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REPORT OF FOREIGN TRAVEL BY JAMES E. CROOK AND YU-CHEN C. LEE, ORAU

Robert W. Wood, Director of Physical and Technological Research, ER-74, Headquarters, Germantown, Maryland

Attached is a copy of a trip report prepared by James E. Crook and Yu-Chen C. Lee covering their travel to Taiwan during the period October 28 through November 5, 1988. The travelers attended and presented papers at the Fourth Asia and Oceania Congress of Nuclear Medicine held November 1-4, 1988, in Taipei, Taiwan.

The report has been reviewed and does not contain any classified information.

ORIGINAL SIGNED BY  
M. C. WALLACE

Larry L. Radcliffe, Acting Director  
Research and Waste Management Division

*to name  
of the letter*

Attachment

cc w/atchmt:

- R. O. Hunter, Jr., ER-1, HQ, FORS
- D. B. Waller, IE-1, HQ, FORS
- A. B. Siebert, DP-32, HQ, GTN
- E. Q. Ten Eyck, DP-34, HQ, GTN
- J. G. Coyne, MA-28, OSTI
- J. A. Lenhard, ER-10, ORO
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COVER SHEET  
FOR TRIP REPORTS SUBMITTED TO THE  
OFFICE OF ENERGY RESEARCH

Destination(s) and Dates for  
Which Trip Report Being Submitted: Taipai, Taiwan October 28-November 5, 1988

Name of Traveler: James E. Crook

Joint Trip Report  Yes  
 No

If so, Name of Other Traveler(s): Yu-Chen C. Lee

FOREIGN TRAVEL TEAM REPORT

November 1-4, 1988

James E. Crook, M.D., Ph.D., FACP

and

Yu-Chen C. Lee, Ph.D.

Medical and Health Sciences Division  
Oak Ridge Associated Universities  
P. O. Box 117  
Oak Ridge, Tennessee 37831-0117

Prepared December 2, 1988

- (1) Traveler: James E. Crook, M.D., Ph.D., FACP, Director, and Yu-Chen C. Lee, Ph.D., Postdoctoral Research Associate, Preclinical and Clinical Radiopharmaceutical Development, Medical and Health Sciences Division, Oak Ridge Associated Universities, Oak Ridge, Tennessee 37831-0117. This trip report is dated December 2, 1988.
- (2) Destination: Taipei, Taiwan. This trip covered the period October 28-November 6, 1988 (Dr. Crook), and October 28-November 12, 1988 (Dr. Lee). Official business was involved during the period October 28-November 5, 1988 (Drs. Crook and Lee).
- (3) Purpose of Trip: To attend the Fourth Asia and Oceania Congress of Nuclear Medicine held November 1-4, 1988 in Taipei, Taiwan, and to present in oral sessions, the following papers entitled "Imaging and Radiolabeling Studies of Tamarin Anticolon Carcinoma Monoclonal Antibody of BR55-2 with Indium-111" (Dr. Crook) and "Immunodiagnosis of Tamarin Colon Cancer" (Dr. Lee).
- (4) Abstract: The Congress was officially opened by H. G. Teng-Hu Lee, President of the Republic of China, who addressed delegates and scientists from twenty-two countries. The theme of the Congress "Nuclear Medicine State-of-the-Art and Prospect" was supported by a total of thirty-six invited speakers of international standing who presented seminar length dissertations on present day issues of clinical and academic nuclear medicine in two special lectures, three plenary sections and six symposia. There were 250 papers accepted for oral presentation and 91 accepted for poster presentation. As well, there was a special round-table conference on the effects of low level radiation. Included among its participants were such notable speakers as Dr. Henry Wagner of the Johns Hopkins University and the eminent Nobel Laureate, Dr. Rosalyn Yalow. The initial site selected for the Congress was to have been at the newly constructed conference facilities at the Taiwan Veterans Administration Hospital, but the enrollment and number of attendees was so high it was switched to the facilities at the Grand Hotel. This was a good choice as the conference rooms were well situated and the chairmen of the various sessions were well informed about the subject matter. The conference attendees participated in a number of post-presentation question and answer sessions indicating that the general ability and interest of the audience was high.
- (5) Cost of Travel: The cost of this trip was approximately \$3,404.40 (Dr. Crook) and \$3,352.26 (Dr. Lee) for a total cost of \$6,756.66. The entire cost was charged to DOE Budget Activity HA 02 07 01 for the Radiopharmaceutical Development and Preclinical Nuclear Medicine Program.

## COMPREHENSIVE REPORT

Although the opening ceremonies for the Congress took place on Monday, October 31 at 5:00 p.m. in the afternoon, the travelers were scheduled to arrive in time to participate in the four Precongress Teaching Sessions. Due to significant delays in the air carrier's departure times we arrived late into the Precongress Teaching Session II. The Third and Fourth Precongress Teaching Sessions included lectures on, for example, tumor imaging. This was delivered by Dr. Samuel Yeh of Cornell Medical College and the Memorial Sloan Kettering Cancer Institute in New York. Dr. Yeh is well-known to us having been a coauthor on publications from our group as well as being a coinvestigator, on studies utilizing carbon-11 tryptophan and valine which were carried out at the Brookhaven National Laboratories in Long Island, New York. Dr. Yeh was also a member of the Scientific Program Subcommittee for the Congress, specifically being Chairman of the Teaching Section of that subcommittee. He addressed his comments to a basic background introduction to the topic of tumor imaging using not only the historical favorite, gallium-67, but discussed the new tumor-seeking radiopharmaceuticals which incorporate either indium-111 or iodine-131. Although he had introduced the topic of MIBG early-on in his discussion, Dr. Yeh then gave a fairly detailed exposition directed toward R-24 which is a well-defined mouse IgG antibody against surface antigen ganglioside, GD<sub>3</sub>. Specifically, he talked about the uptake of this monoclonal antibody in gliomas and malignant pheochromocytomas. The R-24 was taken up by the metastasis as well as the original tumor present in the adrenal. He also spoke briefly about the use of positron emission tomography in oncology pointing out that N-13 ammonia, glutamate, leucine, valine, and methionine are used by tumors such as osteogenic sarcoma, melanoma, and lymphomas. He ended his lecture session with a section entitled "New Applications of Old Procedures". In this section he simply pointed out that modalities previously used, e.g., pump infusion of the liver with chemotherapeutic agents, were now being studied as a means by which one could deliver concentrations of labeled or unlabeled monoclonal antibodies to organs with primary or metastatic disease. This is a mechanism for limiting radiation exposure to organs uninvolved with the neoplastic process. Other sessions in the Second Precongress Teaching Session day were devoted to cardiovascular function, abdominal abscess imaging, and bone scanning as well as bone mineral measurements. There were sections devoted to endocrine organs such as the parathyroid glands. Both renal and brain imaging sections were also included. Two of the more notable teaching sections were delivered by Dr. Raymundo Go who discussed myocardial perfusion imaging. A second teaching section delivered by Dr. Donald Tow addressed a basic review of ventricular function and assessment of that function using radionuclide methods.

One of the travelers, Dr. Yu-Chen Lee, having known for some time, the President of the Organization, Dr. Peter Yeh, introduced me to Dr. Yeh. Dr. Yeh was kind enough to invite us to join a group of distinguished visitors and scientists for a lecture and tour of the new Taiwan Veterans Administration Hospital in Taipei. The first part of the tour took place in a huge auditorium equipped with multiprojectors such that the viewing screens took up approximately one-half of the circular auditorium. This audiovisual production was obviously professionally produced and very well narrated. Following this general introduction to the Taiwan Hospital, we then made a personal tour of the nuclear medicine facility. Dr. Yeh quite proudly pointed out that approximately 100 nuclear medicine studies were done each day and that the department generated five curies of activity, generator produced, each week. I believe that this degree of productivity, as well as the President of Taiwan's

acknowledgment of Dr. Yeh's almost single-handed effort in establishing nuclear medicine in Taiwan, led Dr. Rosalyn Yalow, U. S. Nobel Laureate, a member of the tour, to make the comment that the United States should consider sending its scientists to Taiwan rather than having Taiwan send its scientists to the United States.

At the opening ceremonies, the President of Taiwan had also spoken about the great enthusiasm with which they viewed the first positron emission tomograph and cyclotron to be installed at the Taiwan Veterans Hospital. This hospital certainly must be one of the largest hospitals in the world, with an estimated bed capacity of 2700. It has undergone extensive remodeling and the remodeling is expected to continue for the next year or two.

An afternoon symposium was devoted to "Science and Nuclear Medicine, An Update". The session was chaired by Dr. Al Wolf and divided into four subsections dealing with instrumentation, radiopharmaceuticals and PET, nuclear medicine computers and modeling of tracer kinetics in nuclear medicine. Dr. Wolf gave his usual erudite dissertation dealing with the progress and promise of PET. Touched upon were topics such as metabolic probes, chemical probes, enzyme inhibitors and enzyme probes, ion channel blockers, blood flow agents, ethical drugs and radiopharmacology, and finally other positron emitters, e.g., rubidium-82, gallium-68 and bromine-75. He then talked about new radiotracers for PET that involved fluorine-18 estradiol derivatives, cation channel blockers such as the F-18 phencyclidines and in particular the Merck drug MK801. Considerations about a nuclear medicine computer, by Dr. Michael Goris of Stanford University really dealt with asking proper questions such as what does the user really expect of a system performing scintigraph procedures, single station versus multi station units, integration of the imaging system in the laboratory management system, etc. The final portion delivered by Dr. Huang, tracer kinetics modeling, described typical models usually used in tracer behavior. He also pointed out that the kinds of models required for study depended on many factors. Foremost among these factors are the measuring instruments available, nature of the tracer used and what accuracy is desired. He then showed tables showing how these factors are related, in particular with a PET as the measuring instrument available used in combination with a tracer containing a positron label. With this system possible model types were regional and quantitative. He also addressed some issues on model validation, parameter estimation and a brief example on the applications of tracer kinetic models, for example, using the neuroreceptor binding studies with PET. It was found that the reliability of receptor density estimates could be maximized by the use of ligands having an optimal binding affinity.

The first plenary session devoted to the revival of brain functional studies was held on the second day of the meeting. The session was chaired by Dr. Henry Wagner. There were a total of three papers in this session, the first of which was "PET in Neuropsychiatry" which was to have been delivered by Dr. Michael Phelps. However, Dr. Randall Hawkins of the same institute substituted for Dr. Phelps. The majority of the work presented was material which had been previously published and presented. The second paper dealt with the utilization of PET in oncology and focused on what was felt to be promising solutions for many of the frustrating problems in oncology through the use of the typical CNOF labeled substrates. Examples of these were devoted to C-11 methionine and F-18 FDG. Pointed out as an area of special importance was the rapidly growing use of monoclonal antibodies radiolabeled with a variety of radioisotopes. The final section of the preliminary section was devoted to single photon emission tomography.

On the same day of this Congress an additional symposium was held in the afternoon that was devoted to radioimmuno-detection of cancer. This particular symposium had four sections, the first of which dealt with the basic aspect of radioimmuno-detection of cancer in which a number of terms of importance were defined or redefined, viz., immunoreactivity radiolabels, the importance of blocking the metal ion pool with iron and the importance of metabolizable spacers. Some attention was directed toward radioimmunos-cintigraphy. It was believed to be feasible and encouraging a position which seems to be a majority opinion held today. It was pointed out that in order for lesions of approximately the same size full width half maximal to be visualized, the lesion needs to concentrate the radioactivity 4-6 times greater than the background. However, this was felt to be achievable. A second paper of some interest pertained to immunoscintigraphy on the basis of immunohistochemistry. This was presented by Dr. Hans Biersack, a collaborator of Dr. Russ Knapp at the Oak Ridge National Laboratory and an individual whom I have met a number of times both in Europe and in Oak Ridge. He showed some interesting work based, in essence, on matching the appropriate antibody used for immunoscintigraphy with that which would be selected on the basis of immunohistochemistry. A total of 214 patients with a variety of malignant tumors included colorectal, melanoma, lung, testicular, ovarian, bladder, carcinoid, and prostate, had been studied. The third paper presented in the symposium dealt with clinical experience in immunoscintigraphy; which dealt with the recommendations of the International Research Group for Immunoscintigraphy and Therapy (IRIST) located in France. This group sponsors the idea of a cocktail of I-131 antiCEA monoclonal antibody and I-131 antiCA 19-9 monoclonal antibody in the detection of known colorectal carcinoma. The cocktail goes under the name of IMACIS-1. The next to the last paper of this section pertained to radioimmuno-detection of cancer. This particular paper reviewed some clinical problems in oncology for which radioimmunos-cintigraphy had been designed; specifically, toward the detection of subclinical, subradiological reoccurrences, the evaluation of chemotherapy and the determination of whether a mass large enough to be seen on ultrasound or x-ray CT is due to post-therapy fibrosis or contains viable tumor. The biotin:streptavidin techniques were mentioned as ways of improving the ratio of tumor uptake at tissue background. Other new antibodies and antigens such as PRIA-3 which is a new antibody against the fixed columnar cell antigen was felt to have some potential for staging a colorectal carcinoma. The final paper of the section dealt with a comparison between CA 72-4 compared to CEA, CA 19-9, CA 125 and CA 15-3 in the diagnosis, staging and in the follow-up of solid tumors. This group had an interesting population of individuals as follows: 110 patients with proven cancer of the GI tract, 50 patients with benign diseases of the GI tract, 30 patients with colorectal polyps, 40 healthy controls and 40 patients suffering from ovarian and mammarian cancer disease. The results showed an overall sensitivity for GI carcinomas of 36%, with the lowest being for endocrine cancer and the highest sensitivity for advanced pancreatic and stomach cancer.

On the second day of the Congress, in the first oncology section, Dr. Yu-Chen Lee, as the number one paper, orally presented her paper titled "Immunodiagnosis of Tamarin Colon Cancer". I was a coauthor on this particular paper. The paper dealt with the use of a variety of methodologies such as the ratio of T+4 (helper/inducer) lymphocytes to T+8 (suppressor/cytotoxic) T-lymphocytes. There was a statistically significant difference between the negative controls versus those tamarins with acute colitis and cancer positive. As well, work carried out using cytofluorographic analysis also indicated differences between the sera from cancerous tamarins and those who were the normal controls. Also on this

same day in the Oncology II section, cochaired by Dr. Biersack, who was Chairman of the European Section on the Scientific Program Subcommittee, was an oral presentation by Dr. James Crook of the paper entitled, "Imaging and Radiolabeling Studies of Tamarin and Anticolon Carcinoma Monoclonal Antibody, BR55-2 with Indium-111". This work dealt with preliminary studies using the indium-111 labeled antibody, BR55-2, and the ability to image colon carcinoma in tamarins with both clinical symptoms and biopsy proven colonic carcinomas. This work was the groundwork for support of our application and now on-going work for the development of a specific monoclonal antibody against the colorectal carcinoma occurring in tamarin. Both papers were well received. There were a number of complimentary remarks on our good fortune in having a colony of nonhuman primates.

The second and third plenary sessions dealt with new cardiovascular tracers and techniques on the horizon and nuclear medicine practice respectively. In the former session, Dr. Schelbert of UCLA was a cochairman. The three sections of this plenary session dealt with an evaluation of global ventricular evaluation by using a simultaneous measurement of ventricular performance in myocardial perfusion with a single injection of Tc-99<sup>m</sup> isonitrile. Tc-99<sup>m</sup> isonitrile imaging was also the topic, more specifically, in the second paper of this particular section. The final section was an evaluation of myocardial metabolism using PET which was delivered by Dr. Schelbert. He more or less reviewed what was known about how traces of blood flow including oxygen-15 labeled water, rubidium-82 and ammonia-13 could be utilized in the evaluation. He pointed out the specific theoretical and practical advantages. He also addressed the issue of instrumentation requirements. The last part of the section dealt with some "newer" short-lived containing compounds such as carbon-11 acetate. The third and final plenary section dealt with the history of nuclear medicine in Asia and Oceania, also talked about the SPECT versus PET versus MRI and the Japanese experience. An intriguing session was delivered by Dr. Dick Lambrecht, formerly of the Brookhaven National Laboratory and now with the Kingdom of Saudi Arabia. He addressed not only the experience he has had in Saudi Arabia, but also the broad experience in the establishment of cyclotron and PET programs in developing countries. Probably far and away the country most ahead of everyone else in Asia and Oceania is Kuwait. He also addressed those problems which are of concern in developing nations such as the availability of service requirements needed. He outlined and mentioned that there were a number of third world countries that were planning to have a cyclotron installed under the auspices of the World Health Organization. The manufacturer of the particular cyclotron to be installed in the five countries would be manufactured within the United Soviet Socialist Republic.

As a final note to this trip report, I thought it would be worthwhile to describe briefly the tour that both Dr. Lee and I made of the Institute of Nuclear Energy Research facility operated under the auspices of the Chinese Atomic Energy Council, located about one hour outside of Taipei, Taiwan, in Lung-Tan. Our hosts for this tour were Dr. Zei-Tsan Tsai (Ph.D.), Head, Radiation Application Division, and Dr. Yung-Chen Tong (Ph.D.), Senior Scientist. Dr. Tong has been a recent worker/visitor at the Oak Ridge National Laboratory. We were shown the gamma radiation facilities used to sterilize products shipped there by Johnson and Johnson from the USA. As well, we reviewed and visited some of the facilities where generator-dependent products are made for in-country use.

## EVALUATION

I feel that the visit to the Fourth Asia and Oceania Congress of Nuclear Medicine by the two team members, Dr. Crook and Dr. Lee, was quite worthwhile. The Congress was successful and well-organized as evidenced by the Congress' choice of chairpersons and cochairpersons of the various sections and subsections. I think the fact that the Congress developers were able to attract a U. S. Nobel Laureate, Dr. Rosalyn Yalow, to the Congress was evidence of the breadth and depth of the scientific and professional expertise present. I think it is especially important to point out that positron emission tomography utilizing cyclotron-developed short-lived radionuclide continues to spread throughout the world. It's importance is becoming increasingly apparent to a number of knowledgeable individuals including government officials of the individual countries. It is also readily apparent that Taiwan should no longer be regarded as a third world or developing country, but rather is probably now in the category of having been developed. A final and second important point that needs to be emphasized is the relative degree of rapidity with the use of monoclonal antibodies and the radiolabeling of them is proceeding both within Europe and throughout Asia. A final point of importance is that having several ORAU and DOE scientists physically present provides the opportunity for a degree of scientific interchange that is not readily available or possible under other circumstances.

#### APPENDICES

A copy of the abstracts entitled, "Imaging and Radiolabeling Studies of Tamarin Anticolon Carcinoma Monoclonal Antibody BR55-2 with Indium-111" and "Immunodiagnosis of Tamarin Colon Cancer" are attached as appendix A. A copy of the scientific program for the Fourth Asia and Oceania Congress of Nuclear Medicine is attached as appendix B.

**FOURTH ASIA AND OCEANIA CONGRESS OF NUCLEAR MEDICINE, NOVEMBER 1-4, 1988**

**ABSTRACT FORM**

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**IMAGING AND RADIOLABELING STUDIES OF TAMARIN ANTICOLON CARCINOMA MONOCLONAL ANTIBODY BR55-2 WITH INDIUM-111.** J.E. Crook, L.C. Washburn, Y-C.C. Lee, T.T. Sun, B.L. Byrd, E.C. Holloway, N.K. Clapp and Z. Steplewski\*. Oak Ridge Associated Universities, Oak Ridge, TN, \*The Wistar Institute, Philadelphia, PA, U.S.A.

Colon cancer ranks as one of the major causes of death in the U.S.A. The cotton top tamarin, a New World monkey, has a high incidence of spontaneously developing colon carcinoma. Five nuclear imaging studies were performed on 5 different tamarins of which 2 were controls. The purpose of these studies were to (1) evaluate the animal model, (2) approximate the amount of indium-111-labeled (In-111) antibody allowing visualization of the internal organs of the tamarin, and (3) determine a time course over which sufficient counts would be present to obtain serial images. Radiolabeling of monoclonal antibody BR55-2, specific for human colorectal carcinoma with reactivity toward the tamarin tumor was performed as follows: Mab BR55-2, isotype 2a (5.9 mg/ml) was coupled with diethylenetriamine-pentacetic acid (DTPA) using the cyclic DTPA anhydride technique at an anhydride-to-antibody molar ratio of 2:1, resulting in the conjugation of 1.3 DTPA groups per molecule of Mab. In-111 labeling involved mixing DTPA-conjugated BR55-2 (460 µg/120 µl) with In-111 acetate (1100 µCi) in 400 µl of 0.5 M sodium acetate, pH 5.5. HPLC purification and coadministration of unlabeled Mab are both important in order to achieve maximum tumor specificity of radiolabeled tumor-associated Mab. Doses of In-111-labeled BR55-2 ranging from 100 µCi administered via the femoral vein were well tolerated by the tamarins. Serial images were obtained up to 144 hours post injection using a Searle Phogamma V gamma camera. Considering the weak affinity of the BR55-2 monoclonal antibody for the spontaneous tamarin colorectal carcinoma, satisfactory images of the liver, spleen, and bowel were obtained.

This work is supported by contract number DS-AC05-76OR00033 between the U.S. DOE and ORAU.

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 Abstract must be postmarked by June 30, 1988.

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TYPE FULL NAME OF AUTHOR PRESENTING PAPER		
<u>James</u>	<u>Crook</u>	<u>MD, PhD</u>
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**FOURTH ASIA AND OCEANIA CONGRESS OF  
NUCLEAR MEDICINE, NOVEMBER 1-4, 1988  
ABSTRACT FORM**

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**TYPE ABSTRACT HERE (BE SURE STAY WITHIN BORDER)**  
**IMMUNODIAGNOSIS OF TAMARIN COLON CANCER.** Y-C.C. Lee, J.E. Crook, N.K. Clapp, B.D. Lawless\*, J.E. Fuhr\*\* and Z. Steplewski\*\*\*. Oak Ridge Assoc. Univ., Oak Ridge, TN, \*Fordham Univ., New York, NY, \*\*Univ. of Tenn. Med. Ctr., Knoxville, TN, \*\*\*The Wistar Inst., Philadelphia, PA, U.S.A.

Diagnosing colon cancer in its early stages would lower the mortality rate. The cotton-top tamarin, Saguinus oedipus, develops colon cancer spontaneously, and serves as a model for the study of human colon cancer. Several immunological methods have been developed to diagnose tamarin colon cancer. The ratio of helper/inducer (T4+) to suppressor/cytotoxic (T8+) T lymphocytes showed a significant difference ( $p=0.0005$ ) between negative controls versus acute colitis and cancer positive tamarin groups. Mouse antitamarin cancer cell IgG showed specificity for both tamarin and human adenocarcinoma cells. Autoantibodies from cancerous tamarin were isolated. Autoantibodies found in tamarins having acute colitis were lower but detectable by immunofluorescent stain. This may suggest that tamarins with acute colitis are in a precancerous stage.

Fluorescently-labeled cells were detected when peripheral blood mononuclear cells from cancerous tamarins were incubated with biotinylated autoantibodies from cancerous tamarin. Cytofluorographic analysis also confirmed this observation. Enzyme-linked immunosorbent assay using antigens from SW 948 (human colon carcinoma cells) and CTT (tamarin colon carcinoma cells), also showed the presence of antibodies in the sera of cancerous tamarin. From the above experimental results, we suggest that immunological approaches are potential ways for diagnosing colon cancer in tamarin. Currently, we are working to characterize and compare the antigens from SW 948 and CTT cell lines.

This work was supported in part by DOE Contract DE-AC05-76OR00033 and NIH Grant 5-R01-CA39706-02, NCI Contract NO1CP57006, the National Foundation for Ileitis and Colitis, NIH Grant 2-507-RR05746-14.

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Yu-Chen Lee Ph.D.  
First Last Degree

Friday, November 4					
PLENARY SESSION III Nuclear Medicine Practice					
8:30-10:00	Room A				
10:00-10:30	Tea Break				
10:30-12:30	Cardiovascular VI Room A	Radiology Room B	Pulmonary II Room C	Genitourinary II Room D	Nuclear Magnetic Resonance Room E
12:30-13:50	Luncheon				
13:50-15:30	Renal, Pulmonary, and Peripheral Vascular Diseases and Organ Transplantation Room A	SYMPOSIUM E		SYMPOSIUM F	
15:30-16:00	Tea Break			In-Vitro Nuclear Medicine and Miscellaneous Room B	
16:00-17:00	SPECIAL LECTURE II The PET Revolution in the Neurosciences Room A				
17:10-18:00	Closing Ceremony, Banquet Room, 10th FL				



PRECONGRESS  
TEACHING  
SESSION

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**PRECONGRESS TEACHING SESSION I**

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8:00-12:10

Room B

Chairman: Hank F. Kung, U.S.A.

