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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 Taipai, 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

Attachment

cc w/atchmt:
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A. B. Siebert, DP-32, HQ, GTN
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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 /XX/ 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 trytophan 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_3. 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 profusion 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 Taipai. 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 estrodiol 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 radioimmunodetection of cancer. This particular symposium had four sections, the first of which dealt with the basic aspect of radioimmunodetection 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 radioimmunoscintigraphy. 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 radioimmunodetection of cancer. This particular paper reviewed some clinical problems in oncology for which radioimmunoscintigraphy 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^{m} isonitrile. Tc-99^{m} 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 Socialists 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-pentaacetic 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 05 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 DE-AC05-760R00033 between the U.S. DOE and ORAU.

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Abstract must be postmarked by June 30, 1988.

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James	Crook	MD, PhD
First	Last	Degree

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

ABSTRACT FORM

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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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TYPE FULL NAME OF AUTHOR PRESENTING PAPER

Yu-Chen	Lee	Ph.D.
First	Last	Degree

APPENDIX B

Friday, November 4					
8:30-10:00	PLENARY SESSION III Nuclear Medicine Practice *Room A*				
10:00-10:30	Tea Break				
10:30-12:30 Scientific Papers	Cardiovascular VI *Room A*	Radioassay *Room B*	Pulmonary II *Room C*	Genitourinary II *Room D*	Nuclear Magnetic Resonance *Room E*
12:30-13:50	Luncheon				
13:50-15:30	SYMPOSIUM E Renal, Pulmonary, and Peripheral Vascular Diseases and Organ Transplantation *Room A*			SYMPOSIUM F In-Vitro Nuclear Medicine and Miscellanies *Room B*	
15:30-16:00	Tea Break				
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

MEMO

PRECONGRESS TEACHING SESSION I

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.

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 Univerity, 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 Shiue. 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.

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.

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-Lipiodal 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

SCIENTIFIC PAPERS

MEMO

SPECIAL LECTURE I

8:30-9:30 Room A

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

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

OFFICIAL OPENING OF THE COMMERCIAL EXIHIBIT

9:30-10:30 International Reception Hall, 1st FL

CARDIOVASCULAR I

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, Moriyama 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, Guilaume 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 **Radiolodinated 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

11:00 **Tc-99m Complexes of Aminobenzyliminodiacetic 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, Vallgren S, Sadek S, Abdel-Dayem HM, Yacoub T, Awdeh 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, Staszelis J, and Zajdel W. Medical Systems, CompArt Ltd., Warsaw, Poland

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 IJ, 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

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, Chaudakashetnn 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, Morita R. Dept. of Endocnne Surgery Kawasaki Medical School, Kurashiki, Japan

11:30 **Preoperative Localization of Pheochromocytoma: A Prospective Comparison of I-131-Metaiodobenzylguanidine (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-Metaiodobenzylguanidine (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 Scientigraphy 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 Iliac 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.

Tuesday, November 1

11:45 **Stress Fracture in Military Recruits.** Yao W.I. Hsial H.C. Wu C.S. Liao S.Q. Hsiao C.H. Yan

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 Ishi-i, 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 Folowing First Transmural Myocardial Infarction —A Prospective Study.** Chern 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 Yttriun-90 from Stroniun-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)-Dimercaptosuccinate 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.

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

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

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 Imagine 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

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

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

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 α-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

17:00 **Sensitive TSH Assay in the Assessment of Thytroid 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 Radioiodine 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, Nagataki 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 of Differentiated Thyroid Cancer.** Iervasi G, Ferdeghini M, Calvo S, Bor[illegible] G, Cazzuola F, Carmassi F, Bianchi R C.N.R. Institute of Clinical Physiology, University of Pisa, Pisa, Italy

18:15 **The Experiences in the Treatment of Well Differentiated Thyroid Carinoma with Radioative Iodine.** Tanumihardjo M, Masjhur. 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, Tominage 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 Compute Tomography (SPECT) Using N-isopropl p[I-123]-Iodoamphetamine (I-123IMP) in D mentia.** Oshibuchi M, Sato M, Kanda Edamitsu O, Nishi F, Anno Y, Ohtake H. Dep of Radiology, Hakujikai Memorial Hospit Tokyo, Japan

