International Symposium on Technetium and Other Radiometals in Chemistry and Medicine
TE.RA.CHE.M.-2010

Forum-Brixen
Bressanone (Bz) - Italy
Sept. 8-11, 2010

FINAL PROGRAM

Wednesday 8

15.00 Registration
18.00-20.00 Opening Ceremony
Lifetime Achievement Awards to S.C. Srivastava
P.A. Schubiger
Award "Marino Nicolini Prize"

Symposium Lecture: Organometallic chemistry of technetium and rhenium: an inspiration for chemistry and radiopharmacy
R. Schibli (ETH, Zurich, Switzerland)

20.00 Welcome Party

Thursday 9 **SESSION A. Chemistry of Technetium and Other Metals**
In Collaboration with COSTD38 and COSTBM0607 EU Actions

Session A1. Technetium and Other Metals in Coordination Chemistry
Moderators: J. Dilworth (Oxford, UK) and R. Schibli (Zurich, Switzerland)

8.30 - 9.10 Invited Lecture: Technetium and rhenium chemistry for radiopharmacy: quo vadis?
R. Alberto (University of Zurich, Switzerland)

9.10 - 10.10 Oral Presentations

The *fac*-$\{TcO_3\}^+$ core: a multi-flexible platform for a new labeling strategy of biomolecules
H. Braband, Y. Tooyama, S. Imstepf, R. Alberto

Understanding the coordination modes and geometries of the technetium-nitrosyl core [Tc-NO].
T. Nicholson, A. Mahmood, N. Limpa-Amara, P. Müller, A.G. Jones

The impact of ligand structure on the rhenium tricarbonyl complexes formed from tripodal pyridine-containing chelates
Y-K. Cheong, P. Duncanson, D.V. Griffiths, M. Motevalli

Synthesis and characterization of new binary technetium halides
F. Poineau, A. Sattelberger, P. Forster, P. Weck, E. Johnstone, L. Ma, K. Czerwinski

10.10 - 10.40 Coffee break and Poster viewing

10.40 - 11.20 Invited Lecture: Modern ligand design for targeted metallo-radiopharmaceuticals: from radiochemistry through pharmacokinetics optimization
J.F. Valliant (McMaster University, Hamilton, Canada)

11.20 - 12.20 Oral Presentations

New *fac*-M(acac)(P)$(CO)_3$ and M(acac)$(P)_2(CO)_2$ complexes (M=Re, ^{99m}Tc)
C. Triantis, C. Tsoukalas, T. Tsotakos, C. Raptopoulou, A. Terzis, M. Pelecanou, I. Pirmettis, M. Papadopoulos

Tc-DTPA sediments formed in technetium – hydrazine – DTPA – nitric acid solutions
K.E. German, A.B. Melentiev, S.N. Kalmykov, N.N. Popova, A.A. Shiryaev, I.G. Tananaev, Y.V. Zubavichus

Very stable copper(II) complexes of bispidines and their radiopharmaceutical behavior
S. Fähnemann, H. Stephan, M. Walther, J. Steinbach, C. Haaf, P. Comba

New chelators tailored for Ga(III) and radiolabelling with gallium-68
J. Šimeček, J. Notni, V. Kubíček, P. Hermanna

12.20 - 13.00 Poster Communications
Moderator: F. Colombo (Milan, Italy)

(A1-oP1) A comparative study of technetium carbonyl complexes with O,O- and S,S-bidentate ligands
A.E. Miroslavov, G.V. Sidorenko, D.N. Suglobov, M.S. Grigor'ev, V.V. Gurzhiy

(A1-oP2) The preparation of a Tc-labeled analogue of phenylalanine for labeling peptides
A. Toppino, T.J. Gullon, J.F. Valliant

(A1-oP3) Kinetic studies of the complexes $[Re(CO)_3(PYZCA)(OH_2)]$ and $[Re(CO)_3(QXCA)(OH_2)]$ with neutral and anionic monodentate ligands
J. Suthiram, H.G. Visser, J.R. Zeevaart, A. Roodt