8:00 Introduction

8:10 **MR Imaging Principles.** Max S. Lin. St. Louis University, St. Louis, MO, U.S.A.8:50 **Fundamentals of Positron Emission Tomography.** Henry S.C. Huang. UCLA School of Medicine, Los Angeles, CA, U.S.A.9:30 **Fundamentals of SPECT.** Benjamin M.W. Tsui. University of North Carolina, Chapel Hill, NC, U.S.A.10:10 **Criteria for the Selection of a Computer for Nuclear Medicine.** Kai H. Lee. University of Southern California, Los Angeles, CA, U.S.A.10:50 **Correlation of Functional Nuclear Medicine Imaging with Structural CT or MR.** C.T. Chen. University of Chicago, Chicago, IL, U.S.A.11:30 **Basic Exponential Models for Pharmacokinetic Analysis in Nuclear Medicine.** George Y. Wang. Memorial Sloan-Kettering Cancer Center, New York, NY, U.S.A.

Sunday, October 30

**PRECONGRESS TEACHING SESSION II**

13:00-17:00

Room B

Chairman: David C.P. Chen, U.S.A.

- 13:00 **Tc-99m Radiopharmaceuticals: Recent Advances and Clinical Prospectives.** Theodore S.T. Wang, Columbia University, New York, NY, U.S.A.
- 13:40 **Iodine Labeled Brain Perfusion Imaging Agents.** Hank F. Kung, University of Pennsylvania, Philadelphia, PA, U.S.A.
- 14:20 **Recent Advent in Positron Emitting Radiopharmaceuticals.** Chyng-Yann Shiu, Brookhaven National Laboratory, Upton, NY, U.S.A.
- 15:00 **Radioassay and Non-isotopic Immunoassay.** I-Wen Chen, University of Cincinnati College of Medicine, Cincinnati, OH, U.S.A.
- 15:40 **Tumor Markers.** Frank H.F. Cheng, University of Iowa Hospitals, Iowa City, IO, U.S.A.
- 16:20 **Antibody Imaging.** Ban-An Khaw, Massachusetts General Hospital, Boston, MA, U.S.A.

Monday, October 31

**PRECONGRESS TEACHING SESSION III**

8:00-12:00

Room B

Chairman: Theodore S.T. Wang, U.S.A.

- 8:00 **Myocardial Perfusion Imaging.** Raymundo T. Go, Cleveland Clinic Foundation, Cleveland, OH, U.S.A.
- 8:40 **Ventricular Function.** Donald E. Tow, VA Medical Center, West Roxburg, MA, U.S.A.
- 9:20 **Abdominal Abscess Imaging.** David C.P. Chen, University of Southern California, Los Angeles, CA, U.S.A.
- 10:00 **Bone Scans in Benign and Malignant Bone Diseases.** Wilfrido M. Sy, Brooklyn Hospital, Brooklyn, NY, U.S.A.
- 10:40 **Bone Mineral Measurement.** Robert Y.L. Chu, University of Oklahoma City, OK, U.S.A.
- 11:20 **Radionuclide Thyroid and Parathyroid Imaging.** David C. Yang, The Methodist Hospital, Brooklyn, NY, U.S.A.

Monday, October 31

Monday, October 31

**PRECONGRESS TEACHING SESSION IV**

13:00-17:00

Room B

Chairman: Wilfrido M. Sy, U.S.A.

- 13:00 **Radionuclide Brain Imaging.** Wei-Jen Shih. University of Kentucky Medical Center, Lexington, KY, U.S.A.
- 13:40 **Radionuclide Renal Studies.** Eddy K. Dunn. State University of New York, Brooklyn, NY, U.S.A.
- 14:20 **Comparison of Imaging Modalities in Diagnosis of Hepatobiliary Disease.** Eddy C.K. Tong. Mt. Sinai School of Medicine, New York, NY, U.S.A.
- 15:00 **Tumor Imaging.** Samuel D.J. Yeh. Cornell Medical College, Memorial Sloan-Kettering Cancer Center, New York, NY, U.S.A.
- 15:40 **I-131-Lipiodol in the Management of Hepatocellular Carcinoma.** Chan H. Park. Thomas Jefferson University Hospital, Philadelphia, PA, U.S.A.
- 16:20 **Regulatory Affairs in Nuclear Medicine.** Gerard C. Wong. California Department of Health Service, Sacramento, CA, U.S.A.

**OPENING CEREMONY**

17:10-18:00

Convention Hall, 12th FL

**Opening Remarks**

Prof. Peter Shin-Hwa Yeh  
President, Asia and Oceania Federation of Nuclear Medicine and Biology

**Address of Welcome**

H.E. Teng-Hui Lee  
President of the Republic of China

**Supported by**

Prof. Kwoh-Ting Li  
Senior Advisor to the President

Prof. Chun-Jen Shih  
Director General of Department of Health

**WELCOME RECEPTION AND COCKTAIL PARTY**

19:00-22:00

Banquet Room, 10th FL

MEMO

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**SCIENTIFIC  
PAPERS**

Tuesday, November 1

MEMO

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**SPECIAL LECTURE I**

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8:30-9:30

Room A

**Chairman:** Peter Shin-Hwa Yeh, R.O.C.

**Radiimmunoassay Update.**

Rosalyn S. Yalow. Solomon A. Berson  
Research Laboratory, Veteran Administration  
Center, Bronx, NY, U.S.A.

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**OFFICIAL OPENING OF THE  
COMMERCIAL EXHIBIT**

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9:30-10:30

International Reception Hall, 1st FL

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**CARDIOVASCULAR I**

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10:30-12:30

Room A

**Chairmen:** Ismael G. Mena, U.S.A.  
Donald E. Tow, U.S.A.

10:30 **Left Ventricular Pressure-Volume Loop Determined by Radionuclide Ventriculography (RNV) and Analog Pressure Data: A New Method for Clinical Applications.**  
Inagaki S, Sugihara H, Nakagawa T, Katahira T, Kubota Y, Kitamura H, Ochiai M, Adachi H, Katsume H, Nakagawa M, Ikegaya K, and Matsui S. Dept. of Cardiology, Kyoto Prefectural Rakuto Hospital, Kyoto, Japan

- 10:45 **Simple Method for Calculation of Left Ventricular Pressure? Volume Index by Combinaton of Firstpass and Gated Blood Pool Scintigrapy.** Bunko H, Taki J, Nanbu I, Shiire Y, Taniguchi M, Nakajima K, Tonami N, Hisada K. Dept. of Nuclear Medicine, Kanazawa University School of Med., Kanazawa, Japan
- 11:00 **Calculation of Ejection of Fraction (EF) from Dual Gated SPECT Myocardial Imaging with Tc-99m Methoxy Isobutyl Isonitrile (MIBI).** Abdel-Dayem HM, Kouris K, Taha B, Belani N, Hassan IM, Constantinides C, Nair M. Dept. of Nuclear Medicine, Faculty of Medicine, Kuwait University, Safat, Kuwait
- 11:15 **New Method of Estimation of Cardiac Output with Use of KR-81m.** Hirasawa Y, Shimada T, Tanaka S, Mori Y, Kawakami K. Dept. of Radiology, Jikei University School of Medicine, Tokyo, Japan
- 11:30 **Scintigraphic Measurement of the Left Ventricular Volume: Comparison of Geometry, Count-based and Mixed Methods.** Lee SS, Hong YG, Shen YY. Cardiovascular Center, Municipal Chung Hsin Hospital, Taipei, R.O.C.
- 11:45 **Quantitative Evaluation of the Focal Area of the Left Ventricle of the Heart by the Factor Analysis Method.** Asahara A, Moriy E, Sasaki I, Yoshioka S. Radiology and Nuclear Medicine, JR Tokyo General Hospital, Tokyo, Japan
- 12:00 **First Pass Left Ventricular Ejection Fraction with Ultra-Shortlived Iridium-191m from New Carbon Based Osmium-Iridium Generator System.** Franken PR, Dobbeleir A, Ham HR, Brihaya C, Guillaume M, Knapp FF, Vandevivere J. Dep. Nucl. Medicine, Antwerp, Belgium
- 12:15 **Computerized Semiconductor Cardiac Probe System for Monitoring of Left Ventricular Function.** Suzuki Y, Ide M, Murakami T, Fukuda T, Kobayashi S. Radiology, Tokai University School of Medicine, Isehara, Japan

**RADIOPHARMACEUTICAL I**

10:30-12:30

Room B

**Chairmen:** Theodore S.T. Wang, U.S.A.  
Gann Ting, R.O.C.

10:30 **Preparation and Evaluation of Tc-99m-Hydroxyethyl Starch as a Lymphoscintigraphic Agent.** Sadek S, Abdel-Dayem HM, Nawaz K, Owunwanne A, Yacoub T. Dept. of Nuclear Medicine, Faculty of Medicine, Kuwait University, Safat, Kuwait

10:45 **Radioiodinated 1,4-Benzodiazepines: Potential Agents for the In Vivo Mapping of Benzodiazepine Receptors.** Maddalena DJ, Jenkinson A, Snowdon GM, Beran R. Isotope division, Australian Nuclear Science and Technology Organisation, Menai, NSW, Australia

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- 11:00 **Tc-99m Complexes of Aminobenzylimino-diacetic Acids as Potential Tumour Imaging Agents.** Maddalena DJ, Jacobs JJ, King-Christopher J, Wilson JG, Snowdon GM. Isotope Division Australian Nuclear Science and Technology Organisation, Menai, NSW, Australia
- 11:15 **Reassessment of the Separation of In-111-DTPA Protein Complexes by Gel Filtration Column Chromatography During the Synthesis of In-111-DTPA-Monoclonal Antibodies.** Wang TST, Rosen JM, Butler SP, Fawwaz RA, Alderson PO. Columbia University, New York, NY, U.S.A.
- 11:30 **The Radionuclide Study of the Hepatobiliary Toxicity of Cyclosporin A (Cy A) in Rabbits.** Owunwanne A, Shihab-Eldeen A, Sadek S, Abdel-Dayem HM. Dept. of Nuclear Medicine, Faculty of Medicine, Kuwait University, Safat, Kuwait
- 11:45 **Comparison of Four Tc-99m Radiopharmaceuticals (RPs) for Localization of Gastrointestinal (GI) Bleeding Sites in a Sheep Model.** Owunwanne A, Al-Wafai I, Valgren S, Sadek S, Abdel-Dayem HM, Yacoub T, Awder M. Dept. of Nuclear Medicine, Faculty of Medicine Kuwait University, Safat, Kuwait
- 12:00 **The Fate of Indium-111 Labeled White Blood Cells during Endotoxin Induced Shock.** Owunwanne A, Al-Sarraf A, Christenson JT. Dept. of Nuclear Medicine, Faculty of Medicine, Kuwait University, Safat, Kuwait

- 12:15 **Tc-99m Colloid Labelling of Autologous Leucocytes.** Hanna RW, Lomas FE, Sullivan PJ. Nuclear Medicine, Royal Canberra Hospital, Acton, Australia

### COMPUTERS AND DATA ANALYSIS I

10:30-12:30

Room C

Chairmen: Michael L. Goris, U.S.A.  
Michel H. Bourguignon, France

- 10:30 **Computers in Nuclear Medicine: From Data Manipulation to Quantitative Diagnosis.** Goris M.L. Nuclear Medicine, Stanford University School of Medicine, Stanford, CA, U.S.A.
- 10:45 **The Development of a Computer Integrated System of a Nuclear Medical Department.** Mazzuca N, Batini V, Del Corona A, Pratali R, Mencacci S, Malvaldi F, Morini V. U.O. Medicina Nucleare, U.S.L. 13, Spedali Riuniti, Viale Alfieri, Livorno, Italy
- 11:00 **A High-Performance Workstation for Processing and Visualization of Medical Image Data.** Owczarczyk J, Staszelski J, and Zajdel W. Medical Systems, CompArt Ltd., Warsaw, Poland

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- 11:15 **The Automation of Radioimmunoassay Data Processing in the Department of Nuclear Medicine, Kaohsiung Medical College.** Jong SB, Peng GT, Wu CC, Wu LL, Huang YW, Yang RL. Dept. of Nuclear Medicine, Kaohsiung Medical College, Kaohsiung, Taiwan, R.O.C.
- 11:30 **Six Years Experience with Tele Nuclear Medicine.** Morrison RT, Szasz U, Searle R. Nuclear Medicine, University Hospital, Vancouver, Canada
- 11:45 **Technical Aspects of Zoom SPECT: A Quest for High Resolution.** Kouris K, Elgazzar AH, Higazi E, Awdeh M, Mahmoud AR, Nair M, Abdel-Dayem HM. Dept. of Nuclear Medicine, Faculty of Medicine, Kuwait University, Safat, Kuwait
- 12:00 **A Study of Uniformity for Camera-Based SPECT System Using Various Nuclide.** Tachibana K, Hamada K, Kurihara H, Ishimura J, Kawanaka M, Fukuchi M. Department of Nuclear Medicine, Hyogo College of Medicine, Hyogo, Japan
- 12:15 **A Co-operative Survey Concerning the Quality Control of Imaging Device with the Simulated Anatomic Liver Phantom from IAEA.** Iinuma T, Matumoto T, Tateno Y, Yamasaki T, Fukuhisa K, Nohara N, Sasaki Y, Nagai T. Division of Clinical Research, National Institute of Radiological Sciences, Chiba-shi, Japan

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**ENDOCRINE I**

10:30-12:30

Room D

**Chairmen:** Munho Lee, Korea  
Minoru Fukuchi, Japan

- 10:30 **Comparison Between Zoomed Tomography (Z SPECT) and Pinhole Collimator (PHC) in Thyroid Imaging.** Elgazzar AH, Kouris K, Nawaz K, Omar A, Higazi E, Baig S, Abdel-Dayem HM. Dept. of Nuclear Medicine, Faculty of Medicine Kuwait University, Safat, Kuwait
- 10:45 **The Role of Radioiodine-123 Uptake in the Diagnosis of Hypothyroidism Induced by Dietary Iodine Excess.** Michigishi T, Mizukami Y, Tonami N, Hisada K, Takazakura E. Dept. of Nuclear Medicine, Kanazawa University Hospital, Kanazawa, Japan
- 11:00 **Technetium-99m-Retention.** Intarasupht S, Nasongkla S, Chanachai R, Pleehachinda R, Attanatho V, Ratanamart V, Chaudakasetn P. Nuclear Medicine Unit, Senior Physicist Radiology Dept. Siriraj Hospital, Bangkok, Thailand
- 11:15 **Clinical Evaluation of Technetium-Thallium Subtraction Scintigraphy in Nodular Goiter.** Katagiri M, Harada T, Yamane Y, Otsuka N, Fukunaga M, Monta R. Dept. of Endocrine Surgery Kawasaki Medical School, Kurashiki, Japan

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- 11:30 **Preoperative Localization of Pheochromocytoma: A Prospective Comparison of I-131-Metiodobenzylguanidine (MIBG) and Abdominal Computed Tomography (CT).** Bravo EL, Saha G, Go RT, O'Donnell J. Heart and Hypertension Research, Cleveland Clinic Foundation, Cleveland, U.S.A.
- 11:45 **Clinical Evaluation of I-131-Metiodobenzylguanidine (I-131 MIBG) Imaging in Suspected Pheochromocytoma.** Nakabeppu Y, Nakajo M, Shimabukuro K, Taguchi M, Yonekura R, Iwashita S, Abeyama K, Shinohara S. Dept. of Radiology, Kagoshima University Hospital, Kagoshima, Japan
- 12:00 **Adrenal Scintigraphy with I-131 Iodobenzylguanidine in 81 Cases Suspected Pheochromocytoma.** Tsukamoto E, Itoh K, Nakada K, Furudate M. Department of Nuclear Medicine, Hokkaido University School of Medicine, Sapporo, Japan
- 12:15 **Serum C-Peptide and Insulin Response to Glucagon Stimulation in Diabetics.** Hsu CH, Chang JJ, Lee LS, Hwang JY, Liao ST. Div. of Nuclear medicine, Dep. of Laboratory Medicine, Municipal Taipei Jen-Ai Hospital, Taipei, Taiwan, R.O.C.

**BONE/JOINT I**

10:30-12:30

Room E

**Chairmen:** I.P.C. Murray, Australia  
Avir Kagan, U.S.A.

- 10:30 **Bone Scans of the Lower Extremities in Diabetic Peripheral Neuropathy.** Kagan A, Friedman S, Shagan BP. Nuclear Medicine, Coney Island Hospital, Brooklyn, NY, U.S.A.
- 10:45 **Three-Phase Bone Scintigraphy in Diabetic Hand Syndrome.** Liu RS, Yen TC, Shieh BF, Lin HD, Wang CL, Yeh SH. Department of Nuclear Medicine, Veterans General Hospital, VGH, Taipei, Taiwan, R.O.C.
- 11:00 **Assessment of Skeletal Muscle Damage in Trauma Patients by Indium-111 Antimyosin (In 111-AM).** Elgazzar AH, Malki AA, Owunwanne A, El-dadah M, Mahmoud M, El-Sayed M, Abdel-Dayem HM. Dept. of Nuclear Medicine, Faculty of Medicine, Kuwait University, Safat, Kuwait
- 11:15 **Three Phase Bone Scintigraphy in Vascularized Fibular and Illeac Bone Grafts.** Itoh K, Minami A, Sakuma T, Furudate M. Dept. of Nuclear Medicine, Hokkaido University, Sapporo, Japan
- 11:30 **Radionuclide Total Body Three Phase Bone Imaging-A New Method.** Yang D, Jain C, Patel D, Giovanniello J. Nuclear Medicine Division, The Methodist Hospital, Brooklyn, NY, U.S.A.

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11:45 **Stress Fracture in Military Recruits.** Yao  
WJ, Hsieh HC, Wu CS, Tiao SO, Hsiao CH, Yan

Tuesday, November 1

14:15 **Radiopharmaceuticals in PET, Progress  
and Promise** Alfred P. Wolf, Brookhaven

- 15:05 **Present Status of Treatment of Thyroid Disorders.** Peter Pfannenstiel. Deutsche Klinik for Diagnostik Fachbereich Nuklearmedizin, Wiesbaden, F.R.G.

### CARDIOVASCULAR II

16:00-18:30

Room A

Chairmen: Yasushi Ishii, Japan  
Dan-Jiang Wang, R.O.C.

- 16:00 **Segmental Diagnostic Accuracy (SDA) of SPECT Dipyridamole Tl-201 (DP Tl) Perfusion Study In Comparison with Exercise SPECT Tl(Ex Tl) In Patients (Pts) with CAD.** Mohammed MMJ, Hassan IM, Constantinides C, Kewan Y, Nair M, Cherian G, Abdel-Dayem HM. Dept. of Nuclear Medicine, Faculty of Medicine, Kuwait University, Safat, Kuwait
- 16:15 **Does Intravenous Dipyridamole Have Practical Advantages over Exercise in Thallium-201 Myocardial Scintigraphy?** Hu WH, Wang SJ, Liao SQ, Chang CK, Lin WW, Kan MN, Ting CT, Chen YT, Chiang BN. Cardiology, Veterans General Hospital Taichung, Taichung, Taiwan, R.O.C.
- 16:30 **Oral Dipyridamole-Thallium Myocardial Imaging in Evaluation of Coronary Artery Disease.** Wang DJ, Chen CY, Chen WL, Shieh SM, Sung PK. Internal Medicine and Nuclear Medicine, National Defense Medical Center, Taipei, Taiwan, R.O.C.
- 16:45 **Determinants of Angina Pectoris Following First Transmural Myocardial Infarction — A Prospective Study.** Chen MS, Fu M, Yeh SJ, Lin FC, Tzen KY, Hung JS, Wu D. Section of Nuclear Medicine, Chang Gung Memorial Hospital, Taipei, Taiwan, R.O.C.
- 17:00 **Evaluation of Coronary Flow Reserve Using Exercise Tl-201 SPECT by Double Dose Method.** Kubota Y, Sugihara S, Azuma A, Inagaki S, Nakagawa T, Katahira T, Katsume H, Nakagawa M. 2nd Dept. of Internal Medicine, Kyoto Prefectural University of Medicine, Kyoto, Japan
- 17:15 **Tl-201 Single Photon Emission Tomography (SPECT) Is More Sensitive Than Planar Stress Scintigraphy in Detecting Lesions of Coronary Artery Disease.** Tow DE, Gregoire J, Hackett M. Nuclear Medicine Service, VA Medical Center, West Roxbury, MA, U.S.A.
- 17:30 **Abnormal Thallium-201 Uptake at the Area of Collateral Donor Vessel with Insignificant Stenosis.** Nakano H, Wakakura M, Tanaka T, Okabe A, Ueno T, Aizawa T, Kato K. 1st Department of Internal Medicine, Toho University School of Medicine, Tokyo, Japan
- 17:45 **Tissue Plasminogen Activator in Patients with Exercise-Induced Ischemia.** Sakata K, Kurata C, Taguti T, Fukumoto Y, Hayashi H, Kobayashi A, Yamazaki N. 3rd Dept. of Int. Med. Hamamatsu University School of Medicine, Hamamatsu, Japan

- 18:00 **Detection of Ventricular Aneurysm with Thallium-201: Comparison of Planar Scintigraphy and Single Photon Emission Computerized Tomography.** Chang MCK, Kan MN, Liu RS, Hu WS, Lin WW, Ting CT, Chen JS, Liao SQ, Chen YT. Cardiology, Veterans General Hospital, Taichung, Taiwan, R.O.C.
- 18:15 **Dual Nuclide Autoradiography for the Evaluation of the Perfusion and Metabolism of the Rat Heart Under Control and Substrate Loading.** Bunko H, Taniguchi M, Muramori A, Nakajima K, Taki J, Nanbu I, Tonami N, Hisada K. Dept. of Nuclear Medicine, Kanazawa University School of Med., Kanazawa, Japan

**RADIOPHARMACEUTICAL II AND DOSIMETRY**

16:00-18:30

Room B

Chairmen: Hank F. Kung, U.S.A.  
Si-Jung Yeh, R.O.C.

- 16:00 **Study on the Separation of Carrier-Free Yttrium-90 from Strontium-90.** Lee TW, Cheng WL, Ting G. Nuclear Chemistry Division, Institute of Nuclear Energy Research, Lung-Tan, Taiwan, R.O.C.
- 16:15 **Preparation of the Tc-99m Glucocitrate Instant Kit for Renal Imaging.** Chen TB, Liou WL, Chen WL. Nuclear Medicine, Tri-Service General Hospital, Taipei, Taiwan, R.O.C.

- 16:30 **The Preparation of the Tc-99m(V)-Dimer-captosuccinate Complex as a Tumor Seeking Agent.** Shen LH, Wey SP, Hsiung TH, Tsai ZT, Ting G. Radiation Application Division, Institute of Nuclear Energy Research, Lung-Tan, Taiwan, R.O.C.
- 16:45 **Synthesis of HM-PAO and Tc-99m Complex Formation Study.** Wang YM, Shen LH, Hsieh TH, Ting G, Chung CS. Nuclear Chemistry Division, Institute of Nuclear Energy Research, Lung-Tan, Taiwan, R.O.C.
- 17:00 **Competition Reacting Study of the HM-PAO and Reduced Glutathione with Tc-99m(V).** Wey SP, Shen LH, Fu YK, Ting G. Radiation Application Division, Institute of Nuclear Energy Research, Lung-Tan, Taiwan, R.O.C.

17:15 **Labeling of Human Serum Albumin with Rh-105 Using Cysteine as a Bifunctional Chelation Agent.** Lo JM, Pillai MRA, John CS, Troutner DE. Chemistry, University of Missouri, Columbia, MO, U.S.A.

17:30 **In Vivo Medical Diagnosis of Toxic Cadmium in Rats Using Reactor Neutron Beam.** Chen WK, Chung C. Institute of Nuclear Science, National Tsing Hua University, Hsinchu, Taiwan, R.O.C.

17:45 **Radiation Doses from Medical In Vivo Prompt Gamma Ray Activation Using Tsing Hua Mobile Nuclear Reactor.** Chung C, Chang PS. Institute of Nuclear Science, National Tsing Hua University, Hsinchu, Taiwan, R.O.C.

- 18:00 **Effective Dose Equivalent from Nuclear Medicine Procedures in South Taiwan.** Weng PS, Wu CC, Peng GT. Institute of Nuclear Science, National Tsing Hua University, Hsinchu, Taiwan, R.O.C.
- 18:15 **Radioprotective Effects of Antiradiation Drug (WR-2721) on SPF Miniature Pig.** Weng CN, Tsay CZ, Deng WP, Fu YK, Tsai ZT, Chen WL, Chen TB. Comparative Medicine, Pig Research Institute, Miaoli, Taiwan, R.O.C.
- 16:30 **Cerebral Hemodynamics Studied by Fourier Phase Analysis on Brain Radionuclide Angiography: Evaluation of Neurosurgical Treatments on Moyamoya Disease.** Nakazawa K, Ishii K, Sakai F, Murata M, Tadokoro K, Ikeda T, Takamatsu T, Yoda K, Matsubayashi T. Kitasato University School of Medicine, Kanagawa, Japan
- 16:45 **Comparative Clinical Evaluation of T4/5 Time and Functional Image with Phase and Amplitude Images.** Kouris K, Hassan IM, Taha B, Bahar RH, Constantinides C, Abdel-Dayem HM. Dept. of Nuclear Medicine, Faculty of Medicine, Kuwait University, Safat, Kuwait

**COMPUTERS II AND INSTRUMENTATION**

16:00-18:45

Room C

Chairmen: Yasuhito Sasaki, Japan  
Kai H. Lee, U.S.A.