17:15 **Single Photon Emission Tomography wit N-Isopropyry-(I-123) P-Iodoampphetamin in Dementia.** Shin A, Aaika Y, Nishigaki Utsunomiya K, Ishimaru T, Kawai T, Akagi Dept. of Radiology, Osaka Medical Colleg Osaka, Japan

17:30 **SPECT Contribution in Parkinson's Di ease Evaluation.** Askienazy S, Rondot Habert MO, de Recondo J, Mas JL, Spamp nato U. Medecine Nucleaire, C.H. Satnt Anne, Paris, France

17:45 **Quantitative Analysis of Regional Cerebr Blood Flow Using Tc-99m-HMPAO SPEC in Parkinson's Disease.** Lee MC, Lee M Chung JK, Koh CS. Dept. of Nuclear Medicin Seoul National University Hospital, Seou Korea

18:00 **SPECT Brain Imagine Using N-Ispropyl-(123)p-Iodoamhetamine (IMP) in Patient with Psychosis.** Ishii K, Nakazawa K, Mura K, Yoda K, Matsubayashi T, Takamidou M Oguchi T, Sakai F, Uchida T. Radiolog Kitasato University School of Medicin Kanagawa, Japan

18:15 **Regional Blood Flow Determination in Schizophrenia Using Tc-99m HMPAO with SPECT.** Erbas B, Kumbasar H, Aysev A, Unluoglu G, Erbengi 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 Oncoloty.** 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

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, Belani N, Abdel-Dayem HM. Dept. of Nuclear Medicine, Faculty of Medicine, Kuwait University, Safat, Kuwait

10:45 **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 Nuclear Medicine, Faculty of Medicine, Kuwait University, Safat, Kuwait

11:00 **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

11:15 **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, Horii 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 Isobutyl 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

11:45 **Segmental Analysis of SPECT Tc-99 Methoxy Isobutyl Isonitrile (RP-30) an Thallium-201 (Tl-201) Myocardial Imaging Ischemic Heart Disease (IHD).** Hassan I Mohammed MMJ, Constantinides C, Sadek Nair M, Belani N, Yousef AM, Abdel-Daye HM. Dept. of Nuclear Medicine, Faculty Medicine, Kuwait University, Safat, Kuwait

12:00 **Left Ventricle (LV) Segmental Wall Moti Abnormalities (SWMA): Comparison b tween Multigated Tc-99m MIBI, Contra Ventriculography (CV) and Coronary An ography (CA).** Hassan IM, Kewan Y, Moha med MMJ, Constantinides C, Nair M, Belani Abdel-Dayem HM. Dept. of Nuclear Medicin Faculty of Medicine, Kuwait University, Saf Kuwait

12:15 **The Evaluation of the Protective Effect Calcium Antagonist on Myocardium Usi In-111-Anticardiac Myosin Antibody.** L MC, Chung JK, Koh CS, LaFrance ND. Dept Nuclear Medicine, Seoul National Univers Hospital, Seoul, Korea

ONCOLOGY I

0:30-12:30 Room B

Chairmen: Felix Sundram, Singapore
Ming-Yang Yeh, R.O.C.

0:30 **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.

0:45 **In Vivo Use of New Murine Monoclonal Antibodies Recognizing Human Ovarian Cancer Associateed 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

1:00 **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 Tl-201 Uptake in Tumours.** Sahweil AM, McKillop JH, Milroy R, Abdel-Dayem HM. Dept. of Nuclear Medicine, Faculty of Medicine, Kuwait University, Safat, Kuwait

11:45 **Abdominal Lymphoscintigraphy by S.C. Injection of Tc-99m-Microcolloides and/or Tl-201-Cloride.** 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. Rosenthall, Canada
N. Lakshmipathi, India

10:30 **Usefullness 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

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, Niio 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

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, Ishiiy 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.** Smad R, McLean R, Lau A, Larcos G, de Carle 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