(A1-oP4) New $^{99m}Tc(CO)_3$ mannosylated dextrans bearing S-derivatized cysteine chelator
T. Tsotakos, M. Morais, J.D.G. Correia, I. Santos, M. Martins, S. Pereira, M. Pelecanou, M. Papadopoulos, I. Pirmettis

(A1-oP5) The isolation of "3+3" and "4+0" complexes of rhenium(V)
K.C. Potgieter, T.I.A. Gerber, P. Mayer

(A1-oP6) Ga(III) complexes with DOTA-like ligand - thermodynamic and kinetic stability
V. Kubíček, P. Hermann, É. Jakab-Tóth

(A1-oP7) Gallium complexes with a new DOTA-like chelator bearing a thiol pendant arm: synthesis, characterization and biological studies
M. Batista, M.P.C. Campello, A. Paulo, L. Gano, I. Santos

(A1-oP8) Multimeric cyclam derivatives with tunable surface modification for radiopharmaceutical applications
M. Kuhlmann, H. Stephan, J. Steinbach, A. Röhrich

13.00 - 14.30 Lunch time and Poster viewing

Session A2. Other Radiometals in Radiodiagnosis and Radiotherapy
Moderators: L. Knight (Philadelphia PA, USA) and X. Wang (Beijing, China)

14.30 - 15.15 Invited Lecture: Stability and in vivo behavior of metal complexes
C.S. Cutler (University of Missouri Columbia, USA)

15.15 - 16.00 Oral Presentations

Cu(II) complexation, ^{64}Cu-labeling and biological evaluation of CB-TE1A1P
R. Ferdani, Y. Guo, D.J. Stigers, A.L. Fiamengo, L. Wei, J.A. Golen, A.L. Rheingold, E.H. Wong, G.R. Weisman, C.J. Anderson

Zirconium-89 chemistry in the design of novel radiotracers for immuno-PET
J.P. Holland, J.S. Lewis

Synthesis and preliminary evaluation of ^{68}Ga labeled benzylidene-bis(indole-2-carboxylic acid hydrazide-DOTA) for in vivo visualization of necrosis using PET
K. Prinsen, M.M. Cona, J. Cleynhens, J. Li, Y. Ni, A. Verbruggen

16.00 - 16.30 Coffee break and Poster viewing

16.30 - 17.10 Invited Lecture: Metal radionuclide pairs: useful tools toward a personalized medicine
M. Chinol (IEO, Milan, Italy)

17.10 -17.55 Oral Presentations

In vitro evaluation of ^{68}Ga-Schiff bases for myocardial imaging
M.J. Zimny, M. Fellner, F. Rösch, O. Thews

Radiolabeling of neurotensin agonist and antagonist with ^{177}Lu. Bioaffinity of ^{177}Lu-DOTA-NT and ^{177}LU-DOTA-SR48692 to neurotensin receptors
V. Lungu, D. Chiper, C. Barna, C. Cimpeanu

Automated Synthesis of ^{68}Ga-AMBA
A. Cagnolini, R.E. Swenson, K.E. Linder

17.55 - 18.40 Poster Communications
Moderator: M. Santimaria (Roma, Italy)

(A2-oP1) ^{177}Lu-DOTATATE: comparative study between ^{177}Lu NRG/The Netherlands and ^{177}Lu ORNL/USA
J.S. Caldeira Filho

(A2-oP2) A highly stable functionalizable chelator for ^{67}Ga/^{68}Ga
E. Boros, C.L. Ferreira, J.F. Cawthray, E.W. Price, B.O. Patrick, D.W. Wester, M.J. Adam, C. Orvig

(A2-oP3) Evaluation of radioisotope quality aspects for preparation of high specific activity [Ga-68]-NOTA-AnnexinA1
A. Fuchs, I. Greguric, G. Roe

(A2-oP4) New chelator for $^{67/68}$Ga with excellent radiolabeling properties and in vitro stability
D.J. Berry, R.C. Hider, P.J. Blower