- 16:00 **Present State of Nuclear Medicine Practice In Japan-A Report of Nation-Wide Survey in 1987.** Sasaki Y, Kinoshita F. Department of Nuclear Medicine, Gunma University School of Medicine, Maebashi-shi, Japan
- 16:15 **Composite Image of Cerebral Blood Flow SPECT and Brain MRI.** Watanabe T, Ohtake T, Kosaka N, Momose T, Nishikawa J, Lio M. Dept. of Radiology, University of Tokyo, Faculty of Medicine, Tokyo, Japan
- 17:00 **Phase Analysis of ECG Gated Blood Pool of Cut-into-Half Left Ventricle Obtained by SPECT.** Matsushita T, Caner B, Tanaka M, Odori T, Komuro H, Ishii Y, Torizuka K. Dept. of Radiology, Fukui Medical School, Fukui, Japan
- 17:15 **Mixed Color and Black-and-White Display for SPECT Thallium Image Interpretation-ROC Curve Analysis.** Seldin DW, Manning F, Esser PD, Alderson PO. University of Columbia, New York, U.S.A.
- 17:30 **Quantitative Evaluation of Nuclear Medical Image Procedures for the Diagnosis of Liver Disease-in Asian Countries.** Fukuhisa K, Iinuma T, Matsumoto T, Tateno Y, Yamasaki T, Sasaki Y, Nagai T. Division of Clinical Research, National Institute of Radiological Sciences, Chiba-shi, Japan

Tuesday, November 1

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- 17:45 **Normalization of Bone Scintigram Using Digital Gamma Camera.** Mizoe J, Itoh K, Furudate M. Department of Radiology, Obihiro Kosei Hospital, Obihiro, Japan
- 18:00 **Evaluation of the effect of "Gamma Characteristic" In Cold Lesion Detection.** Izumi Y, Kondo H, Sone K. Nuclear Medicine Division, Tominaga Memorial Hospital, Osaka, Japan
- 18:15 **A Novel High-Precision Dual-Photon Absorptiometer.** Pors-Nielsen S, Bärenholdt O. Dept. of Clinical Physiology & Nuclear Medicine, Central Hospital, Hillerød, Denmark
- 18:30 **Development of the Unfolded Map Display Using Thallium-201 Myocardial SPECT.** Hayashi M, Katabuchi T, Uehara T, Nishimura T. National Cardiovascular Center, Osaka, Japan
- 16:15 **Anti-T3 Autoantibodies in Thyroid Diseases.** Wang PW, Huang MJ, Liu RT, Chen TD. Department of Nuclear Medicine, Chang Gung Memorial Hospital, Kaohsiung Hsien, Taiwan, R.O.C.
- 16:30 **Induction of C-FOS and C-MYC mRNA Expression by Immunoglobulin G from Patients with Graves' Disease in Thyrotropin-Dependent Rat Thyroid Cell Line (FRTL5).** Hatabu H, Kasagi K, Iida Y, Misaki T, Tokuda Y, Hidaka A, Endo K, Lee K, Mori T, Nosaka T, Tsuboi K, Hatanaka K, Konishi J. Radiology and Nuclear Medicine, Kyoto University School of Medicine, Kyoto, Japan
- 16:45 **The Relation between Serum Level of  $\alpha$ -hANP and Cardiac State of Graves' Disease.** Kaihara M, Ban Y, Kushima K, Hara H, Nagakura H. The Third Dept. of Internal medicine, Showa University School of Medicine, Tokyo, Japan

**ENDOCRINE II**

16:00-18:30

Room D

Chairmen: Fumio Kinoshita, Japan  
David C.S. Yang, U.S.A.

- 16:00 **Assessment of the Thyroidal and Peripheral Production of T3 and rT3 in Humans by a New Multitracer Method.** Bianchi R, Pilo A, Iervasi G, Vitek F. University of Pisa, Center of Nuclear Medicine, Pisa, Italy
- 17:00 **Sensitive TSH Assay in the Assessment of Thyroid Function and Its Value in the Follow up of Hyperthyroid Patients Treated with Radioiodine.** Ilyas R, Masjhur J. Dept. of Nuclear Medicine, School of Medicine University of Padjadjaran, Bandung, Indonesia
- 17:15 **Evaluation of Clinical Value of Low Iodine Diet for I-131 Whole Body Scan in Differentiated Thyroid Carcinoma.** Nakada K, Tsukamoto E, Katoh T, Itoh K, Furudate M. Department of Nuclear Medicine, Hokkaido University School of Medicine, Sapporo, Japan

17:30 **Significance of Measurement of Serum Thyroglobulin in Patients with Differentiated Thyroid Carcinoma in the Course of Radiolodine Therapy.** Otsuka M, Ichiya Y, Kuwabara Y, Gunasekera R, Masuda K. Dept. of Radiology, Kyushu University Faculty of Medicine, Fukuoka, Japan

17:45 **Increase in CON A Absorbed Fraction of Serum Thyroglobulin (Tg) in Patients with Thyroid Carcinoma.** Izumi M, Ley L, Sakamoto T, Ashizawa K, Kimura H, Nagayama Y, Matsuo K, Eishima I, Harakawa S, Hirayu H, Yamashita S, Okamoto S, Nagasaki S. The 1st Dept. of Internal Medicine Nagasaki University School of Medicine, Nagasaki, Japan

18:00 **A New Sensitive Method for Detection of Residual Thyroid Tumor after Surgical and I-131 Ablation of Differentiated Thyroid Cancer.** Iervasi G, Ferdeghini M, Calvo S, Bor G, Cazzuola F, Carmassi F, Bianchi R C.N.F. Institute of Clinical Physiology, University of Pisa, Pisa, Italy

18:15 **The Experiences in the Treatment of Well Differentiated Thyroid Carcinoma with Radioactive Iodine.** Tanumihardjo M, Masjhuri. Department of Nuclear Medicine, School of Medicine University of Padjadjaran, Bandung, Indonesia

**NEUROLOGY I**

16:00-18:30

Room E

**Chairmen:** Kubo Azushi, Japan  
Kensho Sone, Japan

16:00 **Clinical Usefulness of SPECT Using Tl-201 and IMP in Patient with Brain Tumor—Comparison with PET Study Using F-18 FDG.** Sumita Y, Oriuchi N, Inoue T, Tomiyoshi K, Shibasaki T, Hayakawa K, Sasaki Y. Dept. of Nuclear Medicine, Gunma University School of Medicine, Gunma, Japan

16:15 **Comparison between Non-Lipophilic and Lipophilic Tracer in Cerebral Tumour Study Using SPECT.** Sone K, Shaw YH, Ichikawa T, Ohashi Y, Izumi Y, Yamazato K, Tominaga S. Dept. of Neurology & Neurosurgery, Tominaga Memorial Hospital, Osaka, Japan

16:30 **Performance and Clinical Application of a Newly Developed Multigamma-Camera Brain PSECT Scanner.** Tanada S, Murase K, Mogami H, Miyagawa M, Yamada M, Yasuhara Y, Kawamura K, Iio A, Hamamoto K. Department of Radiology, Ehime University School of Medicine, Ehime, Japan

16:45 **Comparison of I-123 IMP and Tc-99m HMPAO SPECT Studies with PET in Dementia.** Kuwabara Y, Ichiya Y, Otsuka M, Miyake Y, Gunasekera R, Masuda K. Dept. of Radiology, Faculty of Medicine, Kyushu Univ., Fukuoka, Japan

- 17:00 **Single Photon Emission Computer Tomography (SPECT) Using N-Isopropyl-<sup>123</sup>Iodoamphetamine (<sup>123</sup>IIMP) in Dementia.** Oshibuchi M, Sato M, Kanda Edamitsu O, Nishi F, Anno Y, Ohtake H. Dept. of Radiology, Hakujuikai Memorial Hospital, Tokyo, Japan
- 17:15 **Single Photon Emission Tomography with N-Isopropyl-<sup>123</sup>Iodoamphetamine in Dementia.** Shin A, Aaika Y, Nishigaki I, Utsunomiya K, Ishimaru T, Kawai T, Akagi I. Dept. of Radiology, Osaka Medical College, Osaka, Japan
- 17:30 **SPECT Contribution in Parkinson's Disease Evaluation.** Askienazy S, Rondot J, Habert MO, de Recondo J, Mas JL, Spampinato U. Medecine Nucleaire, C.H. Sainte Anne, Paris, France
- 17:45 **Quantitative Analysis of Regional Cerebral Blood Flow Using Tc-99m-HMPAO SPECT in Parkinson's Disease.** Lee MC, Lee M, Chung JK, Koh CS. Dept. of Nuclear Medicine, Seoul National University Hospital, Seoul, Korea
- 18:00 **SPECT Brain Image Using N-Isopropyl-<sup>123</sup>Iodoamphetamine (IMP) in Patients with Psychosis.** Ishii K, Nakazawa K, Murakami K, Yoda K, Matsubayashi T, Takamidou M, Oguchi T, Sakai F, Uchida T. Radiology, Kitasato University School of Medicine, Kanagawa, Japan
- 18:15 **Regional Blood Flow Determination in Schizophrenia Using Tc-99m HMPAO with SPECT.** Erbas B, Kumbasar H, Aysev A, Unluoglu G, Erben G, Bekdik C. Nuclear Medicine Dept., Hacettepe University Medical School, Ankara, Turkey

**PLENARY SESSION I  
REVIVAL OF BRAIN FUNCTIONAL  
STUDIES**

8:30-10:00 Room A

**Chairmen:** Henry N. Wagner, Jr., U.S.A.  
Yuichi Ichiya, Japan  
**Coordinator:** Chao-Hung Wang, R.O.C.

8:30 **PET in Neuropsychiatry.** Michael E. Phelps.  
UCLA Medical School, Los Angeles, CA  
U.S.A.

9:00 **PET in Oncology.** Ludwig E. Feinendegen  
Nuclear Research Center Julich GmbH, Julich  
F.R.G.

9:30 **SPECT.** Peter J. Ell. The Middlesex Hospital  
London, U.K.

**CARDIOVASCULAR III**

10:30-12:30 Room B

**Chairmen:** Daniel S. Berman, U.S.A.  
Hussein Abdel-Dayem, Kuwait

10:30 **Comparison of 180° Versus 360° SPECT  
Using Tc-99m MIBI.** Kouris K, Nair M, Hassan  
IM, Constantinides C, Bellani N, Abdel-Dayem  
HM. Dept. of Nuclear Medicine, Faculty of  
Medicine, Kuwait University, Safat, Kuwait

0:45 **Experience with Tc-99m Methoxy Isobutyl  
Isonitrile (MIBI) Injections in Emergency  
Room (ER) and Coronary Care Unit (CCU).**  
Jaradah MT, Elgazzar AH, El-Sayed M,  
Mahmoud S, Hashimi J, Bhatnagar S, Ali AM,  
Al-Yousof A, Abdel-Dayem HM. Dept. of Nu-  
clear Medicine, Faculty of Medicine, Kuwait  
University, Safat, Kuwait

1:00 **Tc-99m MIBI Scan in Myocardial Infarction.**  
Koh EM, Kim MA, Oh BH, Park YB, Lee MC,  
Cho BY, Koh CS. Dept. of Nuclear Medicine,  
Seoul National University Hospital, Seoul,  
Korea

1:15 **Effect of Isosorbide Dinitrate on Myocardial  
Blood Flow in Patients with Coronary Heart  
Disease Using Dynamic Positron Emission  
Tomography.** Oda Y, Ohgaya M, Ohtsuka S,  
Kira Y, Kondo M, Yamashita M, Tashiro K,  
Maruyama Y, Kakiuchi T, Honi H, Wakita K,  
Fujii R, Nakahashi H. 1st Dept. of Internal  
Medicine, Kyoto Prefectural University of  
Medicine, Kyoto, Japan

1:30 **Rest-Exercise (Ex) Heart/Lung Ratio (H/L)  
of Thallium-201 and Tc-99m Methoxy Isobu-  
tyl Isonitrile (MIBI) (RP-30) in Patients with  
IHD.** Hassan IM, Constantinides C, Nair M,  
Mohammed MMJ, Sadek S, Bellani N, Abdel-  
Dayem HM. Dept. of Nuclear Medicine, Faculty  
of Medicine, Kuwait University, Safat, Kuwait

**ONCOLOGY I**

- 11:45 **Segmental Analysis of SPECT Tc-99m Methoxy Isobutyl Isonitrile (RP-30) and Thallium-201 (TI-201) Myocardial Imaging in Ischemic Heart Disease (IHD).** Hassan IM, Mohammed MMJ, Constantinides C, Sadek Nair M, Belani N, Yousef AM, Abdel-Dayem HM. Dept. of Nuclear Medicine, Faculty of Medicine, Kuwait University, Safat, Kuwait 10:30-12:30 Room B
- 12:00 **Left Ventricle (LV) Segmental Wall Motion Abnormalities (SWMA): Comparison between Multigated Tc-99m MIBI, Contrast Ventriculography (CV) and Coronary Angiography (CA).** Hassan IM, Kewan Y, Mohammed MMJ, Constantinides C, Nair M, Belani Abdel-Dayem HM. Dept. of Nuclear Medicine, Faculty of Medicine, Kuwait University, Safat, Kuwait 10:30
- 12:15 **The Evaluation of the Protective Effect of Calcium Antagonist on Myocardium Using In-111-Anticardiac Myosin Antibody.** Lee MC, Chung JK, Koh CS, LaFrance ND. Dept. of Nuclear Medicine, Seoul National University Hospital, Seoul, Korea 11:00
- Chairmen:** Felix Sundram, Singapore  
Ming-Yang Yeh, R.O.C.
- Immunodiagnosis of Tamarin Colon Cancer.** Lee YCC, Crook JE, Clapp NK, Lawless BD, Fuhr JE, Steplewski Z. Medical & Health Sciences Division, Oak Ridge Associated Universities, Oak Ridge, TN, U.S.A.
- In Vivo Use of New Murine Monoclonal Antibodies Recognizing Human Ovarian Cancer Associated Antigen CA125.** Nakai T, Endo K, Saga T, Nakashima T, Matsuoka Y, Awaji T, Koizumi M, Kawamura Y, Watanabe Y, Konishi J, Fujii S, Mori T, Sawada M, Torizuka K. Nuclear Medicine, Kyoto University Hospital, Kyoto, Japan
- Monoclonal Antibodies Against Cervical Carcinoma and Their Application.** Yuan CC, Tsai LC, Yeh SH, Hsu SC, Chen HM, Tsai YC, Ng HT. Department of Obstetrics and Gynecology, Veterans General Hospital, Taipei, R.O.C.
- 1:15 **Tissue Polypeptide Antigen (TPA) Levels in Nasopharyngeal Carcinoma.** Sundram FX. Nuclear Medicine Department, Singapore General Hospital, Singapore
- 1:30 **Mechanism of TI-201 Uptake in Tumours.** Sahweil AM, McKillop JH, Milroy R, Abdel-Dayem HM. Dept. of Nuclear Medicine, Faculty of Medicine, Kuwait University, Safat, Kuwait

Wednesday, November 2

- 11:45 **Abdominal Lymphoscintigraphy by S.C. Injection of Tc-99m-Microcolloids and/or Tl-201-Chloride.** D'Errico G, D'Errico A, Sturla M. Nuclear Medicine Institute, Catholic University of Sacred Heart, Roma, Italy
- 12:00 **Use of Tc-99m-Labelled Haematoporphyrin Derivatives (HpD) in Malignant Tumour Detection and Photodynamic Therapy (PDT).** Paramsothy M, Zainuddin J, Olivo M, Low KS. University of Malaya Kuala Lumpur, Malaysia
- 12:15 **Tc-99m Methoxy Isobutyl Isonitrile (RP-30) Uptake in Benign and Malignant Lung Lesions.** Hassan IM, Sahweil AM, Constantinides C, Mobarak AI, Mahmoud AR, Nair M, Omar YT, Abdel-Dayem HM. Dept. of Nuclear Medicine, Faculty of Medicine, Kuwait University, Safat, Kuwait

### GASTROENTEROLOGY I

10:30-12:30

Room C

Chairmen: Leonard M. Rosenthal, Canada  
N. Lakshminpathi, India

- 10:30 **Usefulness of Three Phase Tc-99m-PMT Hepatobiliary Scintigraphy for Differential Diagnosis of Hepatocellular Carcinoma and Determination of Therapeutic Outcome.** Tada A, Tanaka T, Tatsuno I, Wakabayashi T, Suzuki K. Dept. of Radiology, Kanazawa National Hospital, Kanazawa, Japan

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Wednesday, November 2

- 10:45 **The Combination of Liver Split Function Parameters of Computer-Automated Hepatobiliary Sequential Scintigraphy (HSS) in Diagnosis of Non-Icteric Liver Diseases.** Brandhorst I, Maul FD, Standtke R, Bittner G, Mayr-Grebe U, Hor G. Depts. of MRI and Nucl. Med., Inst. for Diagnostic Imaging, Frankfurt, F.R.G.
- 11:00 **Reflux Phenomenon in Cholescintigraphy after Administration of a Gallbladder Contracting Agent.** Itoh H, Koito H, Tsuda T, Tanada S, Iio A, Hamamoto K. Radiology, Ehime University School of Medicine, Ehime, Japan
- 11:15 **Intravenous Radionuclide Cholescintigraphy (IVRC), Sonography and Endoscopy Retrograde Cholangiography (ERC) in the Diagnosis of Choledochal Cysts.** Kao PF, Huang MJ, Liaw YF, Chen HY, Tzen KY. Nuclear Medicine, Chang Gung Memorial Hospital, Taipei, Taiwan, R.O.C.
- 11:30 **Hepatobiliary Scintigraphy in Acute Pancreatitis.** Kuniyasu Y, Higashi S, Nii Y, Kodama Y, Murakami K, Uchiyama K, Takada T, Saitoh Y. Dept. of Radiology, Teikyo University, Tokyo, Japan
- 11:45 **Evaluation of Common Bile Duct Stenosis in Chronic Pancreatitis Using Cholescintigraphy.** Tsuda H, Itoh H, Shimono R, Kataoka M, Kawamura M, Iio A, Hamamoto K. Radiology, Ehime University School of Medicine, Ehime, Japan

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Wednesday, November 2

- 12:00 **Three Dimensional Functional Imaging by Deconvolution Analysis In Tc-99m-PMT Hepatobiliary Dynamic SPECT Imaging.** Sakuma H, Nakagawa T, Maeda H, Nakamura K, Takeda K, Hirano T, Yamaguchi N, Odori T, Ishiy Torizuka K. Dept. of Radiology, Fukui Medical School, Fukui, Japan
- 12:15 **Comparison of Small (10ml) and Large (140ml) Bolus Radionuclide Oesophageal Transit (ROT) Studies In Patients with Achalasia.** Smart R, McLean R, Lau A, Larcos G, de Carie D, Lyons N. Dept. of Nuclear Medicine, St. George Hospital, NSW, Australia

**NEUROLOGY II**

10:30-12:30

Room D

**Chairmen:** Kazufumi Kimura, Japan  
Wei-Jen Shih, U.S.A.

- 10:30 **Quantitative Analysis of Regional Cerebral Blood Flow Using Tc-99m-HMPAO SPECT In Cerebrovascular Disease.** Koh CS, Lee MH, Chung JK, Lee MC. Dept. of Nuclear Medicine, Seoul National University Hospital, Seoul, Korea
- 10:45 **Clinical Application and Evaluation of Three-Dimensional Surface Display in Patients with Cerebrovascular Diseases: Comparison with XCT and SPECT Images.** Ishimura J, Kawanaka M, Tachibana K, Onoue K, Hamada K, Fukuchi M. Department of Nuclear Medicine, Hyogo College of Medicine, Hyogo, Japan

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Wednesday, November 2

- 11:00 **Direct Autoradiographic Comparison of Tc-99m-HM-PAO with I-125-IMP in Experimental Brain Ischemia.** Oba H, Matsuda H, Terada H, Seki H, Sumiya H, Mori H, Tsuji S, Shiba K, Imai K, Hisada K. Dept. of Nuclear Medicine, Kanazawa University Hospital, Kanazawa, Japan
- 11:15 **A Fundamental Study of Tc-99m-HM-PAO as an Agent for Regional Cerebral Blood Flow Imaging.** Kamado K, Tachibana K, Ishimura J, Suehiro M, Kawanaka M, Fukuchi M. Department of Nuclear Medicine, Hyogo College of Medicine, Hyogo, Japan
- 11:30 **I-123 HIPDM Brain SPECT In Patients with Carotid Artery Occlusion.** Go RT, Salgado A, Rehm PK, Furlan AJ, MacIntyre WJ, Little JR, Saha GB, Sila C, O'Donnell JK, Jones SC, Kung HK. Nuclear Medicine Department, Cleveland Clinic Foundation, Ohio, U.S.A.
- 11:45 **Assessment of Interictal Epileptic Patients Using I-123 IMP SPECT.** Kawamura M, Murase K, Itoh H, Mogami H, Kataoka M, Tanada S, Iio A, Hamamoto K. Radiology, Ehime University Hospital, Ehime, Japan
- 12:00 **SPECT Brain Imaging with Tc-99m-HMPAO In Complex Partial Epilepsy.** Erbas B, Saygi S, Zileli T, Bekdik C. Nuclear Medicine Dept., Hacettepe University Medical School, Ankara, Turkey

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- 12:15 **Tc-99m-HMPAO Brain SPECT abd EEG Mapping in Epileptic Patients with Negative CT Scan.** Bertelli P, Toni MG, Solimero C, Nuti A, Murni L. Nuclear Medicine Centre, University of Pisa, Pisa, Italy

**BONE/JOINT II**

10:30-12:30

Room E

Chairmen: Henry N. Wellman, U.S.A.  
Kai-Yuan Tzen, R.O.C.

- 10:30 **An Experimental Study on the Change of Bone Mineral Metabolism after Irradiation.** Hong SW, Lim SM. Dept. of Nuclear Medicine, Korea Cancer Center Hospital, Seoul, Korea
- 10:45 **Total and Regional Bone Mineral Contents in Renal Osteodystrophy Measured with Dual Photon Absorptiometry.** Hagiwara S, Nakatsuka K, Shimada H, Miki T, Nishizawa Y, Okamura T, Koizumi Y, Fukuda T, Ochi H, Onoyama Y, Morii H. 2nd Internal Medicine, Osaka City University Medical School, Osaka, Japan
- 11:00 **Bone Mineral Content of the Spine, Hip, and Forearm in Patients with Primary Hyperparathyroidism.** Seldin DW, Silverberg SJ, Bilezikian JP, Alderson PO. Nuclear Medicine-Radiology, Columbia-Presbyterian Medical Center, New York, NY, U.S.A.

- 11:15 **Bone Mineral Density of the Lumbar Spine in Japanese: Age-Related Regression in Normal Subjects and a Fracture Threshold in Osteoporotics.** Seto H, Nanbu I, Banba Y, Taki K, Soya T, Ihara F, Kamei T, Futatsuya R, Kakishita M. Radiological Sciences, Toyama Medical & Pharmaceutical University, Toyama, Japan
- 11:30 **Total Body and Lumbar Spine Bone Mineral Contents in Japanese Controls with Dual Photon Absorptiometry.** Hagiwara S, Nakatsuka K, Nishio M, Miki T, Nishizawa Y, Okamura T, Fukuda T, Ochi H, Onoyama Y, Morii H. 2nd Internal Medicine, Osaka City University Medical School, Osaka, Japan
- 11:45 **Bone Miner Density (BMD) and Tc-99m-MDP Bone Scan in L-Spine Lesion.** Kao PF, Tzen KY. Nuclear Medicine, Chang Gung Memorial Hospital, Taipei, Taiwan, R.O.C.
- 12:00 **Lumbar Spine Mineral Content Measurement with a Scintillation Camera.** Vandevivere J, Dobbeleir A, Ham HR, Williams L. Dep. Nucl. Medicine, A.Z. Middelheim, Antwerp, Belgium
- 12:15 **Measurement of Bone Mineral Density Using a Gamma Scintillation Camera.** Salehi N, Binns D, Lichtenstein M, Andrews JT. Nuclear Medicine Department, Royal Melbourne Hospital, Parkville, VIC, Australia

Wednesday, November 2

**SYMPOSIUM C  
RADIOIMMUNODETECTION OF CANCER**

13:50-16:00

Room B

**Chairmen:** Kinichi Hisada, Japan  
Hiyoshimaru Oyamada, Japan  
**Coordinator:** Shu-Quinn Liao, R.O.C.

- 13:50 **Basic Aspect of Radioimmuno-detection of Cancer.** Kinichi Hisada. Kanazawa University School of Medicine, Kanazawa, Japan.
- 14:15 **Immunoscintigraphy on the Basis of Immunohistochemistry.** Hans J. Biersack. Institut für Klinische und experimentelle Nuklearmedizin der Universität Bonn, Bonn, F.R.G.
- 14:40 **Clinical Experience in Immunoscintigraphy — Colon.** Yasuhito Sasaki. Gunma University School of Medicine, Gunma, Japan.
- 15:05 **Radioimmuno-detection of Cancer.** M. Granowska. St. Bartholomew's Hospital, London, U.K.
- 15:30 **CA72-4 Compared to CEA, CA 19-9, CA 125 and CA 15-3 in the Diagnosis, Staging and Follow-up of Solid Tumors.** R. Klappdor. Department of Medicine, University of Hamburg, F.R.G.