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 Parfial Epilepsy.** Erbas B, Saygi S, Zileli T, Bekdik C. Nuclear Medicine Dept., Hacettepe University Medical School, Ankara, Turkey

12:15 **Tc-99m-HMPAO Brain SPECT abd EEG Mapping in Epileptic Patitents with Negative CT Scan.** Bertelli P, Toni MG, Solimero C, Nuti A, Murri 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 Scintiliation Camera.** Vandevivere J, Dobbeleir A, Ham HR, Williame 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

SYMPOSIUM C
RADIOIMMUNODETECTON 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 Radioimmunodetection of Cancer.** Kinichi Hisada. Kanazawa University School of Medicine, Kanazawa, Japan.

14:15 **Immunoscintigraphy on the Basis of Immunohistochemistry.** Hans J. Biersack. Institut fur Klinische und experimentelle Nuklearmedizin der Universitat Bonn, Bonn, F.R.G.

14:40 **Clinical Experience in Immunoscintigraphy — Colon.** Yasuhito Sasaki. Gunma University School of Medicine, Gunma, Japan.

15:05 **Radioimmunodetection 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. Klapdor. Department of Medicine, University of Hamburg, F.R.G.

SYMPOSIUM D
HEPATOBILIARY AND BONE DISEASES

13:50-15:30 **Room D**

Chairmen: Leonard M. Rosenthall, Canada
Hironobu Ochi, Japan
Coordinator: Cheng-Tau Su, R.O.C.

13:50 **Hepatobiliary Radionuclide Studies.** Leonard M. Rosenthall. 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 Walles 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.

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.

ONCOLOGY II

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

Chairmen: Hans J. Biersack, F.R.G.
Katsumi Ishi-i, Japan

16:00 **Radioimmunodetection 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 Cervial 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 **Immunoscintigrphy 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.

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 **Radioimmunodetection 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 **Radioimmunoscintigraphy 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.

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 Conter, 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 **Evaluatin 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. 1 st 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-

bayashi T. Radiology, School of Medicine Kitasato Univ., Sagamihara, Japan

17:00 **Thallium-201 Scintigraphy in Space Occupying 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 Treatment 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, Shibata 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

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

CARDIOVASCULAR IV

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

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

16:00 **Detection of Thrombus Using In-111 Platelet and Ga-67 Fibrinogen.** Kariyone S, Yui T, Katsuura Y, Uchida T. Dept. of Internal Medicine, 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 Experimental Arterial Thrombus in the Rabbits: Using Monoclonal Antibody Against Platelets.** 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

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 **Quantitiative 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 Medecine, 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, Giovanniello 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.

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.

INFECTION 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

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 Netrophils 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, Stazsewski 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.

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

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. Harber-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.

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 Tomogrphy.** 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

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, Kusukawa 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

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

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

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.

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 Evaluatin 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 Renoscintiphotography.** 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 Malignat 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 **Evaluatin 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.

DELEGATE ASSEMBLY OF AOFNMB

12:00-13:30 Golden Dragon Hall

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. Kindom 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

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 Vnetricular 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

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 Monoclonaol 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.

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, Falciani 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.

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

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 Memonal 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

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 Anatrophic 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

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, Lio M. Dept. of Radiology, Faculity 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 Imging: 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.

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, Hakujikai 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 Uronephrology.** Keith E. Britton. St. Bartholomew's Hospital, London, U.K.

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. Birmimgham & Midland Hospital for Women, Birmimgham, 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

15:05 **The Clinical Application of Multiharmonic Fourier Analysis of Routine Gated Blood Pool Studies.** Michel H. Bourguignon. Hospitalier 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 President of the AOFNMB.

POSTER SESSIONS

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 Memonal Hospital, Taipei, Taiwan, R.O.C.

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

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 *a*-Methyl Paraiodophenyl 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-

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

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, Kalliontzi CH, Gerali S, Tsinikas D, Sifakis N, Athanasoulis TH, Kokolakis N, Moulopoulos 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.

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 Hospita, Taichung, Taiwan, R.O.C.