(A2-oP5) Novel ^{64}Cu(II)-labeled bombesins capable of GRP receptor-targeted tumor imaging
A. Ruffani, H. Stephan, R. Bergmann, J. Pietzsch, J. Steinbach, B. Graham, L. Spiccia

(A2-oP6) Biodistribution of [^{111}In-DOTA^{0},Trp^{8}]SS-14 in hsst$_{2A/3/5}^{+}$-HEK293 tumor bearing mice
X. Kotsaka, A. Tatsi, P.I. Marsouvanidis, T. Maina, P. Cordopatis, E.P. Krenning, M. de Jong, B.A. Nock

(A2-oP7) Optimizing conditions for radiolabelling DTPA-bombesin analogues with ^{111}In at high specific activity
P.B. Pujatti, J. Mengatti, E.B. de Araújo

(A2-oP8) In vivo characterization of dual isotope radiolabeled cell penetrating imaging probes activatable by tumoral matrix metalloproteinase-2
S.M.J. van Duijnhoven, M.S. Robillard, K. Nicolay, H. Grüll

(A2-oP9) Pb-212 labeled α-MSH analogue modified with a nuclear localization sequence for melanoma targeting
X. Zhang, F. Gallazzi, S. Deutscher, T. Quinn

20.00 Meeting of the IAC, ISC and LOSC

Friday 10 SESSION B. Radiopharmaceuticals Labelled with ^{99m}Tc and Other Radiometals

Session B1. Radiopharmacy
Moderators: T.P. Quinn (Columbia MO, USA) and C.J. Anderson (St. Louis MO, USA)

8.30 - 9.10 Invited Lecture: Radiometallated peptides in small animal studies
T. Maina (NCSR "Demokritos", Athens, Greece), M. de Jong (Erasmus MC, Rotterdam, The Netherlands)

9:10 - 10:10 Oral Presentations

Synthesis and assessment of ^{99m}Tc chelate-conjugated bevacizumab for development of a specific radiopharmaceutical
M.F. García, X. Camacho, V. Calzada, M. Fernández, W. Porcal, J.P. Gambini, O. Alonso, P. Cabral, T.P. Quinn

Derivatives of $^{99m}Tc(CO)_3$(nitrilotriacetic acid), evaluated as potential renal tubular tracers: properties and in vitro distribution
M. Lipowska, A.T. Taylor, L.G. Marzilli

A new platform for the preparation of ^{99m}Tc receptor targeted probes using droplet microreactors
R.W. Simms, K.A. Stephenson, J.F. Valliant

HEHEHE: a new chelator for $[^{99m}Tc(CO)_3]^+$-labeling resembling His_6-tag in protein purification
V. Tolmachev, C. Hofström, J. Malmberg, S. Ahlgren, A. Orlova, T. Gräslund

10:10 - 10:30 Poster Communications
Moderator: P. Erba (Pisa, Italy)

(B1-oP1) Radiosynthesis and in vivo evaluation of a new ^{99m}Tc-labelled bis-indole derivative for early detection of necrosis
M. Bauwens, K. Prinsen, M. De Saint-Hubert, J. Cleynhens, M.M. Cona, J. Li, C. Boonen, Y. Ni, A. Verbruggen

(B1-oP2) Second generation single amino acid chelate (SAACII) technology with enhanced hydrophilicity: development and successful application to molecular imaging
K.P. Maresca, S.M. Hillier, G. Lu, J.C. Marquis, C.N. Zimmerman , W.C. Eckelman, J.L. Joyal, J.W. Babich

(B1-oP3) Structure-affinity relationship studies of neutral $^{99m}Tc(CO)_3$ complexes targeting the 5-HT_{1A} receptor
Z. Akgun, Y. Peng, N. Limpa-Amara, A.G. Jones, A. Mahmood

(B1-oP4) A novel Tc-99m-labeled alpha-melanocyte stimulating hormone hybrid peptide with enhanced melanoma uptake and reduced renal uptake
J. Yang, H. Guo, Y. Miao

10.30 - 10.50 Coffee break and Poster viewing

Session B2. Radiopharmacology
Moderators: M.C. Giron (Padova, Italy) and R. Rossin (Eindhoven, The Netherlands)