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Wednesday, November 2

**SYMPOSIUM D  
HEPATOBIILIARY AND BONE DISEASES**

13:50-15:30

Room D

- Chairmen:** Leonard M. Rosenthal, Canada  
Hironobu Ochi, Japan  
**Coordinator:** Cheng-Tau Su, R.O.C.
- 13:50 **Hepatobiliary Radionuclide Studies.** Leonard M. Rosenthal. Montreal General Hospital, Montreal, Quebec, Canada
- 14:15 **Newest Developments of Dual Photon Absorptiometry (DPA) for Bone Density Problems of Osteopenia.** Henry N. Wellman. Indiana University Medical Center, Indianapolis, IN, U.S.A.
- 14:40 **Role of SPECT in Bone Diseases I.P.C. Murray.** The Prince of Wales Hospital, Randwick, Australia.
- 15:05 **Pinehole Scintigraphy as Applied to Bone and Joint Studies.** Young Whee Bahk. Catholic University Graduate School, Seoul, Korea.

**ROUND TABLE  
EFFECT OF LOW LEVEL RADIATION**

14:00-17:30

Room A

- Chairman:** Merle K. Loken, U.S.A.  
**Coordinator:** Chien Chung, R.O.C.
- 14:00 **Radiation and Society.** Rosalyn S. Yalow. Solomon A. Berson Research Laboratory, Veterans Administration Center, Bronx, NY, U.S.A.

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Wednesday, November 2

- 14:15 **Basics of Radiation Biology.** Shigenobu Nagataki. Nagasaki University School of Medicine, Nagasaki, Japan.
- 14:30 **Low Level Radioactive Waste.** Henry N. Wagner, Jr. The John Hopkins Medical Institutions, Baltimore, MD, U.S.A.
- 14:45 **Nuclear Power: Benefit / Risk.** Roger Linnemann. Radiation Management Consultants, Philadelphia, PA, U.S.A.
- 15:00 **The Greenhouse Effect and Acid Rain.** Henry N. Wellman. Indiana University Medical Center, Indianapolis, IN, U.S.A.
- 15:15 **Responsibilities of Physicians in Radiation Matters.** Merle K. Loken. University of Minnesota, Minneapolis, MN, U.S.A.
- 15:30 **Tea Break**

**PANEL DISCUSSION**

16:00-17:30 **Room A**

**Chairman:** Merle K. Loken, U.S.A.  
**Panelist:** Rosalyn S. Yallow, U.S.A.  
Shigenobu Nagataki, Japan  
Henry N. Wagner, Jr., U.S.A.  
Roger Linnemann, U.S.A.  
Henry N. Wellman, U.S.A.  
Merle K. Loken, U.S.A.  
**Coordinator:** Chien Chung, R.O.C.

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Wednesday, November 2

**ONCOLOGY II**

16:00-18:30 **Room B**

**Chairmen:** Hans J. Biersack, F.R.G.  
Katsumi Ishii, Japan

- 16:00 **Radioimmuno-detection of Human Colon Cancer Xenograft in Nude Mouse by a Mixture of Monoclonal Antibodies.** Lee MH, Lee MC, Cho BY, Koh CS. Dept. of Nuclear Medicine, Seoul National University Hospital, Seoul, Korea
- 16:15 **Imaging of Xenografted Human Cervical Carcinoma in Nude Mice with Radiolabeled Monoclonal Antibody.** Chen WL, Huang WS, Guan SI, Su GZ, Yu MS, Hsu CT, Yeh MY. Nuclear Medicine, Tri-Service General Hospital, Taipei, Taiwan, R.O.C.
- 16:30 **Immunoscintigraphy of Colorectal and Other Gastrointestinal Cancers with Radioactive Monoclonal Antibodies to CEA and CA 19-9.** Kim CS, Park W, Jang DH, Han CS, Kim HS, Shin SH. Nuclear Medicine, National Medical Center of Korea, Seoul, Korea
- 16:45 **Imaging and Radiolabeling Studies of Tamarin Anticolon Carcinoma Monoclonal Antibody BR55-2 with Indium-111.** Crook JE, Washburn LC, Lee YCC, Sun TT, Byrd BL, Holloway EC, Clapp NK, Steplewski Z. Medical and Health Sciences Division, Oak Ridge Associated Universities, Oak Ridge, TN, U.S.A.

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Wednesday, November 2

- 17:00 **Clinical Experiences of Melanoma Imaging with In-111-Labeled Monoclonal Antibodies 96.5 and ZME 018.** Oyamada H, Terui S, Fukukita H. Division of Nuclear Medicine, National Cancer Center Hospital, Tokyo, Japan
- 17:15 **Immunoscintigraphy and Pharmacokinetics of Indium-111 Label ZME-018 Monoclonal Antibody in Patients with Malignant Melanoma.** Endo K, Koizumi M, Watanabe Y, Nakai T, Saga T, Sakahara H, Konishi J, Arano Y, Miyachi Y, Imamura S, Torizuka K. Nuclear Medicine, Kyoto University Hospital, Kyoto, Japan
- 17:30 **N-Isopropyl-p-I-123-Iodoamphetamine Scintigraphy in Malignant Melanoma.** Morita K, Ono S, Fukunaga M, Otsuka N, Nagai K, Furukawa T, Mimura H, Yanagimoto S, Tomomitsu T, Morita R. Dept. of Nuclear Medicine, Kawasaki Medical School, Okayama, Japan
- 17:45 **Radioimmuno-detection of Pheochromocytoma by R-24 Mouse Monoclonal Antibody.** Yeh SDJ, Houghton AN, Coit D, Cordon-Cardo C, Bajorin D, Brennan MF, Oettgen HF, Old LJ. Nuclear Medicine Service, Memorial Sloan-Kettering Cancer Center, New York, NY, U.S.A
- 18:00 **Radioimmuno-scintigraphy in Neuroblastoma with Murine Monoclonal Antibody 3F8.** Yeh SDJ, Kushner B, Sullivan M, Cheung NK. Nuclear Medicine Service, Memorial Sloan-Kettering Cancer Center, New York, NY, U.S.A.

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Wednesday, November 2

- 18:15 **Potential Use of In-111 Labeled DTPA-Recombinant Tumor Necrosis Factor for Tumor Imaging.** Wang TST, Butler SP, Fawwaz RA, Alderson PO. Nuclear Medicine, Columbia-Presbyterian Medical Center, New York, NY, USA

### GASTROENTEROLOGY II

16:00-18:30

Room C

**Chairmen:** Chan H. Park, U.S.A.  
Eddy C.K. Tong, U.S.A.

- 16:00 **Evaluation of Arteriovenous Shunts in Lower Extremities of Liver Cirrhosis Patients.** Mori Y, Hirasawa Y, Nagase M, Itoh H, Shimada T, Kawakami K. Dept. of Radiology, Jikei Univ. Sch. of Med., Tokyo, Japan
- 16:15 **Relative Half Clearance Time - A Useful Method in Assessing Cirrhosis and Other Disorders of the Liver.** Tong ECK, Son YK, Lee CHS. Radiology, North General Hospital, New York, NY, U.S.A.
- 16:30 **Evaluation of Portosystemic Shunt with Transrectal Portal Scintigram Using I-123 Iodoamphetamine (IMP) in Biliary Atresia.** Kanto K, Kato T, Koyama K, Ishida H, Hayashi A, Kamagata S, Ishii K. 1st Department of Surgery, Akita University School of Medicine, Akita city, Japan
- 16:45 **Assessment of Intrahepatic Portal Blood Flow with Per-rectal Administration of I-123 IMP.** Murata K, Ishii K, Nakazawa K, Yoda K, Ikeda T, Tadokoro K, Nishimaki H, Matu-

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Wednesday, November 2

- bayashi T. Radiology, School of Medicine  
Kitasato Univ., Sagamihara, Japan
- 17:00 **Thallium-201 Scintigraphy In Space Occu-  
pying Lesions of the Liver.** Sahweil AM,  
McKillop JH, Abdel-Dayem HM, El-Sayed M,  
Omar YT. Dept. of Nuclear Medicine, Faculty of  
Medicine, Kuwait University, Safat, Kuwait
- 17:15 **Treatment of Hepatocellular Carcinoma by  
Hepatic Arterial Infusion of I-131-Labelled  
Lipiodol.** Joya K, Kusumoto Y, Tsai C, Shima  
M, Nakata K, Sato A, Ishii N, Koji T, Honbo Z,  
Nagataki S. Nagasaki University School of  
Medicine, Nagasaki, Japan
- 17:30 **Intrahepatic I-131 Lipiodol for the Treat-  
ment of Hepatocellular Carcinoma.** Yoo HS,  
Lee JT, Suh JH, Park CH. Dept. of Radiology,  
Yonsei University College of Medicine, Seoul,  
Korea
- 17:45 **Evaluation of Malignant Liver Tumors with  
F-18 Labeled 2-Fluoro-2-Deoxyglucose  
(FDG) and PET.** Yamamoto K, Kubo S, Shi-  
bata T, Saji H, Tamaki N, Yonekura Y, Konishi  
J, Torizuka K. Dept. of Radiology & Nuclear  
Medicine, Kyoto University School of Medicine,  
Kyoto, Japan
- 18:00 **Measurement of Pancreatic Blood Flow and  
Methionine Uptake Ratio with Dynamic PET  
Study.** Kubo S, Yamamoto K, Nishizawa S,  
Iwasaki Y, Nukai T, Shibata T, Tamaki N,  
Yonekura Y, Konishi J. Dept. of Radiol. and  
Nucl. Medicine, Kyoto University School of  
Medicine, Kyoto, Japan

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Wednesday, November 2

- 18:15 **Clinical Application of a New Liver Scan-  
ning Agent Labeled with Positron Emitters  
(Ga-68-Microspheres).** Kuniyasu Y, Higashi  
S, Okada S, Ohto M, Arimizu N. Dept. of Radi-  
ology, Teikyo University, Tokyo, Japan

#### CARDIOVASCULAR IV

16:00-18:30

Room D

**Chairmen:** Wilfrido M. Sy, U.S.A.  
Chung-Chiang Wu, R.O.C.

- 16:00 **Detection of Thrombus Using In-111 Plate-  
let and Ga-67 Fibrinogen.** Kariyone S, Yui T,  
Katsuura Y, Uchida T. Dept. of Internal Medi-  
cine, Fukushima Medical College,  
Fukushimashi, Japan
- 16:15 **A New Scintigraphic Approach for Imaging  
of Intravascular Thrombi by Autologous In-  
111 Labeled Platelets.** Carmassi F, Iervasi G,  
Ferdeghini M, Boni G, Bianchi R, Mazzuca N.  
University of Pisa, Center of Nuclear Medicine,  
Pisa, Italy
- 16:30 **Immunoscintigraphic Detection of Experi-  
mental Arterial Thrombus in the Rabbits:  
Using Monoclonal Antibody Against Plate-  
lets.** Caner BE, Nakashima T, Odori T,  
Matsushita T, Nakamura R, Suto Y, Toyama T,  
Sakuma H, Yamamoto K, Endo K, Ishii Y,  
Torizuka K. Dept. of Radiology, Fukui Medical  
School, Fukui, Japan

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Wednesday, November 2

Wednesday, November 2

- 16:45 **Evaluation of Popliteal Vein Thrombophlebitis: Uptake of Radionuclide Venography (RNV) Technique and Standard.** Sy WM, Seo IS, Tai KG. Nuclear Medicine, The Brooklyn Hospital, Brooklyn, NY, U.S.A.
- 17:00 **Angioscintigraphic Analysis of Skin Blood Flow Changes Occurring in the Toes Following Lumbar Sympathectomy (LS).** Mazzuca N, Morini V, Mencacci S, Pulera N, Pratali R, Bencini C. U.O. Medicina Nucleare, U.S.L. 13, Spedali Riuniti, Livorno, Italy
- 17:15 **Quantitative Evaluation of Thoracic Venous Blood Flow Using RI venography in Patients with SVC Syndrome.** Ishimura J, Kawanaka M, Tachibana K, Suehiro M, Fukuchi M. Department of Nuclear Medicine, Hyogo College of Medicine, Hyogo, Japan
- 17:30 **Usefulness of Intravenous Total Body Arteriography in Gated Cardiac Blood Pool Studies.** Yang D, Gould L, Yee W, Patel D, Giovannello J. Nuclear Medicine Division, The Methodist Hospital, Brooklyn, NY, U.S.A.
- 17:45 **Radionuclide Venography: Subcutaneous Injection vs Intravenous Injection.** Wu CC, Jong SB, Chiu CC, Chen YF, Lin YT. Dept. of Nuclear Medicine, Kaohsiung Medical College, Kaohsiung, Taiwan, R.O.C.
- 18:00 **Diagnosis of Aortic Dissection by Radionuclide Aortogram.** Yeh SJ, Tzen KY, Fu M, Hung JS, Wu D. Section of Nuclear Medicine, Chang Gung Memorial Hospital, Taipei, Taiwan, R.O.C.

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- 18:15 **Experience of Effective Renal Plasma Flow Study in Detection of Renal Arterial Occlusion in Aortic Dissection.** Hwang DS, Chen YT, Chen JS, Lin WW, Wang SJ, Liao SQ. Cardiology, Veterans General Hospital, Taichung, Taiwan, R.O.C.

**INFECTIOUS DISEASE**

16:00-18:30

Room E

**Chairmen:** Roberta C. Locko, U.S.A.  
David C.P. Chen, U.S.A.

- 16:00 **Gallium-67 Citrate Scintigraphy for the Assessment of Radiation Pneumonitis.** Kataoka M, Kawamura M, Kimura Y, Fujii T, Tanada S, Hamamoto K. Department of Radiology, Ehime University School of Medicine, Ehime, Japan
- 16:15 **The Diagnostic Value of Whole Body Ga-67 Scan in Adult FUO Patients.** Leu HS, Tzen KY. Internal Medicine, Chang Gung Medical College, Taipei, Taiwan, R.O.C.
- 16:30 **Comparison of Tc-99m Nanometer-sized Inert Colloids Imaging and In-111 or Tc-99m Labeled Leukocyte Imaging for the Detection of Inflammatory Foci.** Uno K, Yoshida H, Minoshima S, Yoshikawa K, Imazeki K, Arimizu N, Kitakata Y. Department of Radiology, Chiba University School of Medicine, Chiba, Japan

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Wednesday, November 2

- 16:45 **Polymorphonuclear Leukocyte Scintigraphy (PS) with In-111 and Tc-99m-HMPAO.** Driedger A, Morrissey G, Mattar A, Powe J, Hurwitz G. Department of Nuclear Medicine, Victoria Hospital, Ontario, Canada
- 17:00 **Improved Specificity of In-Oxine Labelling of Neutrophils by Use of Mono-Poly Separation.** Durbidge M, Kwan YL, Tiley C, Elison BS, Vincent P, Murray IPC. Department of Nuclear Medicine, Prince of Wales Hospital, N.S.W., Australia
- 17:15 **The Use of Tc-99m-HMPAO in the Diagnosis of Inflammatory Disease.** Salehi N, Andrews JT, Lichtenstein M. Department of Nuclear Medicine, Poyal Melbourne Hospital, Parkville, VIC, Australia
- 17:30 **The Scintigraphic Distribution Pattern of Sessile Bone Marrow Macrophages (SBMM) in LAS and Full AIDS.** Brandhorst I, Staszewski S, Bittner G, Hor G. Depts. of MRI and Nucl. Med., Inst. for Diagnostic Imaging, Frankfurt, F.R.G.
- 17:45 **The Role of Nuclear Medicine in the Evaluation of AIDS.** Locko RC, Stent TR. Columbia University/Harlem Hospital Center, New York, NY, U.S.A.
- 18:00 **Nuclear Medicine in Pediatric AIDS.** Locko RC, Stent TR. Columbia University/Harlem Hospital Center, NY, U.S.A.

Wednesday, November 2

- 18:15 **Tc-99m-Albumin vs. Ga-67-Citrate Lung Scintigraphy in AIDS Patients Suffering from Pneumocystis Carinii Pneumonia (PCP).** Brandhorst I, Rust M, Staszewski S, Hor G. Depts. of MRI and Nucl. Med., Inst. for Diagnostic Imaging, Frankfurt, F.R.G.

Thursday, November 3

**PLENARY SESSION II  
NEW CARDIOVASCULAR TRACERS AND  
TECHNIQUES ON THE HORIZON**

8:30-10:00

Room A

**Chairman:** Heinrich R. Schelbert, U.S.A.  
Benjamin N. Chiang, R.O.C.

- 8:30 **Global Ventricular Evaluation: Simultaneous Ventricular Performance and Myocardial Perfusion with Single Injection of Tc-99m Isonitrile.** Ismael G. Mena. Harbor-UCLA Medical Center, Torrance, CA, U.S.A.
- 9:00 **Tc-99m Isonitriles in the Assessment of Myocardial Perfusion.** Daniel S. Berman. Cedars-Sinai Medical Center, Los Angeles, CA, U.S.A.
- 9:30 **PET Evaluation of Myocardial Metabolism.** Heinrich R. Schelbert. UCLA School of Medicine, Los Angeles, CA, U.S.A.

**CARDIOVASCULAR V**

10:30-12:30

Room A

**Chairmen:** Raymundo T. Go, U.S.A.  
Wei-Lian Chen, R.O.C.

- 10:30 **Value of Thallium Emission Tomography in the Community Hospital.** Rao H, Kagan A, Appelhans SA, Sharma CN, Maddipati R, Greif E, Nejat M, Shenoy M. Nuclear Medicine, Coney Island Hospital, Brooklyn, NY, U.S.A.

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Thursday, November 3

- 10:45 **Usefulness of Stress Tl-201 Myocardial SPECT for the Evaluation of Coronary Collateral Vessels in the Patients with Coronary Artery Disease.** Hosoi H, Yamazaki J, Kawamura Y, Okuzumi I, Wakakura M, Igarashi M, Okamoto K, Morishita T, Osawa H, Miyairi M, Yabe Y. 1st Department of Internal Medicine, Toho University School of Medicine, Tokyo, Japan
- 11:00 **Silent Myocardial Ischemia: Evaluation by Exercise Tomographic Thallium-201 Myocardial Imaging.** Kurata C, Sakata K, Taguchi T, Fukumoto Y, Kobayashi A, Yamazaki N. 3rd Dept of Int Med, Hamamatsu Univ. Sch. of Med., Hamamatsu, Japan
- 11:15 **Thallium-201 SPECT Myocardial Imaging: Analysis of Indications for Referral and Its Effect on the Frequency of Subsequent Coronary Angiography.** Go RT, MacIntyre WJ, King JL, Rehm PK, O'Donnell JK, Underwood DA. Nuclear Medicine Department, Cleveland Clinic Foundation, OH, U.S.A.
- 11:30 **Clinical Significance of Metabolic Activity in Persistent Defect on Thallium-201 Tomography.** Tamaki N, Yamashita K, Yonekura Y, Koide H, Saji H, Mukai T, Yamamoto K, Kambara H, Kawai C, Konishi J, Torizuka K. Nuclear Medicine, Kyoto University School of Medicine, Kyoto, Japan

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Thursday, November 3

- 11:45 **Unbiased Sensitivity and Specificity Determinations from Stratified Populations: Application to 201-Thallium SPECT in Coronary Artery Disease.** Goris ML, Bretille J, Askienazy S. Nuclear Medicine, Stanford University School of Medicine, Stanford, U.S.A.
- 12:00 **The Unfolded Map of Tl-201 Myocardial SPECT.** Takishima T, Machida K, Honda N, Namiya T, Takahashi S, Muramatsu M. Radiology, Saitama Medical Center, Saitama Medical School, Saitama, Japan
- 12:15 **Evaluation of the Cardiac Apical Defect on Thallium-201 (Tl-201) Myocardial Perfusion Map Using Bull's-Eye and Spreaded Maps.** Adachi I, Akamatsu H, Kusakawa J, Hohrai T, Tatsu Y, Takeuchi M, Kawai T, Akagi H. Radiology, Osaka Medical College, Osaka, Japan

**ONCOLOGY III**

10:30-12:30

Room B

Chairmen: L. Feinendegen, F.R.G.  
Samuel D.J. Yeh, U.S.A.

- 10:30 **The Role of I-131-MIBG Scintigraphy In Patients with Neuroblastoma, with Particular Reference to Its Role in the Management of These Patients Undergoing Bone Marrow Transplantation.** Elison BS, Murray IPC, Van der Wall H, Vowels M, White L, O'Gorman-Hughes D. Department of Nuclear Medicine, Prince of Wales Hospital, NSW, Australia

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Thursday, November 3

- 10:45 **Gallium Scintigraphy Pattern of Immunoblastic Sarcoma B-Cell Versus T-Cell Origin.** Chen DCP, Yeo E, Hu E, Levine AM, Siegel ME. Nuclear Medicine, University of Southern California, Los Angeles, CA, U.S.A.
- 11:00 **The Effect of Vascularity on Tumor Uptake of Tc-99m (V) Dimercaptosuccinic Acid (DMS).** Odori T, Nakashima T, Suto Y, Toyama T, Sakuma H, Caner BE, Matsushita T, Ishii Y, Torizuka K. Dept. of Radiology, Fukui Medical School, Fukui, Japan
- 11:15 **Evaluation of Tumor Blood Flow by Kr-81m and Tc-99m Labeled MAA in Induced Hypertensive Chemotherapy.** Nakashima T, Matsushita T, Caner BE, Suto Y, Sakuma H, Hayashi N, Odori T, Ishii Y, Torizuka K. Dept. of Radiology, Fukui Medical School, Fukui, Japan
- 11:30 **Accumulation of N-Isopropyl-p-I-123-Iodoamphetamine and Technetium-99m-Hexamethyl-Propyleneamine Oxime in Metastatic Hepatocellular Carcinoma.** Morita K, Ono S, Fukunaga M, Otsuka N, Nagai K, Furukawa T, Mimura H, Yanagimoto S, Tomomitsu T, Morita R. Dept. of Nuclear Medicine, Kawasaki Medical School, Okayama, Japan
- 11:45 **Positron Emission Tomographic Study of Malignant Lymphoma with the O-15 Steady-State Inhalational Technique.** Yoshikawa K, Uno K, Minoshima S, Itami J, Arimizu N. Dept. of Radiology, Chiba University School of Medicine, Chiba, Japan

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Thursday, November 3

- 12:00 **Functional Analysis of (F-18) FDG Accumulation in Lung Cancer Patients.** Matsuda M, Fujimori K, Furudate M. Department of Nuclear Medicine, Hokkaido University School of Medicine, Sapporo, Japan
- 12:15 **Differential Diagnosis Between Hepatocellular Carcinoma and Metastatic Liver Tumor Using 2-Dexoy-2-[F-18] Fluoro-D-Galactose with Positron Emission Tomography.** Yamaguchi K, Fukuda H, Matsuzawa T, Takahashi H, Tada M, Ishiwata K, Ido T, Nakano M. Department of Radiology, University of the Ryukyus, Okinawa, Japan

**PULMONARY I**

10:30-12:30 Room C

Chairmen: Masayori Furudate, Japan  
Kenji Kawakami, Japan

- 10:30 **Pulmonary Scintigraphy with I-123 IMP in Various Lung Diseases.** Cho N, Takeuchi N, Kyogoku S, Kuwazuru R, Tomita T, Suzuki M, Hiraiwa T, Nagase K. Dept. of Radiology, School of Medicine, Juntendo University, Tokyo, Japan

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Thursday, November 3

- 10:45 **Assessment of Inhalation Lung Imaging Using N-isopropyl-p-(I-123) Iodoamphetamine (I-123 IMP) Aerosol.** Kawahara S, Kosuda S, Ishibashi A, Tamura K, Kubo A, Hashimoto S, Hishida T. Radiology, Okura National Hospital, Tokyo, Japan
- 11:00 **Pulmonary Emphysema/Chronic Obstructive Lung Disease Detected by Radioiodine Amine: I-123 HIPDM.** Shih WJ, Lai YL, Coupal JJ, Ryo UY, Kung FH. Dept. of Radiation Medicine, University of Kentucky Medical Ctr., KY, U.S.A.
- 11:15 **Relation between Unevenness on Perfusion Lung Images and Pulmonary Diseases.** Teshima T, Isawa T, Hirano T, Anazawa Y, Miki M, Shiraishi K. Dept. of Medicine, The Res. Inst. Chest Dis. & Cancer Tohoku Univ., Sendai, Japan
- 11:30 **Position of Nuclear Medicine in the Diagnostic Strategy of Pulmonary Embolism About 1900 Cases.** Barritault L, Collignon Le Bouedec MA, Reynaud P. Medicine Nucleaire, Hospital Lannec, Paris, France
- 11:45 **Combined Use of Xenon-133 and Krypton-81m on the Same Patient to Enhance the Clinical Diagnostic Strategy in Pulmonary Embolism (PE).** Kagan A, Rao H, Joseph V, Small C, Varughese S. Nuclear Medicine, Coney Island Hospital, Brooklyn, NY, U.S.A.