ENDOCRINE

No. 28 **Further Studies on the Use of Sodium Ipodate 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.

No. 32 **Salivary Function after Large Doses of Radioiodine 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 Parenchymodous 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, Gasiorowski 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 **Tl-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 Çenter 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 Perrfusion 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 **Evaluatin 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 Uiology, 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

INFECTION DISEASE

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.

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 Emissin 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

No. 63 **Clinical Application of Repeating Radionuclide 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 Metaiodobengylguanidine (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, γ 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.

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 Lymphoscintigrapy in Rats.** Sadek S, Owunwanne A, Yacoub T, Abdel-Dayem HM. Dept. of Nuclear Medicine, Faculty of Medicine Kuwait University, Safat, Kuwait

Oak Ridge
Associated Universities
Post Office Box 117
Oak Ridge, Tennessee 37831-0117

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. Fleatt
Jon M. Veigel
President

BAKER

Enclosures

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DEC 5 1988

Dr. Jon M. Veigel
Executive Director
Oak Ridge Associated Universities
Post Office Box 117
Oak Ridge, Tennessee 37831-0117

Dear Dr. Veigel:

DELINQUENT TRIP REPORTS BY ORAU REPRESENTATIVES

Trip reports are required on all foreign travel within 25 days after the traveler's return to duty station. A review of our records reveals that trip reports are outstanding covering foreign travel by ORAU representatives as follows:

Traveler	Destination	Period of Travel
[redacted]	Taiwan	October 28-November 6, 1988
Diane S. Flack	United Kingdom	September 9-21, 1988
Shirley A. Fry	United Kingdom	September 9-18, 1988
Peter G. Groer	United Kingdom and Austria	September 10-22, 1988

Enclosed is a copy of the guidelines which should be followed in the preparation of the trip reports.

In the event any of the trips were cancelled, please advise. Otherwise, your assistance in assuring that the required trip reports are submitted as soon as possible will be appreciated.

Sincerely,

ORIGINAL SIGNED BY
M. C. WALLACE

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

Enclosure

ER-122:MWallace:aa:6-0714:12/5/88

CONCURRENC
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United States Governn..nt **Department of Energy**

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DATE

REPLY TO ATTN OF ER-622

OCT 1 1 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 Baker / DX

1120125

X-6106

DOE F 1512.1
(8-86)

U.S. DEPARTMENT OF ENERGY

OMB Control No. 1910-2100

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 b. CITIZENSHIP U.S.A.	c. DATE AND PLACE OF BIRTH [redacted], Maryland 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	c. 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 precongress 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	(Check One) Unclassified
10/28/88 10/29/88 10-30-11/04 11/06/88 11/06/88	Lv. Oak Ridge, TN Ar. Taipei, Taiwan Attend meetings Lv. Taipei, Taiwan Ar. Oak Ridge, TN		Attend Fourth Asia and Oceania Congress of Nuclear Medicine, and precongress teaching sessions.		X

6 HAS TRAVELER SUBMITTED DOE FORM 1512.2 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

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

Becca P. Ryan 8/11/88 — Division Business Office *(Signature and Title)* (Date)

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

PART E—To be completed by Traveler's supervisor

9 REVIEW AND COMMENTS.

William D. Farr 8/15/88 — Division Chairman *(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 — Lynn V. Gillespie, Safeguards & Security Division 9/9/88

PART G—To be completed at Headquarters

12 REVIEW/COMMENTS BY DIRECTOR OF DIVISION OR OFFICE

X James S. Robertson — *(Signature)* James S. Robertson, M.D., Ph.D., Human Health and Assessments Division *(Title)* 10/5/88 *(Date)*