10.50 - 11.30 Invited Lecture: Targeting radiopharmaceuticals to the cell nucleus
K. Vallis (University of Oxford, UK)

11:30 - 12.30 Oral Presentations

Relatioship between cisplatin, copper-64 radiopharmaceuticals and p53 in the trafficking of ^{64}Cu to the nuclei of tumor cells
Y. Guo, A. Zheleznyak, C.J. Anderson

Radiolabeled L-oligonucleotides with tuneable pharmacokinetics – a suitable complementary system for pretargeting approaches
C. Förster, M. Schubert, R. Bergmann, S. Vonhoff, S. Klussmann, M. Walther, J. Pietzsch, H-J. Pietzsch, J. Steinbach

^{99m}Tc labeled probes for diagnosis of ERBB dependent cancers
E.B. Corcoran, R.N. Hanson

^{188}Re for targeting intracellular antigens in virus-induced cancers and melanoma
E.A. Dadachova, L. Francesconi

12:30 - 12:50 Poster Communications
Moderator: L. Melendez-Alafort (Padova, Italy)

(B2-oP1) ^{99m}Tc(N)-DBODC(5) from cardiology to oncology: preliminary in vitro study
C. Bolzati, D. Carta, V. Gandini, C. Marzano, N. Salvarese, N.A. Colabufo, F. Berardi, R. Perrone, G. Bandoli

(B2-oP2) Development of a ^{99m}Tc-labelled RGD peptide as an angiogenesis imaging agent
P. Iveson, M. Morrison, J. Barnett

(B2-oP3) Chitosan based ^{99m}Tc agent for folate-receptor-mediated targeting
W. Guo, W. Yang, X. Zhang

(B2-oP4) Evaluation of ^{99m}Tc-labeled cyclic RGD peptide dimers with chelating HYNIC: impact of RGD peptide and ^{99m}Tc chelate
Y-S. Kim, Y. Zhou, X. Lu, H. Gao, S. Liu

12.50 - 14.30 Lunch time and Poster viewing

Session B3. Metal Radionuclide production
In collaboration with IAEA

14.30 - 16.45 Round Table: Alternatives for Mo-99 production
Presidents: T.J. Ruth (University of British Columbia, Canada), R.W. Atcher (Los Alamos National Laboratory, USA)

14.30 - 15.30 Alternative production routes for Mo-99
R.W. Atcher, T.J. Ruth

GTRI'S efforts to accelerate the establishment of a medical isotope production capability without the use of highly enriched uranium
P. Staples, J. Chamberlin, J. Lacey, R. Hamilton, C. Fitzgerald, J. Lindemyer, G. Vandegrift, N. Pope, J. Ireland, G. Dale, J. Binder, C. Bryan, R. Hobbs, L. Jollay

15.30 - 16.20 Poster Communications

(B3-oP1) Scale-up and improvement of MURR $^{99}Mo/^{99m}Tc$ gel generator
A.R. Ketring, G.J Ehrhardt, J.D. Lydon Jr., L.H. Manson III

(B3-oP2) Design of accelerator-based solutions to produce ^{99}MO using lowly-enriched uranium
F. Stichelbaut, Y. Jongen

(B3-oP3) Direct on-target production of ^{99m}Tc using the $^{100}Mo(p,2n)^{99m}Tc$ transformation
P. Schaffer, K. Gagnon, T.J. Morley, D. Abrams, J. Wilson, M.S. Kovacs, S.A. McQuarrie, E. Asselin, S.K. Zeisler, F. Bénard, T.J. Ruth

(B3-oP4) The MORE project: an alternative route to the production of high specific activity ^{99}Mo
S. Lapi, K. Ladouceur, T. J. Ruth, J M D'Auria

(B3-oP5) The IAEA support to addressing shortages in ^{99}Mo production and supplies
N. Ramamoorthy, E. Bradley, K. Alldred, P. Adelfang