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- 12:00 **Studies on Continuous Changes in Respiratory Impedance and Transcutaneous Oxygen Partial Pressure in Methacholine Induced Asthma with Repeated Administration of Radioisotopes.** Sugita M, Kitada O, Hirayama H. Dept. of Internal Medicine, Hyogo Medical College Hospital, Nishinomiya, Japan
- 12:15 **Trial of Quantitative Evaluation in Kr-81m Gas Ventilation Study.** Seo H, Tanabe M, Tamai T, Satoh K, Kawase Y, Kawasaki Y, Kojima K. Dept. of Radiology, Kagawa Medical School, Kagawa, Japan

### GENITOURINARY I

10:30-12:30

Room D

Chairmen: Kazuo Ito, Japan  
Joseph Castronuovo, U.S.A.

- 10:30 **Perirenal Vascular "BLUSH" during Renal Angioscintigraphy.** Castronuovo JJ, Scagnelli T. Nuclear Medicine, The Community Hospital at Glen Cove, N.Y., U.S.A.
- 10:45 **An Evaluation of the Role of DMSA Scintigraphy Compared with IVP in Patients with Urinary Tract Infection and/or Vesico-Ureteric Reflux.** Elison BS, Murray IPC, McDonald T, Bass S, Cahill S, Rosenberg A. Dept. of Nuclear Medicine, Prince of Wales Hospital, NSW, Australia

- 11:00 **Visual and Quantitative Evaluation of Renal Injury Using Tc-99m-DTPA Renal Scintigraphy.** Takahashi T, Machida K, Honda N, Mamiya T, Takishima T, Hasegawa N, Ohno K, Hashimoto M. Dept. of Radiology, Saitama Medical Center of Saitama Medical School, Saitama, Japan
- 11:15 **Accumulation Tc-99m DTPA Outside the Urinary Tract in Renoscintigraphy.** Yokota S, Go M, Fujino A, Ishibashi A. Urology, Kitasato University School of medicine, Kanagawa, Japan
- 11:30 **Short Term Effect of Angiotensin Converting Enzyme (ACE) Inhibitor, Enalapril, in Incipient Diabetic Nephropathy.** Abu-Romeh SH, Nawaz K, Al-Suhaili AR. Nuclear Medicine, Tawam Hospital, Abu Dhabi, United Arab Emirates
- 11:45 **Twenty Four Hours Urinary Protein Excretion After Angiotensinconverting Enzyme Inhibition in Essential and Renal Parenchymal Hypertensive Patients: Comparison between RIA and Colorimetric Methods.** Mazzuca N, Bigazzi R, Falciani C, Demi M, Del Lucchese A, Baldari G, Morini V, Rimuniti S. U.O. Medicina Nucleare, U.S.L., 13, Spedali Riuniti Livorno, Italy
- 12:00 **Diagnosis of Vasculogenic Impotence: The Combination of Penile Xenon-133 Washout and Papaverine Tests.** Lin SN, Liu RS, Chang LS, Yeh SH. Division of Urology/Dept. of Surgery, Veterans General Hospital, Taipei, R.O.C.

- 12:15 **The Role of Radionuclide Hysterosalpingography in Gynecology.** Lee MS, Hsu PC, Hung WW, Hsu CT, Shen YY, Huang KF. Obstetrics and Gynecology, Municipal Chung-Hsing Hospital, Taipei, Taiwan, R.O.C.

**BONE/JOINT III**

10:30-12:30 Room E

**Chairmen:** Wilfrido M. Sy, U.S.A.  
Yong Whee Bahk, Korea

- 10:30 **Correction of the Bladder Artifact in Hip SPECT.** Kouris K, Musa A, Taha B, Abdel-Dayem HM, Collier BD. Dept. of Nuclear Medicine, Faculty of Medicine, Kuwait University, Safat, Kuwait
- 10:45 **Diagnostic Method for Bone Lesion with Tl-201 Chloride Scintigraphy.** Shibuya K, Nakama M, Sugimoto E, Ohsawa T. Dept. of Orthopaedics, Jichi Medical School, Tochigi, Japan
- 11:00 **Role of the Thallium-201 Etiologic Classification of Solitary Bone Lesions (SBL).** Elgazzar AH, Malki AA, Sahweil A, Abdel-Dayem HM, Razzak SA, Kubasic H, Jahan S, Mahmoud A, El-Sayed M, Higazi E. Dept. of Nuclear Medicine, Faculty of Medicine, Kuwait University, Safat, Kuwait

- 11:15 **Multiple Myeloma: A New Finding on Bone Scintigraphy.** Sy WM, Seo IS, Tai KG. Nuclear Medicine, The Brooklyn Hospital, Brooklyn, NY, U.S.A.
- 11:30 **Evaluation of Bone SPECT in Patients with Malignant Neoplasm.** Toita T, Minoshima S, Uno K, Miyoshi T, Arimizu N, Matsunaga M, Tanabe M, Oonuma N, Takahashi H. Dept. of Radiology, Chiba University School of Medicine, Chiba, Japan
- 11:45 **Evaluation of Metastatic Bone Lesions in Vertebral Bodies by Magnetic Resonance Imaging and Bone Scintigraphy.** Hiraishi K, Hisada Y, Kanna K, Asaka S, Maeda H, Kawai T, Kanasaki Y, Akagi H. Dept. of Radiology, Osaka Medical College, Osaka, Japan
- 12:00 **Usefulness of Pinhole Collimator in Differential Diagnosis of Metastatic Disease and Spondylosis in the Vertebrae: Evaluation by ROC Analysis.** Kosuda S, Kawahara S, Tamura K, Tsukatani Y, Ko WJ, Sanmiya T, Kubo A, Hashimoto S, Lien SL, Wu CC. Radiology, Okura National Hospital, Tokyo, Japan
- 12:15 **Localization of Tc-99m-MDP in Soft Tissue.** Chen HY, Tzen KY. Nuclear Medicine, Chang Gung Memorial Hospital, Taipei, Taiwan, R.O.C.

Thursday, November 3

**DELEGATE ASSEMBLY  
OF  
AOFNMB**

12:00-13:30

Golden Dragon Hall

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Friday, November 4

**PLENARY SESSION III  
NUCLEAR MEDICINE PRACTICE**

8:30-10:00

Room A

**Chairmen:** Kanji Torizuka, Japan  
Lelands Villadolid, Philippines  
**Coordinator:** Shyh-Jen Wang, R.O.C.

8:30 **History of Asia and Oceania Congress of Nuclear Medicine.** Hideo Ueda. Sakakibara Heart Institute, Tokyo, Japan

9:00 **SPECT vs PET vs MRI.** Masahiro Iio. University of Tokyo, Tokyo, Japan

9:30 **Experience in the Establishment of Cyclotron and PET Program in the Developing Countries.** Richard M. Lambrecht. Kingdom of Saudi Arabia.

**CARDIOVASCULAR VI**

10:30-12:30

Room A

**Chairmen:** Yoshiharu Yonekura, Japan  
Por-Jau Huang, R.O.C.

10:30 **High Left Ventricular Ejection Fraction at Rest and During Exercise as a Cause of False Positive Results in Exercise Electrocardiographic Testing.** Yamashina A, Jinnouchi Y, Takao N, Hayashida N, Igarashi M. Internal Medicine, St. Luke's International Hospital, Tokyo, Japan

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- 10:45 **Improvement of Regional and Global Left Ventricular Function in Patients with the First Acute Myocardial Infarction (AMI) 21 Days After Early Thrombolysis by Recombinant Tissue Plasminogen Activator (rt PA)** Hoschl R, Shuter B, Magee M, Nelson G, Freund J, Yeates M. Dept. of Nuclear Medicine, The Royal North Shore Hospital of Sydney, NSW, Australia
- 11:00 **Left Ventricular Function of Mitral Stenosis before and after Percutaneous Mitral Valvuloplasty.** Lee DD, Choe O, Shim WH, Park SJ, Lee WK, Cho SY, Kim SS, Tak SJ, Park CY. Dept. of Diagnostic Radiology, Yonsei University College of Medicine, Seoul, Korea
- 11:15 **Cardiac Response to Various Exercise in Ischemic Heart Disease Patients Evaluated by an Ambulatory Ventricular Monitor (VEST).** Ohtake T, Watanabe T, Kosaka N, Momose T, Nishikawa J, Kawakubo K, Toda I, Sugimoto T, Lio M. Dept. of Radiology, University of Tokyo Faculty of Medicine, Tokyo, Japan
- 11:30 **Clinical Evaluation of the Cardiac Performance in Patients with Coronary Heart Disease by the Pulmonary Blood Volume in Exercise Tests.** Saito T, Tomiya H, Karaki A, Yamazaki Y, Furukawa Y, Shimizu M, Makita K, Takeda K, Inagaki Y. The Third Dept. of Internal Medicine, Chiba University School of Medicine, Chiba, Japan

- 11:45 **The Positive Rate of Tc-99m Pyrophosphate Myocardial Scan in Acute Myocardial Infarction.** Koh EM, Kung SS, Chung JK, Lee MC, Koh CS. Dept. of Nuclear Medicine, Seoul National University Hospital, Seoul, Korea
- 12:00 **The Role of Nuclear Cardiology Procedures in the Evaluation of Cardiac Function Following Heart Transplantation.** Iturralde MP, Novitzky D, Cooper DKC, Rose AG, Boniaszczuk J. Department of Nuclear Medicine, H F Verwoerd Hospital and the University of Pretoria, University of Cape Town Medical School, south Africa
- 12:15 **The Effects of Denervation and Acute Rejection of Left Ventricular Volumes Measured by Radionuclide Ventriculography Following Cardiac Transplantation in the Chacma Baboon.** Iturralde MP, Novitzky D, Cooper DKC, Rose AG, Boniaszczuk J. Department of Nuclear Medicine, H F Verwoerd Hospital and the University of Pretoria, University of Cape Town Medical School, South Africa

Friday, November 4

**RADIOASSAY**

10:30-12:30

Room B

Chairmen: Chang-Soon Koh, Korea  
I. Wen Chen, U.S.A.

- 10:30 **Precision and Specificity of Digoxin Radioimmunoassay Kits.** Hsieh YY, Lin MS, Su CT, Shu MY. Medicine, National Taiwan University Hospital, Taipei, Taiwan R.O.C.
- 10:45 **Clinical Usefulness of Serum 'TPA' Values Using Newly Developed Radioimmunoassay Kit.** - Nakamura R, Nakashima T, Noguchi M, Matsushita T, Caner B, Odori T, Ishii Y, Tonzuka K. Dept. of Radiology, Fukui Medical School, Fukui, Japan
- 11:00 **Clinical Evaluation of a Liquid-Phase Monoclonal Immunoradiometric Assay (IRMA) Kit for Human TSH.** Chen IW, Heminger LA, Black RR, Maxon HR. Radiobiology Laboratory ML 568, University of Cincinnati Medical Center, Cincinnati, Ohio, U.S.A.
- 11:15 **Fundamental Establishment of Rabbit Antivasoactive Intestinal Peptide (VIP) Serum: Basic Validation in Radioimmunoassay.** Chu LS, Chen WL, Ho T, Chen YH, Wang LM, Ho LT. Nuclear Medicine, Tri-Service General Hospital, Taipei, Taiwan, R.O.C.
- 11:30 **Effect of Menstruation on Serum CA 125 Levels.** Kan YY, Yeh SH, Hsieh YH, Wu LC, Chiou GF, Lou CM, Liu RS, Ng HT. Department of Nuclear Medicine, Veterans General Hospital, Taipei, Taiwan, R.O.C.

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Friday, November 4

- 11:45 **Depth Independence for In-Vivo Bioassay Measurements.** Tung CJ, Lee BC. Institute of Nuclear Science, National Tsing Hua University, Hsinchu, Taiwan, R.O.C.
- 12:00 **A Panel of Three Tumoral Markers in the Study of Head and Neck Carcinoma.** Mazzuca N, Faiciani C, Di Nasso F, Malvaldi F, Mencacci S, Demi M, Lucchese AD, Morini V. U.O. Medicina Nucleare, U.S.L. 13, Spedali Riuniti, Livorno, Italy
- 12:15 **Clinical Evaluation of CA 72-4 As Tumor Marker.** Ochi Y, Imokawa M, Okabe H, Hamazu M, Suzuki T, Yamazaki T. Central Clinical Lab. Shiga Univ. of Medical Science, Shiga, Japan

**PULMONARY II**

10:30-12:30

Room C

Chairmen: Philip O. Alderson, U.S.A.  
Toyoharu Isawa, Japan

- 10:30 **Tc-99m DTPA Aerosol Clearance Studies in Inhalation Injury from Thermal and Chemical Burns.** Sundram FX, Lee ST. Nuclear Medicine Department, Singapore General Hospital, Singapore
- 10:45 **The Utility of Tc-99m-DTPA Aerosol Inhalation Scans in Artificially Ventilated Patients.** Butler SP, Alderson PO, Greenspan RL, Doctor DG, DeFilippi VJ. Nuclear Medicine-Radiology, Columbia-Presbyterian Medical Center, New York, U.S.A.

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Friday, November 4

- 11:00 **Effect of FRC and Pulmonary Blood Flow on Clearance of Tc-99m-DTPA Aerosol.** Tominaga S, Hirasawa Y, Mori Y, Shimada T, Kawakami K. Dept. of Internal Medicine, Juntendo University School of Medicine, Chiba, Japan
- 11:15 **A Comparative Study of Pulmonary Clearance of Tc-99m-HMPAO and Tc-99m-DTPA Aerosol.** Kawakami K, Hirasawa Y, Mori Y, Kawai R, Shimada T, Tagagi H, Tominaga S. Dept. of Radiology, Jikei University School of Medicine, Tokyo, Japan
- 11:30 **Difference in Aerosol Deposition Patterns due to Difference in Aerosol Generators.** Miki M, Isawa T, Teshima T, Hirano T, Anazawa Y. Dept. of Medicine, The Res. Inst. Chest Dis. & Cancer, Tohoku Univ., Sendai, Japan
- 11:45 **Evaluation of New Protocol for Post Perfusion Ventilation (PERF. VENT.) with Tc-99m Pyrophosphate (PYP) Aerosols.** Nawaz MK, Elgazzar AH, Walia HK, Abdel-Dayem HM, Farag AD, Sulaiman AR, Baig SA, Higazi E. Dept. of Nuclear Medicine, Faculty of Medicine Kuwait University, Safat, Kuwait
- 12:00 **Pulmonary Epithelial Permeability in Normal Subjects and Patients with Lung Diseases.** Anazawa Y, Isawa T, Teshima T, Hirano T, Miki M. Dept. of Medicine, The Res. Inst. Chest Dis. & Cancer Tohoku Univ., Sendai, Japan

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Friday, November 4

- 12:15 **Effect of Beta 2-Stimulator on Mucociliary Clearance.** Isawa T, Teshima T, Hirano T, Anazawa Y, Miki M. Dept. of Medicine, The Res. Inst. Chest Dis. & Cancer Tohoku Univ., Sendai, Japan

## GENITOURINARY II

10:30-12:30 Room D

**Chairmen:** Keith E. Britton, U.K.  
Sien-Shih Chang, R.O.C.

- 10:30 **Value of Transit Time Indices (TTIS) of Diuretic Renogram (DR) in the Evaluation Surgery in Obstructive Uropathy (OU).** Bahar RH, Sabha M, Awdeh M, El-Sayed M, Kouris K, Nimmans S, Yousif MA, Britton K, Abdel-Dayem HM. Dept. of Nuclear Medicine, Faculty of Medicine Kuwait University, Safat, Kuwait
- 10:45 **Diuresis Radionuclide Renography in Diagnosis and Follow-up of Dilated Upper Urinary Tract.** Kao PF, Tzen KY, Shieh CP, Hung CS. Nuclear Medicine, Chang Gung Memorial Hospital, Taipei, Taiwan, R.O.C.
- 11:00 **The Value of Tc-99m DTPA Diuretic Renogram (RDR) in the Evaluation of Surgery in Chronic Obstructive Uropathy (COU).** Bahar RH, Sabha M, Kouris K, Britton KE, Abdel-Dayem HM. Dept. of Nuclear Medicine, Faculty of Medicine Kuwait University, Safat, Kuwait

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Friday, November 4

- 11:15 **Diuretic Renogram (RD) in Chronic Obstructive Uropathy (COU): Comparison between Tc-99m DTPA and Tc-99m MAG-3.** Bahar RH, Ali YM, El-Sayed M, Mahmoud SE, Abdel-Dayem HM. Dept. of Nuclear Medicine, Faculty of Medicine Kuwait University, Safat, Kuwait
- 11:30 **Pathophysiological Investigation of Renal Cortical Function with Factor Analysis of Tc-99m DTPA Renoscintigram.** Ono M, Takeda K, Maeda H, Nakagawa T, Yamaguchi N. Dept. of Radiology, Mie University School of Medicine, Mie, Japan
- 11:45 **Comprehensive Renal Function Evaluation in Patients with Complete Staghorn Calculi Treated by Anatomic or Percutaneous Nephrolithotomy.** Jiaan BP, Yin JH, Lee YH, Lin TL, Lin SN, Chen KK, Hwang JK, Chen MT, Chang LS, Yeh SH, Liu RS. Division of Urology, Department of Surgery, Veterans General Hospital, Taipei, Taiwan, R.O.C.
- 12:00 **Kock Pouch Urinary Diversion — A prospective Radionuclide Renal Function Study and Its Correlation with Radiologic Finding.** Chen KK, Chang LS, Chen MT, Yin JH, Huang JK, Liu RS, Yeh SH. Div. of Urology & Dept. of Surgery, Veterans General Hospital, Taipei, Taiwan, R.O.C.
- 12:15 **A Speculation of the Renal Graft Survival from Renal Scintigraphy in Acute Rejection.** Yoshida K, Utsunomiya T, Kumano K, Endo T, Sakai T, Ishibashi A, Koshiba K. Urology, Kitasato Univ. Hospital, Sagamihara, Japan

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Friday, November 4

## **NUCLEAR MAGNETIC RESONANCE**

10:30-12:30

Room E

- Chairmen:** Max S. Lin, U.S.A.  
Ingo Brandhorst, F.R.G.
- 10:30 **Selection of Pulse Shape, Field of View and Bandwidth in Clinical MRI.** Lin MS. Nuclear Medicine Service (115 JC), V.A. Medical Center, MO, U.S.A.
- 10:45 **F-19 NMR Imaging by Perfluoro Chemical Agent.** Kosaka N, Yoshikawa K, Shiono T, Momose T, Watanabe T, Ohtake T, Nishikawa J, Iio M. Dept. of Radiology, Faculty of Medicine, University of Tokyo, Tokyo, Japan
- 11:00 **Chemical Shift Imaging with Modified Spin Echo Technique.** Niida A, Miki H, Sadamoto K, Hamamoto K, Nagao H, Yamamoto E. Dept. of Radiology, Washokai Sadamoto Hospital, Ehime, Japan
- 11:15 **Spinal SE Imaging: Control of CSF Pulsation Effect.** Lin MS. Nuclear Medicine Service (115 JC), V.A. Medical Center, MO, U.S.A.
- 11:30 **The MRI Diagnosis of Sellar and Perisellar Lesions with and without Gadolinium-DTPA (Gd-DTPA).** Brandhorst I, Agnoli AL, Maul FD, Hermann S, Hr G. Dept. of MRI and Nucl. Med., Inst. for Diagnostic Imaging, Frankfurt, F.R.G.

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Friday, November 4

- 11:45 **Magnetic Resonance Imaging of Intracranial Diseases in Children.** Kanda T, Oshibuchi M, Nishi F, Fujimatsu M, Sato M, Anno Y, Ohtake H. Dept. of Radiology, Hakuji Memorial Hospital, Tokyo, Japan
- 12:00 **The Neuroradiological Examination of Cerebral Venous Malformations with MRI, CT and Angiography.** Brandhorst I, Agnoli AL, Bittner G, Mayr-Grebe U, Hor G. Depts. of MRI and Nucl. Med., Inst. for Diagnostic Imaging, Frankfurt, F.R.G.
- 12:15 **Gadolinium Labeled Antimyosin Monoclonal Antibody for MRI Contrast Material** Nishikawa J, Yoshikawa K, Iio M, Watanabe T, Yazaki Y. Department of Radiology, Tokyo University Hospital, Tokyo, Japan

**SYMPOSIUM E  
RENAL, PULMONARY, AND  
PERIPHERAL VASCULAR  
DISEASES AND ORGAN  
TRANSPLANTATION**

13:50-15:30

Room A

Chairmen: Keith E. Britton, U.K.  
Shozo Hashimoto, Japan  
Coordinator: Lee-Shing Chu, R.O.C.

- 13:50 **Radionuclide Studies — New Applications in Urology.** Keith E. Britton, St. Bartholomew's Hospital, London, U.K.

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Friday, November 4

- 14:15 **Present Status of Pulmonary Nuclear Medicine.** Philip O. Alderson, Columbia-Presbyterian Medical Center, New York, NY, U.S.A.
- 14:40 **Vascular Radionuclide Imaging.** Wilfrido M. Sy. The Brooklyn Hospital, Brooklyn, NY, U.S.A.
- 15:05 **Techniques of Nuclear Medicine for the Evaluation of Organ Transplants.** Merle K. Loken, University of Minnesota, Minneapolis, MN, U.S.A.

**SYMPOSIUM F  
IN-VITRO NUCLEAR MEDICINE  
AND MISCELLANIES**

13:50-15:30

Room B

Chairmen: Hiroshi Demura, Japan  
Heung-Tat Ng, R.O.C.

- 13:50 **Quality Control, Standardization, and Value of Hormone Radioimmunoassays in Reproductive Endocrinology.** Seamus S. Lynch, Birmingham & Midland Hospital for Women, Birmingham, U.K.
- 14:15 **Nuclear Medicine and Endocrine Monitoring of I.V.F. Patients.** Stephen G. Hillier, University of Edinburgh, Edinburgh, Scotland, U.K.
- 14:40 **Comparison of Diagnostic Accuracy of Laparoscopy, Hysteroscopy, Contrast Hysterosalpingography and Radionuclide Hysterosalpingography in Evaluation of Female Infertility.** Mario P. Iturralde, Universiteit Van Pretoria, Pretoria, South Africa

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Friday, November 4

15:05 **The Clinical Application of Multiharmonic  
Fourier Analysis of Routine Gated Blood  
Pool Studies.** Michel H. Bourguignon, Hospi-  
talier Frederic Joliot, Orsay, France.

**SPECIAL LECTURE II**

16:00-17:00

Room A

Chairman: Peter Shin-Hwa Yeh, R.O.C.

**The PET Revolution in the Neurosciences.**  
Henry N. Wagner, Jr. The Johns Hopkins  
Medical Institutions, Baltimore, MD, U.S.A.

**CLOSING CEREMONY**

17:10-18:00

ROOM A

Presentation of Plaque of Honor to Prof. Hideo  
Ueda, First President of AOFNMB by Prof.  
Peter Shin-Hwa Yeh.

**Closing Remarks**

Prof. I.P.C. Murray  
Formerly President, AOFNMB

**Reply**

Prof. Peter Shin-Hwa Yeh  
President, AOFNMB

**Inauguration Speech**

Newly Elected President, AOFNMB

**Closing of Congress**

President Peter Shin-Hwa Yeh will pass the  
AOFNMB symbols to the newly elected Presi-  
dent of the AOFNMB.

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**POSTER  
SESSIONS**

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**BONE/JOINT**

- No. 1 **Clinical Usefulness of Radionuclide Imaging in the Bone and Soft Tissue Tumors.** Saito R, Ohishi T, Mitanihara S, Yamagishi Y, Ebata K, Okuyama A, Tajima H, Oumigawa H. Radiology, Nippon Medical School, Tokyo, Japan
- No. 2 **Primary Intraosseous Meningioma Presenting as a Osteolytic Lesion.** Ito H, Takagi H, Eiji O. Neurosurgery, Yamato City Hospital, Kanagawa, Japan
- No. 3 **The Assessment of Reactive Hyperemia Using Tc-99m RBC and Tc-99m MDP.** Park CY, Lee EJ, Suh JS. Dept. of Radiology, Yonsei University College of Medicine, Seoul, Korea
- No. 4 **Skeletal Scintigraphy In Meniscus Tear of Knees.** Kim SH, Chung SK, Kim CY, Bahk YW. Dept. of Radiology, Kangnam St. Mary's Hospital, Seoul, Korea
- No. 5 **Bone Mineral Density in Patients with Gonadal Dysgenesis.** Hsu JJ, Soong YK, Tzen KY. Dept. of Obs/Gyn, Chang Gung Memorial Hospital, Taipei, Taiwan, R.O.C.
- No. 6 **Significance of the Solitary Lesion in Bone Scan of Patients with Extraosseous Malignancies.** Chen HY, Tzen KY. Nuclear Medicine Department, Chang Gung Memorial Hospital, Taipei, Taiwan, R.O.C.