13. COGNIZANT SECRETARIAL OFFICER

IF DOE EMPLOYEE TRAVEL ☐ IE Determination Received 9/28/88

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

X Robert H. Wood — *(Signature)* 10/7/88 *(Date)*

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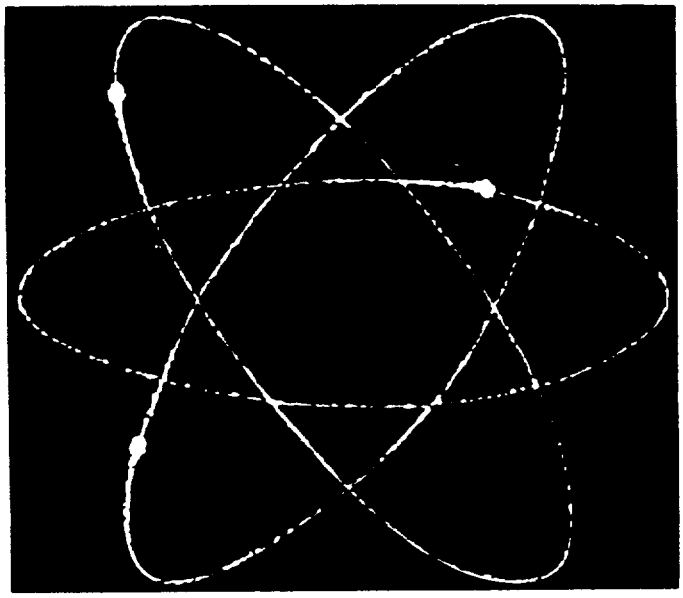
FOURTH ASIA AND OCEANIA CONGRESS OF NUCLEAR MEDICINE



NOVEMBER 1-4, 1988

Taipei, Taiwan, ROC

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

FINAL ANNOUNCEMENT

SCIENTIFIC PROGRAM

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 Isonitrile	Ismael G. Mena, M.D., U.S.A.
2. Tc-99m Isonitriles 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

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: Radioimmunodetection and Radioimmunotherapy of Cancer

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 Immuno-scintigraphy — 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

1. Hepatobiliary Radionuclide Studies	Leonard M. Rosenthall, 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. Pinehole 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 Uronephrology	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

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

5. Thyroid and Parathyroid Imaging	David C.S. Yang, M.D., U.S.A.
6. Brain Imaging	Wei-Jen Shih, M.D., U.S.A.
7. Comparisons of Imaging Modalities	Eddy C.K. Tong, M.D., U.S.A.
8. Renal Nuclear Medicine	Eddy K. Dunn, M.D., U.S.A.
9. Tumor Imaging	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

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.