16.20 - 16.45 Discussion with the authors

16.45 - 17.00 Coffee break and Poster viewing

17.00 - 18.15 Oral Presentations

$^{44}Ti/^{44}Sc$ generator and synthesis of ^{44}Sc-DOTA-TOC
N. Loktionova, D.V. Filosofov, M. Pruszyński, A. Majkowska, R. P. Baum, F. Rösch

The low-energy β^-- and electron emitter ^{161}Tb as alternative for ^{177}Lu for targeted radionuclides therapy
K. Zhernosekov, S. Lehenberger, U. Köster, H. Dorrer, A. Hohn, R. Schibli, A. Türler

Radionuclidic impurities in $^{90}Sr/^{90}Y$ generators: experience at IPEN/CNEN-SP
G. Barrio, J.A. Osso Jr.

Copper-61 production and purification
S. Thieme, M. Walther, H-J. Pietzsch, J. Steinbach

Multifunctional radionanomedicine: a new theranostic approach
E.Sabbioni

20.00 Concert

Saturday 11 SESSION C. Clinical Applications of Radiopharmaceuticals Labelled with Radiometals

Session C1. Imaging and Clinical Application

8.30 - 10.30 Round Table: New clinical application of radiometal labelled radiopharmaceuticals
President: W.C. Eckelman (Bethesda MD, USA)

8.40 - 10.00 Oral Presentations (Companies)

8.40 - 9.00 A strategy for both SPECT and PET radiotracers
J-L. Vanderheyden

9.00 - 9.20 In search of prostate cancer: trom technetium to iodine and back again
J. Babich

9.20 - 9.40 A novel bio-receptor targeted ^{99m}Tc-molecule for intraoperative lymphatic mapping in solid tumors: binding and clinical performance
F.O. Cope, D.R. Vera, A.M. Wallace, V.K. Sondak, M.K. Oser, J.D. Terry, R.D. Hartman, L-S. Chen, J.M. Bosold, M.T. Joy, S.A. Blackburn, W.L. Rich Metz, B.C. Abbruzzese, A.M. Phelps, G.H. Hinkle, R.C. Orahood

9.40-10.00 Present-day development of Tc-99m radiopharmaceuticals: an economical challenge for pharmaceutical companies. The IBA involvement
R. Pasqualini

10.00 - 10.30 Oral Presentations

A new tumor pretargeting approach based on a bio-orthogonal chemical reaction
R. Rossin, P. Renart Verkerk, S.M. van den Bosch, R.C.M. Vulders, I. Verel, J. Lub, M.S. Robillard

Radioactive gold nanoparticles in cancer therapy: therapeutic efficacy of a biocompatible ^{198}AuNP-GA nanotherapeutic agent
A. Zambre, R. Shukla, N. Chanda, P. Kan, L.D. Watkinson, T.L. Carmack, H. Engelbrecht, J.R. Lever, K. Katti, G.M. Fent, S.W. Casteel, C. Jeffrey Smitha, W.H. Miller, S. Jurisson, E. Boote, J.D. Robertson, C. Cutler

10.30 - 11.00 Coffee break and Poster viewing

11.00 - 11.40 Invited Lecture: Clinical advantages of multimodality imaging
G. Mariani (University of Pisa, Italy)

11.40 - 12.30 Symposium Closure

14:30 Trip and Social Dinner

POSTERS

Session A1. Technetium and Other Metals in Coordination Chemistry

(A1-P9) The synthesis and structural characterization of new Tc(I) nitrosyl complexes
T. Nicholson, A. Mahmood, F. Refosco, F. Tisato, P. Müller, A.G. Jones

(A1-P10) Technetium labeled cathepsin B ihibitors as molecular imaging agents
P.E. Edem, J.F. Valliant

(A1-P11) Metallocarborane-based 1-hydroxy-1,1'-alkylidene bisphosphonates for tumor imaging and therapy
M. Cooke, J.F. Valliant

(A1-P12) Bis-benzimidazole containing single amino acid chelates (SAACB): a new class of tridentate chelates for ^{99m}Tc imaging probes
A. Darwish, M. Cooke, J.F. Valliant