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- No. 7 **Bone Mineral Density Study In Postmenopausal Fractures.** Chen LH, Shih CH, Tzen KY. Orthopaedic Surgery, Chang Gung Memorial Hospital, Taipei, Taiwan, R.O.C.
- No. 8 **Spontaneous Osteonecrosis of Knee (SONK): An Analysis of 38 Cases.** Lee DT, Lan JL, Liu RS, Liao SQ. Rheumatology, Veterans General Hospital, Taichung, Taiwan, R.O.C.
- No. 9 **Photon-Deficient Lesion in Bone Scan.** You DL, Tzen KY. Section of Nuclear Medicine, Chang Gung Memorial Hospital, Taipei, Taiwan, R.O.C.
- No. 10 **Bone Scan in the Diagnosis of Metastatic Calcification in Malignant Disease and Chronic Renal Failure.** H. Ochi, T. Okamura, Y. Koizumi, T. Fukuda, I. Shibakin, S. Taniguchi, S. Rin, J. Oda, Y. Onoyama, T. Nakai\* Department of Radiology, Osaka City University Medical School, \*Nissei Hospital, Osaka, Japan

CARDIOVASCULAR

- No. 11 **Factor Analysis of Gated Cardiac Blood-Pool Data in Patients with Congenital Heart Disease.** Ito T, Tagami T, Maeda H, Takeda K, Nakagawa T, Yamaguchi N. Dept. of Radiology, Mie University School of Medicine, Mie, Japan

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- No. 12 **Imaging of the Inflammatory Response to Myocardial Infarction with Indium-111 Labeled Leukocytes.** Ikeoka K, Naruse H, Ohyanagi M, Iwasaki T, Fukuchi M. 1st Dept. of Internal Medicine, Hyogo College of medicine, Hyogo, Japan
- No. 13 **The Characteristics of Silent Myocardial Ischemia on Thallium-201 Myocardial Scintigraphy.** Naruse H, Ohyanagi M, Kawamoto H, Yamamoto J, Ikeoka K, Iwasaki T, Fukuchi M. 1st Dept. of Internal Medicine, Hyogo College of Medicine, Hyogo, Japan
- No. 14 **Thallium-201 Myocardial Perfusion Abnormalities in Patients with Asymmetrical Apical Hypertrophy.** Matsubara K, Nakamura T, Kitamura K, Tsuji H, Kitamura M, Okajima Y, Miyao K, Katahira T, Inagaki S, Sugihara H, Furukawa K, Katsumej H, Nakagawa M. Internal Medicine, Kyoto Second Redcross Hospital, Kyoto, Japan
- No. 15 **Evaluation of Thallium-201 Myocardial Perfusion Imaging During Transient Coronary Occlusion.** Nakagawa T, Sugihara H, Inagaki S, Katahira T, Kubota Y, Katsume H, Nakagawa M, Kato S. 2nd Internal Medicine, Kyoto Prefectural University of Medicine, Kyoto, Japan
- No. 16 **Application for Acute Myocardial Infarction Using Branched Fatty Acid Analog  $\alpha$ -Methyl Paralodophenyl Pentadecanoic Acid.** Kawamura Y, Yamazaki J, Okuzumi I, Muto T, Nakano H, Wakakura M, Okamoto K, Hosoi H, Morishita T. Toho University School of Medi-

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cine, The 1st Dept. of Internal medicine, Tokyo, Japan

- No. 17 **Application for Myocardial Imaging Using Straight Chain Fatty Acid Analog.** Kawamura Y, Yamazaki J, Okuzumi I, Muto T, Nakano H, Wakakura M, Igarashi M, Okamoto K, Morishita T. Toho University School of Medicine, The 1st Dept. of Internal Medicine, Tokyo, Japan
- No. 18 **Study on the Left Ventricular Ejection Fraction Derived from First Pass Radionuclide Angiography with Single Crystal Gamma Camera.** Lee SS, Shen YY, Huang KF. Cardiovascular Center, Municipal Chung-Hsin Hospital, Taipei, Taiwan, R.O.C.
- No. 19 **Improved Probabilistic Image (PBI) In Detecting Regional Wall Motion Abnormalities (RWMA).** Wu LC, Yeh SH, Chao KY, Chiou PF, Liu RS, Wang SJ, Chen WL, Chen YT. Department of Nuclear Medicine, Veterans General Hospital, VGH, Taipei, Taiwan, R.O.C.
- No. 20 **Segmental Ventricular Dysfunction Following His Bundle Ablation.** Warren R, Vohra J, Chan W, Lichtenstein M, Andrews J, Binns D, Hunt D. Department of Nuclear Medicine, Royal Melbourne Hospital, Parkville, VIC, Australia
- No. 21 **The Effect of Coronary Intervention in Acute Myocardial Infarction.** Yamamoto J, Kawamoto H, Ohyanagi M, Naruse H, Ikeoka K, Iwasaki T, Fukuchi M. 1st Dept. of Internal Medicine, Hyogo College of Medicine, Hyogo, Japan

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- No. 22 **Thallium-201 Stress Myocardial Scintigraphy in Detection of 3-Vessel Disease—Comparison of Planar and SPECT Methods.** Hwang CL, Kan MN, Wang SJ, Chen YT. Cardiology, Veterans General Hospital, Taichung, Taiwan, R.O.C.
- No. 23 **Clinical Value of Indium-111-Monoclonal Antimyocin Imaging in Acute Myocardial Infarction.** Kostamis P, Vassilopoulos N, Nanas S, Kalliontzis CH, Gerasi S, Tsirikas D, Sifakis N, Athanasoulis TH, Kokolakis N, Mouloupoulos SP. Nuclear Medicine, Alexandra University Hospital, Athens, Greece
- No. 24 **Exercise Thallium-201 Scintigraphy In the Evaluation of Coronary Aortocoronary Bypass Graft Surgery.** Cheng CY, Wang DJ, Chen WL. Nuclear Medicine, Tri-Service General Hospital, Taipei, Taiwan, R.O.C.
- No. 25 **Myocardial Uptake of Iodinated Methyl-Branched Fatty Acid: Effects of Metabolic Derangement In Animals.** Yonekura Y, Fujibayashi Y, Kawai K, Nishimura N, Tamaki N, Yamamoto K, Konishi J, Yokoyama A, Torizuka K. Dept. of Nuclear Medicine, Kyoto University School of Medicine, Kyoto, Japan
- No. 26 **Scintigraphic Evaluation of the Hemodynamic Change: Experience with Nicardipine.** Lee SS, Hong YG, Shen YY. Cardiovascular Center, Municipal Chung-Hsin Hospital, Taipei, Taiwan, R.O.C.

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- No. 27 **Diagnosis of Coronary Artery Disease by Dipyridamole-Radionuclide Ventriculography.** Hu WH, Wang SJ, Liao SQ, Kan MN, Chang CK, Hwang DS, Chen YT, Chiang BN. Cardiology, Veterans General Hospital, Taichung, Taiwan, R.O.C.

ENDOCRINE

- No. 28 **Further Studies on the Use of Sodium Iodate in the Treatment of Graves' Hyperthyroidism.** Shen DC, Wu SY, Chopra IJ, Wu DA, Shian LR, Solomen DH. Endocrinology & Metabolism, Tri-Service General Hospital, Taipei, Taiwan, R.O.C.
- No. 29 **Diverse Tc-99m Thyroid Scintigraphy In Hashimoto's Thyroiditis.** Wang PW, Huang MJ, Huang BY. Department of Nuclear Medicine, Chang Gung Memorial Hospital, Kaohsiung, Taiwan, R.O.C.
- No. 30 **Discrepant Endorphin and Cortisol Responses to Surgical Stress between Newborns and Infants.** Huang KL, Wang PW, Chuang JH. Department of Nuclear Medicine, Chang Gung Memorial Hospital, Kaohsiung, Taiwan, R.O.C.
- No. 31 **Serum Ferritin Level in Hyperthyroidism.** Jeng SJ, Huang CH, Wang CH, Tsan KW. Endocrinology & Metabolism Division, Internal Medicine Dept., Mackay Memorial Hospital, Taipei, Taiwan, R.O.C.

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- No. 32 **Salivary Function after Large Doses of Radiiodine Therapy in Patients with Carcinoma of the Thyroid.** Guan SI, Chu LS, Tsai DG, Chen WL. Nuclear Medicine, Tri-Service General Hospital, Taipei, Taiwan, R.O.C.
- No. 33 **Twin Tomography in Diffuse Parenchymatous Disease of the Pancreas.** Pilloy W, Bauling P, Herbst L. Nuclear Medicine, Medical University of Southern Africa, Medunsa, South Africa.
- No. 34 **Does Thyroid Dynamic Imaging with Tc-99m Contribute to Clinical Management of Thyroid Disease, with Specific Reference to Thyroid Carcinoma.** Pilloy W, Bauling P, Herbst L. Nuclear Medicine, Medical University of Southern Africa, Medunsa, South Africa
- No. 35 **Tc-99m Citrate for Imaging Solid "Cold" Nodules of the Thyroid.** Radwan MW, Wachowicz-Ostrowska W, Gasirowski W, Woy-Wojciechowski J. Central Clinical Hospital, Warsaw, Poland
- No. 36 **Application of Radionuclide Esophageal Transit Time in Detection of Diabetic Autonomic Neuropathy.** Lin JW, Wang SJ, Liao SQ, Lin WH. Internal Medicine, Veterans General Hospital-Taichung, Taichung, Taiwan, R.O.C.

**GASTROENTEROLOGY**

- No. 37 **TI-201 Per-rectal Scintigraphy: Noninvasive Method for Estimating Portal-systemic Shunt in Chronic Liver Diseases.** Mitanihara S, Oishi T, Saito R, Yamagishi Y, Ebata K, Okuyama A, Omigawa H, Tada N. Radiology, Nippon Medical School, Tokyo, Japan
- No. 38 **Gastric Cancer Risk Factors: A Case-Control Study Based on Medical Records.** Hoshino H, Arimoto H. Radiobiology Division, National Cancer Center Research Institute, Tokyo, Japan
- No. 39 **Quantitative Analysis of Sjogren's Syndrome by Sequential Salivary Gland Scintigraphy.** Kubo A, Tsukatani T, Sanmiya T, Lien SL, Nakamura K, Ogawa K, Takagi Y, Kinoshita F, Hashimoto S. Dept. of Radiology, Keio University School of Medicine, Tokyo, Japan
- No. 40 **Reappraisal of Tc-99m DISIDA Cholescintigraphy in the Differential Diagnosis of Neonatal Jaundice.** Wang CH, Shieh BF. Division of Nuclear Medicine, Mackay Memorial Hospital, Taipei, Taiwan, R.O.C.
- No. 41 **Hepatic Perfusion Index: A Useful Parameter for Liver Scan in Decision Making.** Shen YY, Huang MS, Chung YC, Huang KF, Wang TY. Nuclear Medicine, Municipal Chung-Hsin Hospital, Taipei, Taiwan, R.O.C.

- No. 42 **Biliary Atresia Diagnosed by Tc-99m DISIDA Cholescintigraphy with and without Phenobarbital.** Yen TC, Liu RS, Yeh SH, Wei JF. Department of Nuclear Medicine, Veterans General Hospital, Taipei, Taiwan, R.O.C.
- No. 43 **Evaluation of Gastric Emptying by Means of One Gamma Camera Using Dynamic Acquisitions.** Roland J, Dobbeleir A, Ham HR, Vandevivere J. Dept. of Nuclear Medicine, A.Z. Middelheim, Antwerpen, Belgium
- No. 44 **Comparative Study of Labeled Chicken Liver and Egg-White as Solid Markers for Gastric Emptying Studies.** Sadek S, Owunwanne A, Yacoub T, Abdel-Dayem HM. Department of Nuclear Medicine, Faculty of Medicine, Kuwait University, Safat, Kuwait
- No. 45 **Common Bile Duct to Duodenum Transit Time in Patients Suspected of Acute Cholecystitis.** B. Chandramouly, S. Hospital, Brooklyn, NY, U.S.A.

**GENITOURINARY**

- No. 46 **Application of Deconvolution Analysis to Tc-99m-DTPA Renal Imaging.** Terada N, Matsushita T, Nakagawa T, Maeda H, Takeda K, Yamaguchi N. Dept. of Radiology, Mie University School of Medicine, Mie, Japan
- No. 47 **Application of Deconvolution Analysis to Dynamic Tc-99m-DTPA Renal SPECT Imaging.** Ohi M, Kato N, Maeda H, Nakagawa T, Toyoda S, Takeda K, Yamaguchi N. Dept. of Radiology, Mie University School of Medicine, Mie, Japan

- No. 48 **Effect of Nifedipine on Effective Renal Plasma Flow in Patients with Scleroderma.** Wang SJ, Lan JL, Lin MS, Liao SQ, Lee DT. Nuclear Medicine Department, Veterans General Hospital-Taichung, Taichung, R.O.C.
- No. 49 **Radionuclide Renal Function Study in Upper Urinary Stones Before and After Various Surgical Treatment.** Chen KK, Chang LS, Chen MT, Huang JK, Yin JH, Liu RS, Yeh SH. Div. of Urology & Dept. of Surgery, Veterans General Hospital, Taipei, Taiwan, R.O.C.
- No. 50 **Increment in Effective Renal Plasma Flow Predicts Response to Captopril in Essential Hypertension.** Abu-Romeh SH, Al-Suhaili AR, Al-Dadah M. Nuclear Medicine, Tawam Hospital, Abu Dhabi, United Arab Emirates
- No. 51 **Combined Corporeal and Penile Xe-133 Washout Studies in the Detection of Venous Leakage.** Chu YK, Yeh SH, Liu RS, Lin SN, Wu LC, Chao IB, Chen MT, Chang SS. Department of Nuclear Medicine, Veterans General Hospital, VGH, Taipei, Taiwan, R.O.C.
- No. 52 **Correlation between Corporeal Xe-133 Washout Test and Infusion Dynamic Cavernosography.** Tsai PP, Lin SN, Wang JH, Liu RS, Chen MT, Lee LM, Lee YH, Lin DL, Chen KK, Yin JH, Huang JK, Chang LS. Division of Urology, Dept. of Surgery, Veterans General Hospital, VGH, Taipei, Taiwan, R.O.C.

- No. 53 **The Study of Renographic Changes in Children with Sickle Cell Anemia (SCA).** Halkar RK, Rimawi R, Aboobaker KC, Jahan MS, Rahaman MA, Kubasik H, Owunwanne A, Abdel-Dayem HM. Dept. of Nuclear Medicine, Faculty of Medicine, Kuwait University, Safat, Kuwait

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**INFECTIOUS DISEASE**


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- No. 54 **Gallium-67 Lung Scan in Progressive Systemic Sclerosis (PSS).** Lee DT, Lan JL, Liao SQ, Wang SJ. Rheumatology, Veterans General Hospital, Taichung, Taiwan, R.O.C.
- No. 55 **Clinical Significance of T3 & T4 in Patients of Systemic Lupus Erythematosus.** Chang CP, Lan JL, Leu CC, Lee DT. Rheumatology, Veterans General Hospital, Taichung, Taiwan, R.O.C.
- No. 56 **Evaluation of Esophageal Function of Collagen Diseases by Radionuclide Esophageal Transit.** Lee DT, Lan JL, Liao SQ, Wang SJ. Rheumatology, Veterans General Hospital, Taichung, Taiwan, R.O.C.
- No. 57 **Diagnostic Value of Quantitative Sacroiliac Scintigraphy.** Leu CC, Lan JL, Liao SQ, Liu RS, Wang SJ, Wong DW, Lee DT, Chang CP. Rheumatology, Veterans General Hospital, Taichung, Taiwan, R.O.C.

## POSTERS

No. 58 **Semiquantitative Measurement of the Renal Gallium Uptake in the Evaluation of Lupus Nephritis.** Liao SQ, Lin MS, Chang CP, Wang SJ, Yeh SH. Nuclear Medicine, Taichung Veterans General Hospital, Taichung, Taiwan, R.O.C.

No. 59 **Gallium-67 Imaging in AIDS Patients: Association of Reduce Hepatic and Increased Pulmonary Activity.** B. Chandramouly, P. Himelfarb, S. Cochavi, and C. Burgess Long Island college Hospital, Brooklyn, NY., U.S.A.

**NEUROLOGY**

No. 60 **A New Apparatus for Brain Imaging: 4-Head Rotating Gamma Camera Single Photon Emission Computed Tomograph (SPECT).** Hashikawa K, Kimura K, Etani H, Uehara A, Mieno M, Kashiwagi T, Kozuka T, Isaka Y, Matsumoto M, Kamaka T. Division of Nuclear Medicine, Osaka University Medical School, Osaka, Japan

No. 61 **Evaluation of Cerebral Collateral Circulation by Technetium-99m HM-PAO Brain SPECT During the MATAS' Test.** Terada H, Matsuda H, Seki H, Oba H, Sumiya H, Higashi S, Tsuji S, mai K, Hisada K. Dept. of Nuclear Medicine, Kanazawa University Hospital, Kanazawa, Japan

No. 62 **A SPECT Study in ICA Occlusion: Discrepancies between IMP Flow Image and Neurological Deficits.** Kuwabara K, Hobgaku H, Kusunoki M, Shirai J. Internal Medicine, Kobe Ekisaikai Hospital, Kobe, Japan

## POSTERS

No. 63 **Clinical Application of Repeating Radio-nuclide Angiography of Brain with Acetazolamide Loading.** Shimamura O, Kishikawa Y, Ishizu T, Nakagawa M. Dept. of Neurology, Kyoto Prefectural Rakuto Hospital, Kyoto, Japan

No. 64 **A New Method for Brain Functional Study Using Tc-99m-Hexamethylpropyleneamine (HMPAO) SPECT.** Momose T, Kosaka N, Nishikawa J, Ohtake T, Watanabe T, Lio M. Dept. of Radiology, Faculty of Medicine, University of Tokyo, Tokyo, Japan

No. 65 **Tc-99m-HMPAO Regional Cerebral Blood Flow SPECT in Cerebral Rete Mirabile.** Chung SK, Park YH, Lee SY, Shinn KS, Kim JW, Bahk YW. Dept. of Radiology, Kangnam St. Mary's Hospital, Seoul, Korea

**ONCOLOGY**

No. 66 **Effect of Chelates and Incubation Media on Aggregability of Platelets Labeled with In-111.** Mieno M, Isaka Y, Uehara A, Hashikawa K, Matsumoto M, Kimura K, Kamada T. Osaka University Medical School, First Dept. of Medicine, Osaka, Japan

No. 67 **Differential Cellular Metabolism of In-111, Y-90 and I-125 Radiolabeled Monoclonal Antibody.** Naruki Y, Carrasquillo JA, Reynolds JC, Maloney PL, Frincke JM, Wilbur S, Paik CH, Otsuka S, Larson SM. First Dept. of Internal medicine, Toho University, Tokyo, Japan

- No. 68 **Clinical Evaluation of the Tumor Marker in the Patients with Breast Cancer.** Takeshita T, Shishikura H, Ohtsuka E. Surgery, Yamato City Hospital, Kanagawa Pref, Japan
- No. 69 **Immunoscintigraphy for the Detection of Lymph Node Metastases from Breast Cancer.** Tjandra JJ, Russell JS, Collins JP, Andrews JT, Lichtenstein M, Pietersz GA, McKenzie IFC. Department of Nuclear Medicine, Royal Melbourne Hospital, Parkville, Australia
- No. 70 **Relative Utility of Tc-99m DISIDA and Heat Denatured Tc-99m RBC in Clarification of Splenic Visualization on Tc-99m Sulfur Colloid Reticuloendothelial Scintiscans.** Dunn EK, Vaquer RA, Strashun AM. Division of Nuclear Medicine, SUNY Health Science Center at Brooklyn, NY, U.S.A.
- No. 71 **Clinical Evaluation of I-131 Metaiodobenzylguanidine (MIBG) Imaging in Suspected Neuroblastoma.** Nakajo M, Nakabeppu Y, Abeyama K, Shinohara S. Dept. of Radiology, Kagoshima University Hospital, Kagoshima, Japan

**PULMONARY**

- No. 72 **Clinical Value of Pulmonary Perfusion Scintigraphy in the Pulmonary Thromboembolism** Oishi T, Saito R, Mitanihara S, Kumazaki T, Yamagishi Y, Ebata K, Okuyama A, Oumigawa H. Radiology, Nippon Medical School, Tokyo, Japan

**COMPUTERS AND INSTRUMENTATION**

- No. 73 **Compartment Analysis of IMP Kinetics in Human Brain Using Dynamic SPECT.** Iwasaki Y, Nishizawa S, Yonekura Y, Fujita T, Konishi J, Hamanaka D, Ishii Y, Torizuka K. Radiology & Nuclear Medicine, Kyoto University School of Medicine, Kyoto, Japan
- No. 74 **Quantitative Measurement of Radioactivity by Using Planar Data.** Akiyama Y, Yui N, Kinoshita F, Koakutsu M, Togawa T, Sakata S. Physics division, Chiba Cancer Center Hospital, Chiba-shi, Japan
- No. 75 **Establishment of Parameters for Acquisition and Reconstruction of SPECT Images of Brain Blood Pool.** Lau CM. Ottawa Civic Hospital, Ottawa, Ontario, Canada
- No. 76 **A Simple Pharmacokinetic Model for Analysis of Blood Clearance Curves of Radiolabeled Mouse Monoclonal Antibodies.** Wong GY, Yeh SDJ. Department of Biostatistics Memorial Sloan-Kettering Cancer Center, New York, NY, U.S.A.

No. 77 **Optimizing Method for a "Hot" Tumor Volume Calculation with Single Photon Emission Tomography (SPECT).** Chen DCP, Chen KY, Chen KH, Siegel ME. Nuclear Medicine, University of Southern California, CA, U.S.A.

No. 78 **A Newtype Ring SPECT for the Brain and Its Performance.** Murata H, Toyama H, Ohtake E, Matsuda H, Aiba T, Satoh T, Higashi Y, Ohi J, Tanaka Y. Nuclear Medicine, Toranomon Hospital, Tokyo, Japan

#### NUCLEAR MAGNETIC RESONANCE

No. 79 **The Diagnosis of Intracerebral Hematomas (IHs) Using Magnetic Resonance Imaging (MRI).** Brandhorst I, Schutz H, Lochner B, Damian M, Hor G. Depts. of MRI and Nucl. Med., Inst. for Diagnostic Imaging, Frankfurt, F.R.G.

No. 80 **The Application of Multispectral Analysis to Magnetic Resonance Imaging.** Chu WK. University of Nebraska Medical Center, Omaha, NE, U.S.A.

#### RADIOPHARMACEUTICAL

No. 81 **The Interaction of In-111 Labeled White Blood Cells with Synthetic Arterial Grafts.** Owunwanne A, Al-Huneidi W, Christenson JT. Dept. of Nuclear Medicine, Faculty of Medicine Kuwait University, Safat, Kuwait

No. 82 **A Sterile Tc-99m Generator from n,  $\gamma$  Molybdenum.** Shying ME, Sodeau JM. Environmental Science Division, A.N.S.T.O., Menai, NSW, Australia

No. 83 **Radiochemical Purity Evaluation of Rh-105 Complexes by Magnesium Oxide.** Lo JM, Pillai MRA, John CS, Troutner DE. Chemistry, University of Missouri, Columbia, MO, U.S.A.

No. 84 **Quality Control of Tc-99m-Labeled Dextran for Lymphoscintigraphy.** Yang KT, Wu CC, Chen JY, Chung SB. Dept. of Nuclear Medicine, Changhua Christian Hospital, Changhua, Taiwan, R.O.C.

No. 85 **Preparation of Ethylene Hydroxy Diphosphonate as Bone Imaging Kit.** Lo JM, Chen MS, Lin SH, Yang IC. Institute of Nuclear Science, National Tsing Hua University, Hsinchu, Taiwan, R.O.C.

No. 86 **Characterization of Tc-99m Ethylene Hydroxy Diphosphonate by HPLC.** Lin SH, Lin JF, Yeh SJ, Tzen KY. Institute of Nuclear Science, National Tsing Hua University, Hsinchu, Taiwan, R.O.C.