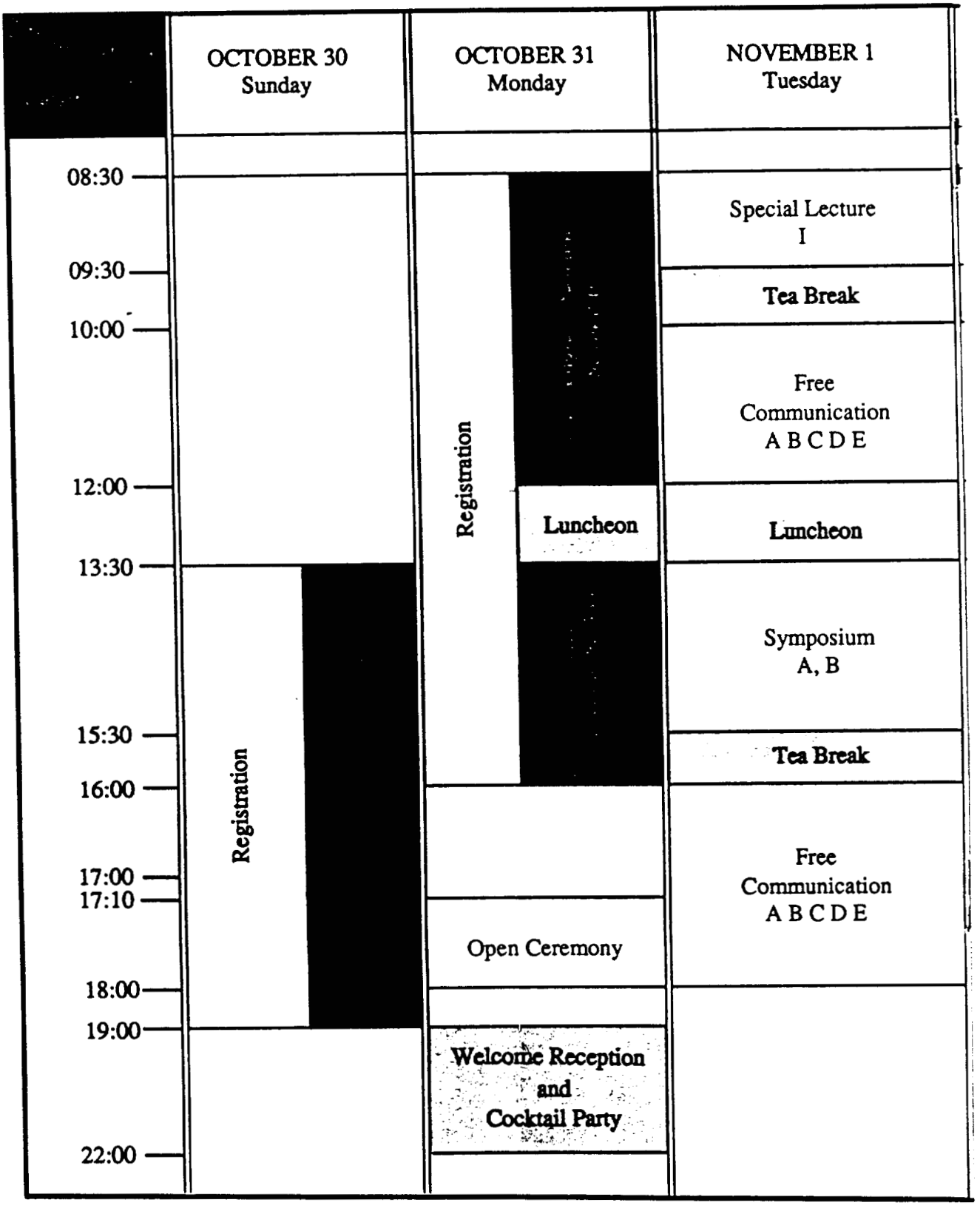
CONGRESS TOUR Thursday, November 3

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



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

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

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:

Traveler	Period of Travel	Cost to DOE Budget Activity HA 02 07 01
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 precongress 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 Rec'd original w/all signatures from Bob Malin, ER-HL. Notified Carol Baker, ORAU. MCW

CONCURRENCES

RTG SYMBOL	INITIALS/SIG.	DATE
ER-122	WALLACE	9/14/88
ER-122	ATCHLEY	9/14/88
DP-82	KRAUSE	9/15/88
AD-40	MARQUESS	9/14
ER-122	WALLACE	9/14/88
RTG SYMBOL	INITIALS/SIG.	DATE
RTG SYMBOL	INITIALS/SIG.	DATE
RTG SYMBOL	INITIALS/SIG.	DATE
RTG SYMBOL	INITIALS/SIG.	DATE

I-1910

DOE F 1325.10 (7-79)

OFFICIAL FILE COPY

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

(6/88)

1910-2100

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 precongress 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.J. Byrd, E.C. Holloway, N.K. Clapp and Z. Steplewski.

AGREEMENT: N/A

DESTINATION: _____

DATES: __/__/__ **TO** __/__/__

PURPOSE: _____

_____

AGREEMENT: _____

DESTINATION: _____

DATES: __/__/__ **TO** __/__/__

PURPOSE: _____

_____

AGREEMENT: _____

DESTINATION: _____

DATES: __/__/__ **TO** __/__/__

PURPOSE: _____

_____

AGREEMENT: _____

1128139

DOE F 1512.1
(8-89)

U.S. DEPARTMENT OF ENERGY

OMB Control No.
1910-2100

REQUEST FOR APPROVAL OF 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	c. 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 precongress 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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X-4832

Privacy Act Information Statement. Collection of the information is authorized by the Department of Energy Organization Act of 1977, P.L. 95-91. Disclosure of the personal information requested is mandatory to support authorization for official travel to foreign countries, and to obtain a passport.