(A1-P13) Radioactive electron-rich metal-metal triple bonds: the $Tc_2X_4(PMe_3)_4$ complexes (X=Cl, Br)
A.Sattelberger, F. Poineau, P. Forster, T. Todorova, L. Gagliardi, K. Czerwinski

(A1-P14) Speciation and reactivity of technetium in sulfuric acid
F. Poineau, K. German, P. Weck, A.Maruk, W. Lukens , G. Kirakosyan, A. Sattelberger, D. Rego, K. Czerwinski

(A1-P15) Synthesis and characterization of technetium waste forms from an advanced fuel cycle
K. Czerwinski, E. Mausolf, F. Poineau, D. Kolman, T. Hartmann, P. Weck, G. Jarvinen

(A1-P16) Bioconjugated Re and Tc-99m carbonyls by means of a transmetallation reaction with Zn(II) compounds
J. Lecina, A. Carrer, A. Álvarez-Larena, U. Mazzi, J. Suades

(A1-P17) Synthesis, radiolabeling and evaluation of ^{99m}Tc(CO)$_3$-labeled misonidazole analogue to target tumor hypoxia
M.B. Mallia, S. Banerjee, H.D. Sarma, M. Venkatesh

(A1-P18) New ^{99m}Tc(I) and Re(I) curcumin derivatives for molecular imaging
F. Pignedoli, F. Zobi, M. Saladini, R. Alberto

(A1-P19) Synthesis and biodistribution in mice of new ^{99m}Tc labeled fatty acids
T. Tsotakos, C. Tsoukalas, A. Papadopoulos, M. Pelecanou, M. Papadopoulos, I. Pirmettis

(A1-P20) ^{99m}Tc(CO)$_3$ ciprofloxacin dithiocarbamate complexes as infection imaging agents
V. Chotzagiannoglou, P. Kyprianidou, T. Tsotakos, C. Tsoukalas, L. Saso, M. Pelecanou, M. Papadopoulos, I. Pirmettis

(A1-P21) New "2+1" mixed ligand *fac*-tricarbonyl complexes of the general formula Re(OO)(L)(CO)$_3$
A. Panagiotopoulou, C. Tsoukalas, C. Raptopoulou, A. Terzis, I. Pirmettis, M. Papadopoulos, M. Pelecanou

(A1-P22) Synthesis and characterization of new *fac*-Re(NO)(P)(CO)$_3$ complexes
A. Lazopoulos, C. Triantis, A. Drakopoulos, C. Tsoukalas, T. Tsotakos, C. Raptopoulou, A. Terzis, M. Pelecanou, I. Pirmettis, M. Papadopoulos

(A1-P23) "2+1" Curcumin complexes with the *fac*-$[Re(CO)_3]^+$ core
M. Sagnou, D. Benaki, M. Paravatou-Petsotas, I. Pirmettis, M. Papadopoulos, M. Pelecanou

(A1-P24) Tricarbonyl Re(I)/Tc(I) complexes from functionalized pyridine-triazole derivatives
A. Boulay, C. Picard, E. Benoist

(A1-P25) New rhenium complexes with ciprofloxacin
J. Lecina, P. Cortés, M.A. Martín, C. Piera, M. Llagostera, J. Suades

(A1-P26) Isomers of the (N^{a}HIS)Ac chelator upon coordination of ^{99m}Tc/Re(CO)$_3$
E.J. Simpson, D. Breadner, J.L. Hickey, L.G. Luyt

(A1-P27) [CpTc(CO)$_3$] replacing phenyl rings in bioactive molecules for radiopharmaceuticals
D. Can, H.P. N'Dongo, P. Schmutz, R. Alberto, P. Raposinho, I. Santos

(A1-P28) Lability of monodentate ligand in tricarbonly rhenium(I) complexes with N-methyl-2-pyridinecarboxyamide. Flexidentate behavior of N-methyl-2-pyridinecarboxyamine
M. Łyczko, K. Łyczko, J. Lipkowski, J. Mieczkowski

(A1-P29) In situ carbonization for rhenium and technetium carbide nano and micro phase preparation
K.E. German

(A1-P30) Concentration of ^{99m}Tc-pertechnetate eluted from alumina based chromatographic ^{99}Mo/^{99m}Tc generator
K.N. Suzuki, J.A. Osso Jr.