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- No. 87 **Analysis of Tc-99m Methylene Diphosphonate by HPLC.** Ding HJ, Chang CW, Yeh SJ, Wu CC. Institute of Nuclear Science, National Tsing Hua University, Hsinchu, Taiwan, R.O.C.
- No. 88 **The Behavior of Tc-99m-Hexamethylpropyleneamineoxime (Tc-99m-HM-PAO) in Blood and Brain.** Nakamura K, Tukatani Y, Fujii H, Katayama M, Ko W, Kubo A, Kinoshita F, Hashimoto S. Dept. of Radiology, School of Medicine, Keio University, Tokyo, Japan
- No. 89 **Tc-99m-Sulfur-Colloid Sucralfate: An Improved Ulcer Avid Agent.** Wang YL, Yeh SH, Liu RS, Wang SJ, Chiou PF. Department of Nuclear Medicine, Veterans General Hospital, VGH, Taipei, Taiwan, R.O.C.
- No. 90 **Calculating Body Dosage Through Determining Radiocesium in the Urines.** Mazzuca N, Falciani C, Demi M, Pucini O, Malvaldi F, Mencacci S, Batini V, Del Lucchese A, Del Corona A, Morini V. U.O. Medicina Nucleare, Livorno, Italy
- No. 91 **Comparison of Three Tc-99m Labeled Polymers for Lymphoscintigraphy in Rats.** Sadek S, Owunwanne A, Yacoub T, Abdel-Dayem HM. Dept. of Nuclear Medicine, Faculty of Medicine Kuwait University, Safat, Kuwait



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12/16/88  
09:45

December 16, 1988

Mr. Larry L. Radcliffe, Acting Director  
Research and Waste Management Division  
Department of Energy  
Oak Ridge, Tennessee 37830

Subject: TRANSMITTAL OF FOREIGN TRIP REPORT  
JAMES E. CROOK AND YU-CHEN C. LEE - TAIWAN

Dear Mr. Radcliffe:

Nine copies of the subject report are enclosed. We apologize for any inconveniences caused to your staff as a result of this late submission.

This report has been reviewed and does not contain any proprietary data.

Sincerely,

*for Kenneth E. Platt*  
Jon M. Veigel  
President

BAKER

Enclosures

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# memorandum

DATE

REPLY TO

ATTN OF

ER-622

OCT 11 1988

SUBJECT

Approved 1512.1's

TO

Margie Wallace, ER-122  
Agreement Administrative Specialist  
Oak Ridge Operations Office

Please find attached approved 1512.1's for the foreign travel of the following individuals:

- Barry, Walter - CEBAF
- Crook, James E. - ~~ORAU~~
- Heidt, Albert F. - CEBAF
- Lee, Yu-Chen c. - ORAU

A trip report is required from each traveler upon completion of his/her travel. If the travel was cancelled or revised in any way, please advise us.

Robert L. Main  
Office of Management  
Office of Energy Research

Attachment(s)

- 11-3-88 / Copy of approved 1512.1 Sent to Carol

1120125

Baker / JZ

X-6106  
10/11/88

# REQUEST FOR APPROVAL OFFICIAL FOREIGN TRAVEL

(Previous Editions are Obsolete)

PART B—To be completed by traveler's administrative officer

Budget and Reporting Classification to be charged: HA 02 07 01 6  
(see Chapter II, Accounting Practices and Procedures Handbook)

PART C—To be completed by traveler

1a. NAME OF TRAVELER Dr. James E. Crook	c. DATE AND PLACE OF BIRTH [REDACTED], Maryland
b. CITIZENSHIP U.S.A.	d. PASSPORT NUMBER (if available) [REDACTED]
2a. HOME ADDRESS [REDACTED]	b. BUSINESS ADDRESS P. O. Box 117 Oak Ridge, TN 37831-0117
3a. EMPLOYER Oak Ridge Associated Universities	c. TELEPHONE NUMBER 615/576-3102
b. ORGANIZATIONAL UNIT Medical and Health Sciences	c. CONTRACT NUMBER US DOE DE-AC05-76OR00033
	d. POSITION TITLE (including profession) Director, Preclinical and Clinical Radiopharmaceutical Development

4. PURPOSE OF TRAVEL—Include all pertinent background information leading to travel and attach copies of invitations and correspondence regarding travel to present papers, give speeches, or to attend conference or symposia. Justification for travel must be provided including benefit to be derived by the government if trip is taken. Also identify by name and organization other DOE and contractor personnel who, to the traveler's knowledge, are going to the same destination at the same time as the traveler. In addition, specify nature and classification of information to be disclosed including titles of papers to be presented; nature of information to be obtained at each of the places to be visited and conferences to be attended and its relation to traveler's work. Travelers are responsible for obtaining clearances for papers or speeches when necessary. If more space is required, attach a separate sheet. NOTE: IF THIS INFORMATION IS CLASSIFIED BE SURE TO CLASSIFY THIS FORM APPROPRIATELY.

The purpose of this travel is to attend the Fourth Asia and Oceania Congress of Nuclear Medicine, and pre-congress teaching sessions, and to present a paper entitled, "Imaging & Radiolabeling Studies of Tamarin Anticolon Carcinoma Monoclonal Antibody BR55-2 with Indium-111", by J.E. Crook, L.C. Washburn, Y-C.C. Lee, T.T. Sun, B.L. Byrd, E.C. Holloway, N.K. Clapp and Z. Steplewski.

As Director of the Preclinical and Clinical Radiopharmaceutical Development program, for the Department of Energy at Oak Ridge Associated Universities, I feel the paper and information to be presented at this meeting are central to DOE's programmatic interests. The meeting affords a unique opportunity for exchange of timely scientific information with other investigators and to learn of the most recent progress in nuclear medicine.

Additional personnel attending from Oak Ridge Associated Universities is Dr. Yu-Chen C. Lee, Postdoctoral Research Associate, Medical and Health Sciences Division.

Attached are copies of pertinent correspondence and information regarding the meeting.

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DATES	LOCATION (Installation, City, Country)	INDIVIDUALS TO BE CONTACTED	SUBJECTS OF DISCUSSION	(Check One)	
				Classified	Unclassified
10/28/88	Lv. Oak Ridge, TN		Attend Fourth Asia and Oceania Congress of Nuclear Medicine, and pre-congress teaching sessions.		X
10/29/88	Ar. Taipei, Taiwan				
10-30-11/04	Attend meetings				
11/06/88	Lv. Taipei, Taiwan				
11/06/88	Ar. Oak Ridge, TN				

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YES  NO. Have not held a DOE Access Authorization within last 5 years

7 SIGNATURE OF TRAVELER—By signing, the traveler acknowledges the obligation to file a trip report within 30 days of return to duty station.

James E. Cook  
(Signature)

08/11/88  
(Date)

PART D—To be completed by official responsible for travel funds

8a ESTIMATED COST OF TRAVEL TO DOE

Transportation \$ 1,251.00 RT  
 Per Diem and Miscellaneous \$ 2,697.00 (includes reg. fee)  
 Total \$ 3,948.00

b. IF PART OF COST OF TRAVEL IS TO BE PAID OR HAS BEEN REQUESTED FROM SOURCES OTHER THAN DOE, INDICATE SOURCE AND AMOUNT

N/A

TRAVEL FUNDS ARE NOW AVAILABLE FOR THIS TRIP

William P. Ryan 8/11/88  
 Division Business Officer (Signature and Title) (Date)

William P. Cortiss 8/22/88  
 William P. Cortiss, Manager of Finan. (Date)

PART E—To be completed by Traveler's supervisor

9 REVIEW AND COMMENTS.

William M. Furr 8/15/88  
 Division Chairman (Signature and Title of Supervisor) (Date)

Tom M. Veigel  
 Tom M. Veigel, Executive Director (Date)

PART F—To be completed at DOE Field Organization

10 NON SENSITIVE TRAVEL: Review/approval by Head of DOE Field Organization. (Approval may be given if such authority has been delegated by the Cognizant Secretarial Officer.)

Approval recommended.

M.C. Wallace  
(Signature)

for Larry L. Radcliffe, Acting Director  
Research & Waste Management Division 9/14/88  
(Title) (Date)

11 SENSITIVE TRAVEL: Review by Head of DOE Field Organization. Has Field Security reviewed DOE F 1512.2 and completed DOE F 1512.37

YES  NO

Louis W. Williams 9/9/88  
 Safeguards & Security Division (Signature and Title) (Date)

PART G—To be completed at Headquarters

12 REVIEW/COMMENTS BY DIRECTOR OF DIVISION OR OFFICE

James S. Robertson  
(Signature)

James S. Robertson, M.D., Ph.D.  
Human Health and Assessments Division

10/5/88  
(Date)

13. COGNIZANT SECRETARIAL OFFICER

IF DOE EMPLOYEE TRAVEL  IE Determination Received

IF SENSITIVE TRAVEL  IE Determination Received

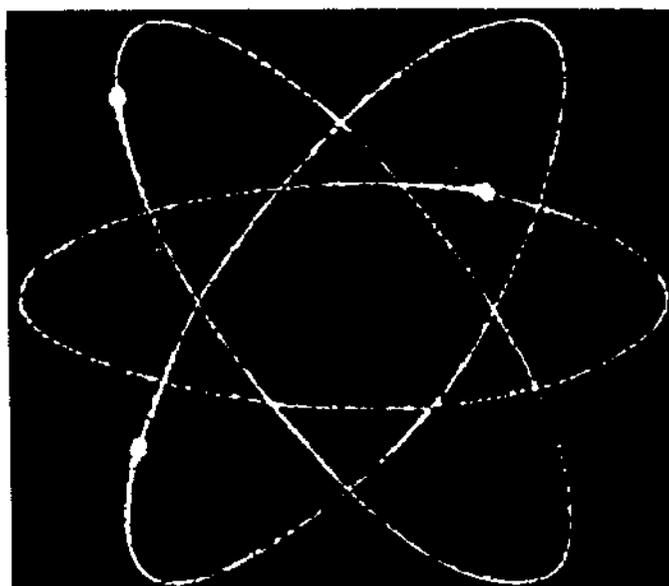
TSA Determination Received

OSS Determination Received

Robert Wood  
(Signature)

10/7/88  
(Date)

# FOURTH ASIA AND OCEANIA CONGRESS OF NUCLEAR MEDICINE



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**NOVEMBER 1-4, 1988**

*Taipei, Taiwan, ROC*



**DEADLINES**  
**PRE-REGISTRATION: AUGUST 1, 1988**  
**ABSTRACT: JUNE 30, 1988**

**FINAL ANNOUNCEMENT**

1128128

# SCIENTIFIC PROGRAM

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## SPECIAL LECTURES

- Prospect of Immunoassay Rosalyn S. Yalow, Ph.D., U.S.A.
- Prospect of Nuclear Medicine in Next 10 Years Henry N. Wagner, Jr., M.D., U.S.A.

## PLENARY SECTIONS

### I. Revival of Brain Functional Studies

- 1. PET in Neuropsychiatry Michael E. Phelps, Ph.D., U.S.A.
- 2. PET in Oncology L. Feinendegen, M.D., F.R.G.
- 3. SPECT Peter J. Ell, M.D., M.Sc., P.D., U.K.

### II. New Cardiovascular Tracers and Techniques on the Horizon

- 1. Global Ventricular Evaluation: Simultaneous Ventricular Performance and Myocardial Perfusion with Single Injection of Tc-99m Isonitrite Ismael G. Mena, M.D., U.S.A.
- 2. Tc-99m Isonitrites in the Assessment of Myocardial Perfusion Daniel S. Berman, M.D., U.S.A.
- 3. PET Evaluation of Myocardial Metabolism Heinrich R. Schelbert, M.D., U.S.A.

### III. Nuclear Medicine Practice

- 1. SPECT vs PET vs MRI Masahiro Iio, M.D., Japan
- 2. Practice of Nuclear Medicine in the Third World To be invited

## SYMPOSIA

### Symposium A: Sciences in Nuclear Medicine — Update

- 1. Instrumentation To be invited
- 2. Radiopharmaceuticals Alfred P. Wolf, Ph.D., U.S.A.
- 3. Nuclear Medicine Computer Sciences Michael L. Goris, M.D., Ph.D., U.S.A.
- 4. Modeling Henry Sung-Cheng Huang, D.Sc., U.S.A.

## SCIENTIFIC PROGRAM

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### Symposium B: Thyroidology

- |   |                                  |
|---|----------------------------------|
| 1. Pathogenesis and Treatment of the Non-Thyroidal Complications of Graves' Disease | Joseph P. Kriss, M.D., U.S.A.    |
| 2. Current Thyroid Controversy  | Shigenobu Nagataki, M.D., Japan  |
| 3. Detection and Clinical Significance of Thyrotropin-Receptor Antibodies           | Junji Konishi, M.D., Japan       |
| 4. Present Status of Treatment of Thyroid Disorders                                 | Peter Pfannenstiel, M.D., F.R.G. |

### Symposium C: Radioimmuno-detection and Radioimmunotherapy of Cancer

- |  |                                 |
|--|---------------------------------|
| 1. Basic Aspect of Radioimmuno-detection of Cancer         | Kinichi Hisada, M.D., Japan     |
| 2. Immunoscintigraphy on the Basis of Immunohistochemistry | Hans J. Biersack, M.D., F.R.G.  |
| 3. Clinical Experience in Immunoscintigraphy — Colon       | Yasuhito Sasaki, M.D., Japan    |
| 4. Radioimmuno-detection of Cancer                         | M. Granowska, M.D., M.Sc., U.K. |
| 5. Radioimmunotherapy — Update                             | Gerald L. DeNardo, M.D., U.S.A. |

### Symposium D: Hepatobiliary and Bone Diseases

- |  |                                    |
|--|------------------------------------|
| 1. Hepatobiliary Radionuclide Studies                                    | Leonard M. Rosenthal, M.D., Canada |
| 2. Clinical Applications of Bone Mineral Estimation by Bone Densitometry | Henry N. Wellman, M.D., U.S.A.     |
| 3. Role of SPECT in Bone Diseases  | I.P.C. Murray, M.D., Australia     |
| 4. Pinhole Scintigraphy as Applied to Bone and Joint Studies             | Yong Whee Bahk, M.D., Ph.D., Korea |

### Symposium E: Renal, Pulmonary, and Peripheral Vascular Diseases and Organ Transplantation

- |  |                                     |
|--|-------------------------------------|
| 1. Radionuclide Studies — New Applications in Uro-nephrology                       | K.E. Britton, M.D., M.Sc., U.K.     |
| 2. Present Status of Pulmonary Nuclear Medicine                                    | Philip O. Alderson, M.D., U.S.A.    |
| 3. Vascular Radionuclide Imaging   | Wilfrido M. Sy, M.D., U.S.A.        |
| 4. Nuclear Medicine in the Evaluation of Patients with Various Transplanted Organs | Merle K. Loken, M.D., Ph.D., U.S.A. |

## SCIENTIFIC PROGRAM

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### Symposium F: In-Vitro Nuclear Medicine and Miscellanies

- |   |  |
|---|--|
| 1. Quality Control, Standardization, and Value of Hormone Radioimmunoassays in Reproductive Endocrinology | Seamus S. Lynch, Ph.D., U.K.           |
| 2. Nuclear Medicine and Endocrine Monitoring of I.V.F. Patients   | Stephen G. Hillier, Ph.D., U.K.        |
| 3. The Clinical Application of Multiharmonic Fourier Analysis of Routine Gated Blood Pool Studies         | Michel H. Bourguignon, M.D., France    |
| 4. Radionuclide Hysterosalpingography   | Mario P. Iturralde, M.D., South Africa |

### PRE-CONGRESS EDUCATIONAL SESSION

#### I. New Areas of Basic Sciences in Nuclear Medicine

- |   |                                   |
|---|-----------------------------------|
| 1. MR Imaging Principles                                    | Max S. Lin, M.D., Ph.D., U.S.A.   |
| 2. Fundamentals of PET                                      | Henry S.C. Huang, D.Sc., U.S.A.   |
| 3. Fundamentals of SPECT                                    | Benjamin M.W. Tsui, Ph.D., U.S.A. |
| 4. Measurement of Bone Mineral Contents                     | Robert Y.L. Chu, Ph.D., U.S.A.    |
| 5. How to Choose Gamma Camera and Other Imaging Instruments | Wei Chang, Ph.D., U.S.A.          |
| 6. How to Choose Computer for Nuclear Medicine Studies      | Kai H. Lee, Ph.D., U.S.A.         |
| 7. Radioassay and Non-Isotopic Immunoassay                  | I. Wen Chen, Ph.D., U.S.A.        |
| 8. Positron Emitting Radiopharmaceuticals                   | Chyng-Yann Shiue, Ph.D., U.S.A.   |
| 9. Tc-99m Radiopharmaceuticals                              | Theodore S.T. Wang, Ph.D., U.S.A. |
| 10. Iodine-123 Radiopharmaceuticals                         | Hank F. Kung, Ph.D., U.S.A.       |
| 11. Antibody Imaging  | Ban-An Khaw, Ph.D., U.S.A.        |

#### II. Clinical Nuclear Medicine — Update

- |   |                               |
|---|-------------------------------|
| 1. Myocardial Perfusion Imaging                     | Raymundo T. Go, M.D., U.S.A.  |
| 2. Ventricular Function Studies                     | Donald E. Tow, M.D., U.S.A.   |
| 3. Abscess Imaging                                  | David C.P. Chen, M.D., U.S.A. |
| 4. Bone Scans in Benign and Malignant Bone Diseases | Wilfrido M. Sy, M.D., U.S.A.  |

## SCIENTIFIC PROGRAM

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5. Thyroid and Parathyroid Imaging
6. Brain Imaging
7. Comparisons of Imaging Modalities
8. Renal Nuclear Medicine
9. Tumor Imaging

David C.S. Yang, M.D., U.S.A.  
Wei-Jen Shih, M.D., U.S.A.  
Eddy C.K. Tong, M.D., U.S.A.  
Eddy K. Dunn, M.D., U.S.A.  
Samuel D.J. Yeh, M.D., D.Sc., U.S.A.

### FREE COMMUNICATION

The Organizing Committee invites all participants to apply for presentation of their Free Papers. Participants who wish to present a Free Paper should submit the Abstract Form not later than June 30, 1988.

The time allotted for the oral presentation (including slide presentation) will be maximum 10 minutes and will be followed by 5 minutes discussion.

Please carefully read the Instruction for Typing Abstract enclosed to complete your Abstract Form.

- \* Only 35mm slides mounted in 5 x 5 cm (2" x 2") frames are acceptable.
- \* Please do NOT send slides with your Abstract Form. Further information concerning Free Communications and slides will be sent to authors whose papers have been accepted for presentation.
- \* The double slide projectors are available.

## **SOCIAL PROGRAM**

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All registered participants and accompanying persons are welcome to take part in the following Social Programs.

### **WELCOME RECEPTION AND COCKTAIL PARTY**

Monday, October 31

A Welcome Reception will be held in honor of the Congress members and accompanying persons at the Grand Hotel in an atmosphere of warm welcome.

### **CONGRESS BANQUET (COST: US \$25.00)**

Wednesday, November 2

All delegates and accompanying persons are cordially invited to enjoy this wonderful banquet. A Chinese cuisine will be served. In addition, a Chinese costume show and children's chorus will be present. In the meantime, the delegates will have an opportunity to mingle with other participants from many countries.

### **CONGRESS TOUR**

Thursday, November 3

The National Palace Museum is one of the most famous tourist attractions in the world, housing more than 300,000 priceless treasures of the Chinese glorious history.

### **FAREWELL PARTY**

Friday, November 4

For all delegates and accompanying persons, there will be a buffet at the Lai-Lai Sheraton Hotel with a sincere Chinese farewell.

# SCHEDULE AT A GLANCE

	OCTOBER 30 Sunday	OCTOBER 31 Monday	NOVEMBER 1 Tuesday
08:30		Registration	Special Lecture I
09:30			Tea Break
10:00			Free Communication A B C D E
12:00			Luncheon
13:30	Registration		Symposium A, B
15:30			Tea Break
16:00			Free Communication A B C D E
17:00	Registration	Open Ceremony	
17:10			
18:00	Registration	Welcome Reception and Cocktail Party	
19:00			
22:00			

NOVEMBER 2 Wednesday	NOVEMBER 3 Thursday	NOVEMBER 4 Friday
Plenary Session I	Plenary Session II	Plenary Session III
Tea Break	Tea Break	Tea Break
Free Communication A B C D E	Free Communication A B C D E	Free Communication A B C D E
Luncheon	Luncheon	Luncheon
Symposium C, D	Congress	Symposium E, F
Tea Break		Tea Break
Free Communication A B C D E		Special Lecture II
		Closing Ceremony
Congress Banquet		Farewell Party

# **GENERAL INFORMATION**

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## **LANGUAGE**

English is the official language of this congress.

## **VENUE**

The Grand Hotel is known as one of the ten great hotels in the world. Sprawling over 20 acres of picturesque land on the slope of Yuan Shan near the northern portal of Taipei, it is a major landmark, commanding a panoramic view of the city below. Designed after the Forbidden City of Peking, the Grand Hotel is symbolic of ancient architectural grandeur. Beautiful Chinese palace splendor is mirrored in every corner of the hotel. The Grand Hotel is honored as a hallmark of Chinese culture and showpiece for Chinese hospitality.

## **REGISTRATION FEE**

Classification	Before Aug. 1, 1988	After Aug. 2, 1988
Physician	US \$250.00	US \$275.00
Scientist / Technologist	US \$170.00	US \$190.00
Accompanying Person	US \$170.00	US \$190.00

The Registration Fee for Participants includes the followings:

- Opening Ceremony.
- Welcome Reception and Cocktail Party.
- Congress Tour: National Palace Museum.
- Farewell Party.

The Registration Fee for Accompanying Persons includes the followings:

- Opening Ceremony.
- Welcome Reception and Cocktail Party.
- Congress Tour: National Palace Museum.
- Ladies' Programs.
- Farewell Party.

## **CANCELLATION AND REFUND**

Cancellation received before July 1, 1988 will be entitled to a 75% refund, before August 1, 1988 will be entitled to a 50% refund. No refund will be made after August 2, 1988.

## **PAYMENT**

The registration fee should be paid in US dollar currency.

1. Through your bank to the credit of "The Fourth Asia and Oceania Congress of Nuclear Medicine"  
International Commercial Bank, Lan Ya Branch, Account No. 010-0400-106-3.

## GENERAL INFORMATION

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2. By a bank draft payable to the Secretariat of the 4th AOCNM. Personal checks will NOT be accepted.

### ACCOMMODATION

Rooms have been reserved at the following hotels at special group rates for our Congress and will be allocated in due order of receiving the application and deposit. Due to limited room quota, the allocation will be made on a first-come, first-served basis. Delegates are required to pay off their own hotel accounts on departure.

Hotel \ Room	Single	Twin	Double
GRAND ★★★★★	New Wing Inner Room Old Wing Outside Room New Wing Outside Room		NT \$1,700 NT \$2,000 NT \$3,600
AMBASSADOR ★★★★★	NT \$3,000	NT \$3,000	N/A
SANTOS ★★★★★	NT \$1,960	NT \$1,960	N/A
MAJESTIC ★★★★★	NT \$1,680	NT \$1,960	N/A

\* From The Ambassador Hotel, Santos Hotel or Majestic Hotel to Venue, Grand Hotel, is within 15 minutes by taxi.

### APPLICATION FOR REGISTRATION

Registration Form is enclosed in this announcement. Please complete the Forms accurately after a careful review of the instructions detailed.

### CONTINUING EDUCATION CREDITS

CME accreditation has been approved.

### DELEGATE ASSEMBLY OF AOFNMB

The Delegates Assembly of AOFNMB (Asia and Oceania Federation of Nuclear Medicine and Biology) will be held with luncheon at 12:00 noon, Thursday, November 3, 1988 at the Congress Venue.

SEP 14 1988

ER-122:Wallace

PROPOSED SENSITIVE COUNTRY TRAVEL BY ORAU REPRESENTATIVES

Robert W. Wood, Director of Physical and Technological Research, ER-74, Headquarters, Germantown, Maryland

Attached for DOE Headquarters approval are three copies each of DOE F 1512.1 covering the proposed travel to Taipei, Taiwan, by ORAU representatives as follows:

<u>Traveler</u>	<u>Period of Travel</u>	<u>Cost to DOE Budget Activity HA 02 07 01</u>
James E. Crook	10/28-11/6/88	\$3,948
Yu-Chen C. Lee	10/28-11/12/88	\$3,632

The travelers will (1) attend and present papers at the Fourth Asia and Oceania Congress of Nuclear Medicine, and (2) participate in pre-congress teaching sessions. As noted in the itinerary, Ms. Lee will have a one-week vacation following the Congress before returning to the U.S. on November 12, 1988.

Please have Margie Wallace (FTS 626-0714) notified as soon as a determination is made regarding the travel and return the signed originals of DOE F 1512.1 to this office.