The information furnished will be used by DOE to authorize travel and payment of travel expenses; by the Department of State to issue a passport;

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	(Check One) Unclassified
10/28/88 10/29/88 10-30-11/04 11/06/88 11/06/88	Lv. Oak Ridge, TN Ar. Taipei, Taiwan Attend meetings Lv. Taipei, Taiwan Ar. Oak Ridge, TN		Attend Fourth Asia and Oceania Congress of Nuclear Medicine, and precongress teaching sessions.		X

6. HAS TRAVELER SUBMITTED DOE FORM 1512.2 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. Cusack — 08/11/88
(Signature) (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

Billie P. Ryan 8/11/88 — William P. Curtiss 8/22/88
Division Business Office (Signature and Title) (Date) — William P. Countiss, Manager of Finan. (Date)

PART E—To be completed by Traveler's supervisor

9. REVIEW AND COMMENTS.

William W Burr 8/15/88 — Jon M. Veigel
Division Chairman (Signature and Title of Supervisor) (Date) — 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 — for Larry L. Radcliffe, Acting Director, Research & Waste Management Division — 9/14/88
(Signature) (Title) (Date)

11. SENSITIVE TRAVEL: Review by Head of DOE Field Organization. Has Field Security reviewed DOE F 1512.2 and completed DOE F 1512.3?

☒ YES ☐ NO — Iris V. Gillespie, Safeguards & Security Division — 9/8/88

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

1128141

(Signature) (Date)

DOE F 1512.2
(8-86)
(Formerly DOE F 5638.1)
All Other Editions Are Obsolete

OMB Control No.
1910-2100

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)

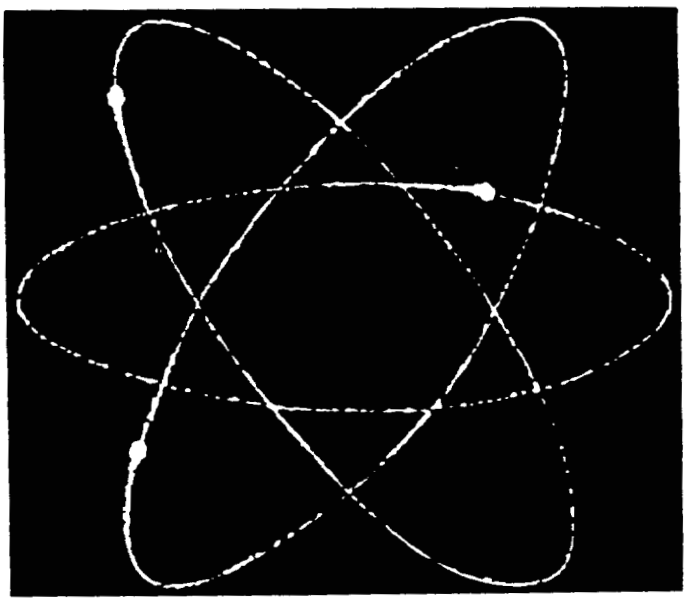
James E Crook
(Signature of Traveler)

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.

1128142

SEE REVERSE SIDE FOR PRIVACY ACT STATEMENT

FOURTH ASIA AND OCEANIA CONGRESS OF NUCLEAR MEDICINE



NOVEMBER 1-4, 1988

Taipei, Taiwan, ROC

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

FINAL ANNOUNCEMENT

SCIENTIFIC PROGRAM

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 Isonitrile	Ismael G. Mena, M.D., U.S.A.
2. Tc-99m Isonitriles 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

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: Radioimmunodetection and Radioimmunotherapy of Cancer

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 Immuno-scintigraphy — 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

1. Hepatobiliary Radionuclide Studies	Leonard M. Rosenthall, 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. Pinehole 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 Uronephrology	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

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

5. Thyroid and Parathyroid Imaging	David C.S. Yang, M.D., U.S.A.
6. Brain Imaging	Wei-Jen Shih, M.D., U.S.A.
7. Comparisons of Imaging Modalities	Eddy C.K. Tong, M.D., U.S.A.
8. Renal Nuclear Medicine	Eddy K. Dunn, M.D., U.S.A.
9. Tumor Imaging	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

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.

