - Investigator: Oriel Alva (M. D., Univ. Buenos Aires)

5. The Influence of whole Body Radiation on the Enzyme Activity of the Intestine -
Investigators: Victor Marcial (M. D., Harvard Univ.), José M. Tomé (i. De Spain), Antonio Bosch (M. D., Mexico) in collaboration with M. Decquisty (Ut. Colonel, H. C., of the U. S. A. Tropical Research Medical Laboratories)

4 Study of the Changes Detectable in the Serum of Cancer Patients Receiving
Atradiation to the Lower Abdomen, With Special Reference to Lipid and

?Protein Levels = Investigators: Barbara Weinbren (B-N-B-ch, London) ?Sergio
Irisarry Qi. D., Univ. Buffalo), Victor Marcial (M. D., Harvard Univ.)

Zenaida Frias (HPH, Univ. Michigan), Leonor Gilestra, and Carmen Viliodas

7. Cancer of the Esophagus - Investigators: Victor Marcial Qf. D., Harvard Univ.)
in collaboration with Dr. Pablo Morales (Div. of Radiology, Dr. 1. Gousdles
Martinez Oncologic Hospital), and Dr. Radl Marcial Rojas (Head of Derecteeent
of Pathology, School of Medicine, U.P.R-)

8. Hodgkin's Disease - Investigators: José M. Toné (H. D., Spain)with the
collaboration of Dr. Eduardo de León (Pathology Department, School of
Medicine, U.P.R.)

8

Garcinosa of che Anterior Two Thitds of the Tongue - Inv
?Toné (1. D., Spain) and Victor Marcial 1. D., Harvard

tigators: José M.

iniv.)

10. Irradiation of the Kidney - Investigators: Antonto Bosch (HI. D., Mexico)
with the collaboration of Dr. Willian Ckldvell (Rodriguez Army Hospital)

11. Fractionation in Radiotherapy of Cancer of the Oral Cavity - Investigator
José M. Toné (M. D., Spain), Antonio Bosch (M. D., Mexico}, and Oriey Ales
(1. D., Univ. Buenos Aires)

D. Medical Sciences and Radiobiology Division - Paul Weinbren (HI. D., Univ. of
Witwatersrand, §. A.)

he Mechanisms of Antigen-Antibody Reactions Following the Inoculation of
Mice with Irradiated and Normal Schistosoas mansoni Cercariae = Tevestin
Paul Woinbren (H. D., Univ. of Witwatersrand, S. A.) and John B. Villedia
(Ph. D., Univ. Michigan)

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2, Intracellular Effects of Neutron Capture Reactions - Investigators: John C.

Bagher Gt. D-, Univ. Michigan) and Paul Weinbren (4. D., Witwatersrand, S.A.)

7 43. The Study of Human Chromosomes in Normal and Irradiated Subjects and Those

Having Sprue - Investigators: N. Bacquisto (Ph. D., Univ. Vermont) and Paul

Weinbren (Ph. D., Witwatersrand, S.A.) with the collaboration of José

: Tomé (M. D., Zaragoza, Spain)

4, The Response of Selected Small Intestine Enzymes to Tonizing ion -

Investigator: M. Bacquisto (M. D., Univ. Vermont) with the collaboration

of Antonio Bosch (M.D., Univ. Mexico)

5. Ethology of Obscure Acute Neurological Syndromes in Children ~ Principal

7 Investigator: Dolores Méndez Cashion (M. D., Univ. Virginia). Virus

{solation program of this research project is being carried out by the

staff of this Division

2, Terrestrial Ecology Program - Part I - Radioecology of a Tropical Rain Forest
at El Verde, Puerto Rico - Principal Investigator: Howard T. Odum (Ph. D.,
University of Michigan)

3. Terrestrial Ecology Program - Part 11 - Radiation Induced Variability in
Terrestrial Arthropod-Borne Animal Viruses of Puerto Rico ~ Principal Investi-
gator: Paul Weinbren (Ph. D., Witwatersrand, S. A.)

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