ORIGINAL SIGNED BY  
M. C. WALLACE

*for* Larry L. Radcliffe, Acting Director  
Research and Waste Management Division

Attachments

- cc w/atchmts:
- D. B. Waller, IE-1, HQ, FORS
- A. B. Siebert Jr., DP-33, HQ, FORS
- R. W. Brown, DP-34, HQ, GTN
- J. A. Lenhard, ER-10, ORO
- M. M. Dare, AD-43, ORO
- D. J. Cook, DP-82, ORO

*10/19/88 Recd. via mail received  
for Mr. Bob Maino,  
ER-HL. Notified Carol  
Baker, ORAU. Y.H.W.*

1128138

I-1910

DOE F 1512.10  
(7-79)

OFFICIAL FILE COPY

ER-122:Wallace:6-0714:AAlexander:6-0733:9/1/88

CONCURRENCES
RTG SYMBOL
INITIALS/SIG. ER-122 WALLACE DATE M.C.W.
RTG SYMBOL 9/1/88
INITIALS/SIG. ER-122 ATCHELEY DATE SA 9/1/88
RTG SYMBOL DP-82 KRAUSE INITIALS/SIG. DATE 9-12-88
RTG SYMBOL AD-40 MARQUESS INITIALS/SIG. DATE 9/14
RTG SYMBOL ER-122 WALLACE INITIALS/SIG. DATE 9/14/88
RTG SYMBOL
INITIALS/SIG.
DATE
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INITIALS/SIG.
DATE
RTG SYMBOL
INITIALS/SIG.
DATE

REQUEST FOR APPROVAL OFFICIAL FOREIGN TRAVEL

All Other Editions Are Obsolete

PART A-SUMMARY TRAVEL INFORMATION

ORGANIZATION: Oak Ridge Associated Universities

COST TO DOE: \$3,948.00

FUND SOURCE: HA 02 07 01 0

NAME OF TRAVELER: Dr. James E. Crook

DOE/CONTRACTOR/UNIVERSITY: C

DESTINATION: Taipei, Taiwan

DATES: 10/30/88 TO 11/04/88

PURPOSE: To attend Fourth Asia and Oceania Congress of Nuclear Medicine, and pregress teaching session, Taipei, Taiwan, 10/30-11/4, and present paper "Imaging & Radiolabeling Studies of Tamarin Anticolon Carcinoma Monoclonal Antibody BR55-2 with Indium-111", J.E. Crook, L.C. Washburn, Y-C.C. Lee, T.T. Sun, B.L. Byrd, E.C. Holloway, N.K. Clapp and Z. Steplewski.

DESTINATION: \_\_\_\_\_

DATES:   /  /   TO   /  /  

PURPOSE: \_\_\_\_\_

AGREEMENT: \_\_\_\_\_

DESTINATION: \_\_\_\_\_

DATES:   /  /   TO   /  /  

PURPOSE: \_\_\_\_\_

AGREEMENT: \_\_\_\_\_

DESTINATION: \_\_\_\_\_

DATES:   /  /   TO   /  /  

PURPOSE: \_\_\_\_\_

AGREEMENT: \_\_\_\_\_

## REQUEST FOR APPROVAL OFFICIAL FOREIGN TRAVEL

(Previous Editions are Obsolete)

PART B—To be completed by traveler's administrative officer

Budget and Reporting Classification to be charged: HA 02 07 01 0  
(see Chapter II, Accounting Practices and Procedures Handbook)

PART C—To be completed by traveler

1a. NAME OF TRAVELER Dr. James E. Crook	c. DATE AND PLACE OF BIRTH [REDACTED], Maryland
b. CITIZENSHIP U.S.A.	d. PASSPORT NUMBER (if available) [REDACTED]
2a. HOME ADDRESS [REDACTED]	b. BUSINESS ADDRESS P. O. Box 117 Oak Ridge, TN 37831-0117 c. TELEPHONE NUMBER 615/576-3102
3a. EMPLOYER Oak Ridge Associated Universities	e. CONTRACT NUMBER US DOE DE-AC05-76OR00033
b. ORGANIZATIONAL UNIT Medical and Health Sciences	d. POSITION TITLE (including profession) Director, Preclinical and Clinical Radiopharmaceutical Development

4. PURPOSE OF TRAVEL—Include all pertinent background information leading to travel and attach copies of invitations and correspondence regarding travel to present papers, give speeches, or to attend conference or symposia. Justification for travel must be provided including benefit to be derived by the government if trip is taken. Also identify by name and organization other DOE and contractor personnel who, to the traveler's knowledge, are going to the same destination at the same time as the traveler. In addition, specify nature and classification of information to be disclosed including titles of papers to be presented; nature of information to be obtained at each of the places to be visited and conferences to be attended and its relation to traveler's work. Travelers are responsible for obtaining clearances for papers or speeches when necessary. If more space is required, attach a separate sheet. NOTE: IF THIS INFORMATION IS CLASSIFIED BE SURE TO CLASSIFY THIS FORM APPROPRIATELY.

The purpose of this travel is to attend the Fourth Asia and Oceania Congress of Nuclear Medicine, and pregress teaching sessions, and to present a paper entitled, "Imaging & Radiolabeling Studies of Tamarin Anticolon Carcinoma Monoclonal Antibody BR55-2 with Indium-111", by J.E. Crook, L.C. Washburn, Y-C.C. Lee, T.T. Sun, B.L. Byrd, E.C. Holloway, N.K. Clapp and Z. Steplewski.

As Director of the Preclinical and Clinical Radiopharmaceutical Development program, for the Department of Energy at Oak Ridge Associated Universities, I feel the paper and information to be presented at this meeting are central to DOE's programmatic interests. The meeting affords a unique opportunity for exchange of timely scientific information with other investigators and to learn of the most recent progress in nuclear medicine.

Additional personnel attending from Oak Ridge Associated Universities is Dr. Yu-Chen C. Lee, Postdoctoral Research Associate, Medical and Health Sciences Division.

Attached are copies of pertinent correspondence and information regarding the meeting.

1128140

X-4832

5. PROPOSED ITINERARY (Account for all time from beginning and ending dates of travel. Vacation dates taken in conjunction with this travel shall be indicated. NOTE: IF INFORMATION IS CLASSIFIED, CLASSIFY THIS FORM APPROPRIATELY.)

DATES	LOCATION (Installation, City, Country)	INDIVIDUALS TO BE CONTACTED	SUBJECTS OF DISCUSSION	(Check One)	
				Classified	Unclassified
10/28/88	Lv. Oak Ridge, TN		Attend Fourth Asia and Oceania Congress of Nuclear Medicine, and pre-congress teaching sessions.		X
10/29/88	Ar. Taipei, Taiwan				
10-30-11/04	Attend meetings				
11/06/88	Lv. Taipei, Taiwan				
11/06/88	Ar. Oak Ridge, TN				

6. HAS TRAVELER SUBMITTED DOE FORM 1812.2 TO COGNIZANT DOE SECURITY OFFICE? (Required for travel to a sensitive country by an individual who currently holds or has ever held, within the last 5 years, a DOE Access Authorization.)

YES  NO: Have not held a DOE Access Authorization within last 5 years

7. SIGNATURE OF TRAVELER—By signing, the traveler acknowledges the obligation to file a trip report within 30 days of return to duty station.

James E. Cook  
(Signature)

08/11/88

(Date)

PART D—To be completed by official responsible for travel funds

8a. ESTIMATED COST OF TRAVEL TO DOE

Transportation \$ 1,251.00 RT  
Per Diem and Miscellaneous \$ 2,697.00 (includes reg. fee)  
Total \$ 3,948.00

8b. IF PART OF COST OF TRAVEL IS TO BE PAID OR HAS BEEN REQUESTED FROM SOURCES OTHER THAN DOE, INDICATE SOURCE AND AMOUNT.

N/A

TRAVEL FUNDS ARE NOW AVAILABLE FOR THIS TRIP

Billie P. Ryan

8/11/88

(Signature and Title) (Date)

William F. Countiss

8/22/88

William F. Countiss, Manager of Finance (Date)

PART E—To be completed by Traveler's supervisor

9. REVIEW AND COMMENTS.

William W. Ryan

8/15/88

(Signature and Title of Supervisor) (Date)

Jon M. Veigel

Jon M. Veigel, Executive Director (Date)

PART F—To be completed at DOE Field Organization

10. NON SENSITIVE TRAVEL: Review/approval by Head of DOE Field Organization. (Approval may be given if such authority has been delegated by the Cognizant Secretarial Officer.)

Approval recommended.

M.C. Wallace

(Signature)

for

Larry L. Radcliffe, Acting Director  
Research & Waste Management Division

(Title)

9/14/88

(Date)

11. SENSITIVE TRAVEL: Review by Head of DOE Field Organization. Has Field Security reviewed DOE F 1812.2 and completed DOE F 1812.3?

YES

NO

Kris V. Gillespie Safeguards & Security Division 9/9/88

PART G—To be completed at Headquarters

12. REVIEW/COMMENTS BY DIRECTOR OF DIVISION OR OFFICE

(Signature)

(Title)

(Date)

13. COGNIZANT SECRETARIAL OFFICER

IF DOE EMPLOYEE TRAVEL  IE Determination Received

IF SENSITIVE TRAVEL  IE Determination Received  ISA Determination Received  OSS Determination Received

1120141

(Signature)

(Date)

U.S. DEPARTMENT OF ENERGY

NOTIFICATION OF PROPOSED TRAVEL TO SENSITIVE COUNTRIES

1. NAME (last, first, middle) (include maiden name if married woman):  
Crook, James Edward

2. BIRTH:  
a. Date: [REDACTED]  
b. Place: [REDACTED], Maryland

3. HOME ADDRESS:  
[REDACTED]  
Oak Ridge, Tennessee 37830

4. HOME TELEPHONE:  
[REDACTED]

5a. PURPOSE OF TRIP (Include details concerning any papers, lectures, etc., if the information pertains to the U.S. Department of Energy program.) Attend Fourth Asia and Oceania Congress of Nuclear Medicine and present paper "Imaging & Radiolabeling Studies of Tamarin Anticolon Carcinoma Monoclonal Antibody BR55-2 with Indium-111", J.E. Crook, L.C. Washburn, Y-C.C. Lee, T.T. Sun, B.L. Byrd, E.C. Holloway, N.K. Clapp and Z. Steplewski.  
5b.  Official Travel  Unofficial Travel

6. To Be Visited: (Also include information on any leave to be taken in conjunction with official travel.)

	Country	City	Person or Installation/Leave	Date(s)
a.	Taiwan	Taipei	N/A	10/28-11/06/88
b.				
c.				
d.				
e.				

7. Names, addresses, and citizenship of relatives, including in-laws, residing in sensitive countries: (Define relationship and include relatives within 3 generations.)  
N/A

8. Present Employment:  
a. Name of employer: Oak Ridge Associated Universities  
b. Present capacity: Director, Preclinical & Clinical Radiopharmaceutical Development  
c. Business address: Post Office Box 117 Oak Ridge, Tennessee 37831-0117  
d. Business telephone: 615/576-3102  
e. Highest classification of information received: Unclassified

9a. Date and place of departure of travel:  
October 28, 1988, departing from Oak Ridge, Tennessee

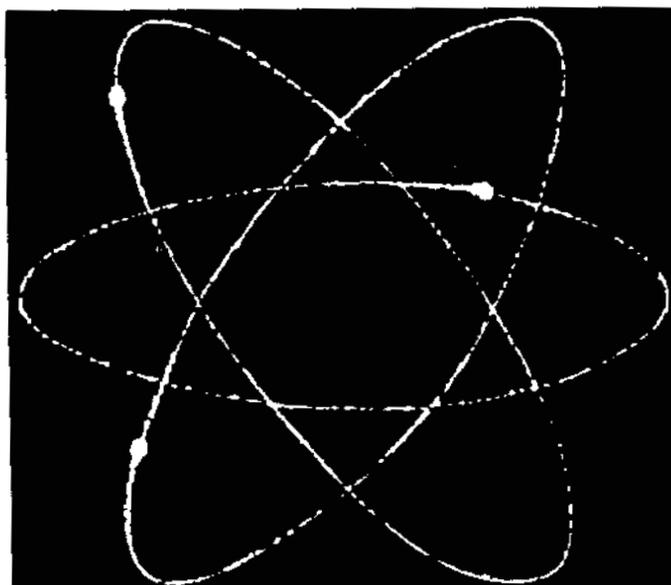
9b. Date of return:  
November 6, 1988, returning to Oak Ridge, Tennessee.

08/11/88  
(Date)

  
(Signature of Traveler)

NOTE: It is the responsibility of the traveler to inform the head of his or her division or office in writing of any change in the itinerary or purpose of the trip as set forth in this document.

# FOURTH ASIA AND OCEANIA CONGRESS OF NUCLEAR MEDICINE



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**NOVEMBER 1-4, 1988**

*Taipei, Taiwan, ROC*



**DEADLINES**  
**PRE-REGISTRATION: AUGUST 1, 1988**  
**ABSTRACT: JUNE 30, 1988**

**FINAL ANNOUNCEMENT**

1128143

# SCIENTIFIC PROGRAM

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## SPECIAL LECTURES

- Prospect of Immunoassay Rosalyn S. Yalow, Ph.D., U.S.A.
- Prospect of Nuclear Medicine in Next 10 Years Henry N. Wagner, Jr., M.D., U.S.A.

## PLENARY SECTIONS

### I. Revival of Brain Functional Studies

- 1. PET in Neuropsychiatry Michael E. Phelps, Ph.D., U.S.A.
- 2. PET in Oncology L. Feinendegen, M.D., F.R.G.
- 3. SPECT Peter J. Ell, M.D., M.Sc., P.D., U.K.

### II. New Cardiovascular Tracers and Techniques on the Horizon

- 1. Global Ventricular Evaluation: Simultaneous Ventricular Performance and Myocardial Perfusion with Single Injection of Tc-99m Isonitrite Ismael G. Mena, M.D., U.S.A.
- 2. Tc-99m Isonitrites in the Assessment of Myocardial Perfusion Daniel S. Berman, M.D., U.S.A.
- 3. PET Evaluation of Myocardial Metabolism Heinrich R. Schelbert, M.D., U.S.A.

### III. Nuclear Medicine Practice

- 1. SPECT vs PET vs MRI Masahiro Iio, M.D., Japan
- 2. Practice of Nuclear Medicine in the Third World To be invited

## SYMPOSIA

### Symposium A: Sciences in Nuclear Medicine — Update

- 1. Instrumentation To be invited
- 2. Radiopharmaceuticals Alfred P. Wolf, Ph.D., U.S.A.
- 3. Nuclear Medicine Computer Sciences Michael L. Goris, M.D., Ph.D., U.S.A.
- 4. Modeling Henry Sung-Cheng Huang, D.Sc., U.S.A.

## SCIENTIFIC PROGRAM

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### Symposium B: Thyroidology

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|---|----------------------------------|
| 1. Pathogenesis and Treatment of the Non-Thyroidal Complications of Graves' Disease | Joseph P. Kriss, M.D., U.S.A.    |
| 2. Current Thyroid Controversy  | Shigenobu Nagataki, M.D., Japan  |
| 3. Detection and Clinical Significance of Thyrotropin-Receptor Antibodies           | Junji Konishi, M.D., Japan       |
| 4. Present Status of Treatment of Thyroid Disorders                                 | Peter Pfannenstiel, M.D., F.R.G. |

### Symposium C: Radioimmunodetection and Radioimmunotherapy of Cancer

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|--|---------------------------------|
| 1. Basic Aspect of Radioimmunodetection of Cancer          | Kinichi Hisada, M.D., Japan     |
| 2. Immunoscintigraphy on the Basis of Immunohistochemistry | Hans J. Biersack, M.D., F.R.G.  |
| 3. Clinical Experience in Immunoscintigraphy — Colon       | Yasuhito Sasaki, M.D., Japan    |
| 4. Radioimmunodetection of Cancer                          | M. Granowska, M.D., M.Sc., U.K. |
| 5. Radioimmunotherapy — Update                             | Gerald L. DeNardo, M.D., U.S.A. |

### Symposium D: Hepatobiliary and Bone Diseases

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|--|------------------------------------|
| 1. Hepatobiliary Radionuclide Studies                                    | Leonard M. Rosenthal, M.D., Canada |
| 2. Clinical Applications of Bone Mineral Estimation by Bone Densitometry | Henry N. Wellman, M.D., U.S.A.     |
| 3. Role of SPECT in Bone Diseases  | I.P.C. Murray, M.D., Australia     |
| 4. Pinhole Scintigraphy as Applied to Bone and Joint Studies             | Yong Whee Bahk, M.D., Ph.D., Korea |

### Symposium E: Renal, Pulmonary, and Peripheral Vascular Diseases and Organ Transplantation

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|--|-------------------------------------|
| 1. Radionuclide Studies — New Applications in Urology                              | K.E. Britton, M.D., M.Sc., U.K.     |
| 2. Present Status of Pulmonary Nuclear Medicine                                    | Philip O. Alderson, M.D., U.S.A.    |
| 3. Vascular Radionuclide Imaging   | Wilfrido M. Sy, M.D., U.S.A.        |
| 4. Nuclear Medicine in the Evaluation of Patients with Various Transplanted Organs | Merle K. Loken, M.D., Ph.D., U.S.A. |

## **SCIENTIFIC PROGRAM**

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### **Symposium F: In-Vitro Nuclear Medicine and Miscellanies**

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|---|--|
| 1. Quality Control, Standardization, and Value of Hormone Radioimmunoassays in Reproductive Endocrinology | Seamus S. Lynch, Ph.D., U.K.           |
| 2. Nuclear Medicine and Endocrine Monitoring of I.V.F. Patients   | Stephen G. Hillier, Ph.D., U.K.        |
| 3. The Clinical Application of Multiharmonic Fourier Analysis of Routine Gated Blood Pool Studies         | Michel H. Bourguignon, M.D., France    |
| 4. Radionuclide Hysterosalpingography   | Mario P. Iturralde, M.D., South Africa |

### **PRE-CONGRESS EDUCATIONAL SESSION**

#### **I. New Areas of Basic Sciences in Nuclear Medicine**

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|---|-----------------------------------|
| 1. MR Imaging Principles                                    | Max S. Lin, M.D., Ph.D., U.S.A.   |
| 2. Fundamentals of PET                                      | Henry S.C. Huang, D.Sc., U.S.A.   |
| 3. Fundamentals of SPECT                                    | Benjamin M.W. Tsui, Ph.D., U.S.A. |
| 4. Measurement of Bone Mineral Contents                     | Robert Y.L. Chu, Ph.D., U.S.A.    |
| 5. How to Choose Gamma Camera and Other Imaging Instruments | Wei Chang, Ph.D., U.S.A.          |
| 6. How to Choose Computer for Nuclear Medicine Studies      | Kai H. Lee, Ph.D., U.S.A.         |
| 7. Radioassay and Non-Isotopic Immunoassay                  | I. Wen Chen, Ph.D., U.S.A.        |
| 8. Positron Emitting Radiopharmaceuticals                   | Chyng-Yann Shiue, Ph.D., U.S.A.   |
| 9. Tc-99m Radiopharmaceuticals                              | Theodore S.T. Wang, Ph.D., U.S.A. |
| 10. Iodine-123 Radiopharmaceuticals                         | Hank F. Kung, Ph.D., U.S.A.       |
| 11. Antibody Imaging  | Ban-An Khaw, Ph.D., U.S.A.        |

#### **II. Clinical Nuclear Medicine — Update**

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|---|-------------------------------|
| 1. Myocardial Perfusion Imaging                     | Raymundo T. Go, M.D., U.S.A.  |
| 2. Ventricular Function Studies                     | Donald E. Tow, M.D., U.S.A.   |
| 3. Abscess Imaging                                  | David C.P. Chen, M.D., U.S.A. |
| 4. Bone Scans in Benign and Malignant Bone Diseases | Wilfrido M. Sy, M.D., U.S.A.  |

## SCIENTIFIC PROGRAM

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- 5. Thyroid and Parathyroid Imaging
- 6. Brain Imaging
- 7. Comparisons of Imaging Modalities
- 8. Renal Nuclear Medicine
- 9. Tumor Imaging

David C.S. Yang, M.D., U.S.A.  
Wei-Jen Shih, M.D., U.S.A.  
Eddy C.K. Tong, M.D., U.S.A.  
Eddy K. Dunn, M.D., U.S.A.  
Samuel D.J. Yeh, M.D., D.Sc., U.S.A.

### FREE COMMUNICATION

The Organizing Committee invites all participants to apply for presentation of their Free Papers. Participants who wish to present a Free Paper should submit the Abstract Form not later than June 30, 1988.

The time allotted for the oral presentation (including slide presentation) will be maximum 10 minutes and will be followed by 5 minutes discussion.

Please carefully read the Instruction for Typing Abstract enclosed to complete your Abstract Form.

- \* Only 35mm slides mounted in 5 x 5 cm (2" x 2") frames are acceptable.
- \* Please do NOT send slides with your Abstract Form. Further information concerning Free Communications and slides will be sent to authors whose papers have been accepted for presentation.
- \* The double slide projectors are available.

## **SOCIAL PROGRAM**

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All registered participants and accompanying persons are welcome to take part in the following Social Programs.

### **WELCOME RECEPTION AND COCKTAIL PARTY**

Monday, October 31

A Welcome Reception will be held in honor of the Congress members and accompanying persons at the Grand Hotel in an atmosphere of warm welcome.

### **CONGRESS BANQUET (COST: US \$25.00)**

Wednesday, November 2

All delegates and accompanying persons are cordially invited to enjoy this wonderful banquet. A Chinese cuisine will be served. In addition, a Chinese costume show and children's chorus will be present. In the meantime, the delegates will have an opportunity to mingle with other participants from many countries.

### **CONGRESS TOUR**

Thursday, November 3

The National Palace Museum is one of the most famous tourist attractions in the world, housing more than 300,000 priceless treasures of the Chinese glorious history.

### **FAREWELL PARTY**

Friday, November 4

For all delegates and accompanying persons, there will be a buffet at the Lai-Lai Sheraton Hotel with a sincere Chinese farewell.

# SCHEDULE AT A GLANCE

	OCTOBER 30 Sunday	OCTOBER 31 Monday	NOVEMBER 1 Tuesday
08:30			Special Lecture I
09:30			Tea Break
10:00			Free Communication A B C D E
12:00		Registration	Luncheon
13:30			Symposium A, B
15:30	Registration		Tea Break
16:00			Free Communication A B C D E
17:00		Open Ceremony	
17:10			
18:00			
19:00		Welcome Reception and Cocktail Party	
22:00			

NOVEMBER 2 Wednesday	NOVEMBER 3 Thursday	NOVEMBER 4 Friday
Plenary Session I	Plenary Session II	Plenary Session III
Tea Break	Tea Break	Tea Break
Free Communication A B C D E	Free Communication A B C D E	Free Communication A B C D E
Luncheon	Luncheon	Luncheon
Symposium C, D	Congress	Symposium E, F
Tea Break		Tea Break
Free Communication A B C D E	Tour	Special Lecture II
		Closing Ceremony
Congress Banquet		Farewell Party

# **GENERAL INFORMATION**

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## **LANGUAGE**

English is the official language of this congress.

## **VENUE**

The Grand Hotel is known as one of the ten great hotels in the world. Sprawling over 20 acres of picturesque land on the slope of Yuan Shan near the northern portal of Taipei, it is a major landmark, commanding a panoramic view of the city below. Designed after the Forbidden City of Peking, the Grand Hotel is symbolic of ancient architectural grandeur. Beautiful Chinese palace splendor is mirrored in every corner of the hotel. The Grand Hotel is honored as a hallmark of Chinese culture and showpiece for Chinese hospitality.

## **REGISTRATION FEE**

Classification	Before Aug. 1, 1988	After Aug. 2, 1988
Physician	US \$250.00	US \$275.00
Scientist / Technologist	US \$170.00	US \$190.00
Accompanying Person	US \$170.00	US \$190.00

The Registration Fee for Participants includes the followings:

- Opening Ceremony.
- Welcome Reception and Cocktail Party.
- Congress Tour: National Palace Museum.
- Farewell Party.

The Registration Fee for Accompanying Persons includes the followings:

- Opening Ceremony.
- Welcome Reception and Cocktail Party.
- Congress Tour: National Palace Museum.
- Ladies' Programs.
- Farewell Party.

## **CANCELLATION AND REFUND**

Cancellation received before July 1, 1988 will be entitled to a 75% refund, before August 1, 1988 will be entitled to a 50% refund. No refund will be made after August 2, 1988.

## **PAYMENT**

The registration fee should be paid in US dollar currency,

1. Through your bank to the credit of "The Fourth Asia and Oceania Congress of Nuclear Medicine"  
International Commercial Bank, Lan Ya Branch, Account No. 010-0400-106-3.

## **GENERAL INFORMATION**

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2. By a bank draft payable to the Secretariat of the 4th AOCNM. Personal checks will NOT be accepted.

### **ACCOMMODATION**

Rooms have been reserved at the following hotels at special group rates for our Congress and will be allocated in due order of receiving the application and deposit. Due to limited room quota, the allocation will be made on a first-come, first-served basis. Delegates are required to pay off their own hotel accounts on departure.

Hotel	Room	Single	Twin	Double
GRAND *****	New Wing Inner Room			NT \$1,700
	Old Wing Outside Room			NT \$2,000
	New Wing Outside Room			NT \$3,600
AMBASSADOR *****		NT \$3,000	NT \$3,000	N/A
SANTOS *****		NT \$1,960	NT \$1,960	N/A
MAJESTIC *****		NT \$1,680	NT \$1,960	N/A

\* From The Ambassador Hotel, Santos Hotel or Majestic Hotel to Venue, Grand Hotel, is within 15 minutes by taxi.

### **APPLICATION FOR REGISTRATION**

Registration Form is enclosed in this announcement. Please complete the Forms accurately after a careful review of the instructions detailed.

### **CONTINUING EDUCATION CREDITS**

CME accreditation has been approved.

### **DELEGATE ASSEMBLY OF AOFNMB**

The Delegates Assembly of AOFNMB (Asia and Oceania Federation of Nuclear Medicine and Biology) will be held with luncheon at 12:00 noon, Thursday, November 3, 1988 at the Congress Venue.