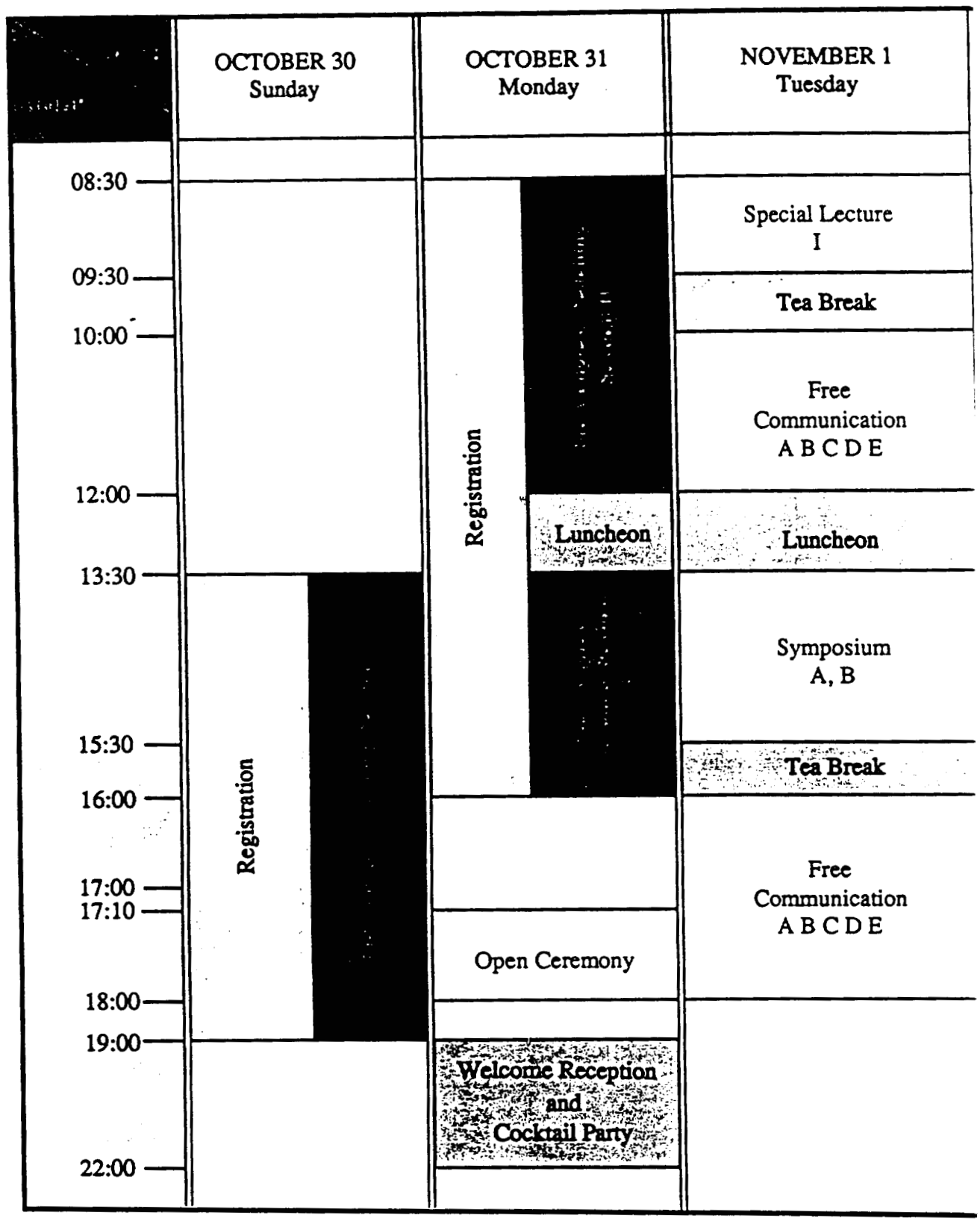
CONGRESS TOUR — Thursday, November 3

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



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

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.

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.