(A1-P31) Radioactivity detection in chromatography
G. Dietzel

(A1-P32) Investigation of new strategies for reduction of redox active radiometals Re-188/186 and Tc-99m
B.P. Burton-Pye, D. McGregor, I.M. Mbomekalle, L.C. Francesconi

(A1-P33) Redox-active ligands interrogate the complex oxidation state behaviour of technetium
B.P. Burton-Pye, D. McGregor, I.M. Mbomekalle, L.C. Francesconi

(A1-P34) A pH-dependant structural study on Ga^{3+} complexes with monoamide derivatives of 1,4,7-triazacyclononane-1,4,7-triacetic acid (NOTA) for PET applications
D. Shetty, J.M. Jeong, S-Y. Choi, L. Hoigebazar, Y-S. Lee, D.S. Lee, J-K. Chung, M.C. Lee, Y-K. Chung

(A1-P35) A novel and non-destructive method for determining moisture in lyophilized reagents for labeling with ^{99m}Tc
B.C.G. de Abreu, A.C. Filho, N.T.O. Fukumori, M.M.N. Matsuda

(A1-P36) Tumor imaging with ^{68}Ga-positron emission tomography: synthesis and characterization of macrocycle-amino acid derivatives
D. Shetty, J.M. Jeong, C.H. Ju, Y-S. Lee, D.S. Lee, J-K. Chung, M.C. Lee

(A1-P37) Synthesis of novel maleimide derivatives for "site-specific labelling"
V. Nagel, C. Burchardt, P.J. Riss, F. Rösch

(A1-P38) Interconversion energy barrier of [Cu((S)-p-NH_2-Bn-NOTA)]−complex conformers studied by ion pair chromatography
J. Schlesinger, D. Ramesh, J. Rajander, P. Nuutila, O. Solin

(A1-P39) Investigations into porphyrins as potential molecular imaging agents
P.A. Waghorn, S.I. Pascu, C.T. Supuran, R.C. King, J.R. Dilworth

(A1-P40) Carbonyl complexes of ^{105}Rh as potential radiopharmaceutical precursors
S.A. Krajewski, A. Bilewicz

Session A2. Other Radiometals in Radiodiagnosis and Radiotherapy

(A2-P10) ^{68}Ga DOTA microspheres and GALLIGAS® for lung scintigraphy
G. Wunderlich, E. Schiller, H-J. Pietzsch, R. Bergmann, M. Andreeff, J. Kotzerke

(A2-P11) PEGylated DOTA-α-MSH analogues for in vivo targeting of melanoma
F. Silva, M. Morais, P.D. Raposinho, M.P.C. Campello, J.D.G. Correia, A. Paulo, I. Santos

(A2-P12) In vitro and in vivo evaluation of a novel ^{67}GA-DOTA-folate in KB tumor bearing mice
C. Müller, C.P. Leamon, R. Schibli

(A2-P13) Bifunctional chelates for ^{68}Ga and ^{64}Cu radiolabeling of peptides for PET imaging
C.L. Ferreira, D.T.T. Yapp, R. Gill, C. Bensimon, P. Jurek, G.E. Kiefer

(A2-P14) Versatile new bifunctional chelators for copper(II) radionuclides
H. Stephan, R. Bergmann, J. Steinbach, L. Spiccia, P. Comba

(A2-P15) Cu-64 labelling of a thyroid stimulating hormone receptor antibody
M.S. Cooper, K. Sunassee, R.L. Paul, J.R. Ballinger, J.P. Banga, P.J. Blower

(A2-P16) Influence of an aliphatic linker between DOTA and synthetic affibody molecule on targeting properties
A. Orlova, J. Feldwisch, V. Tolmachev

(A2-P17) Bis(thiosemicarbazone) based imaging agents beyond the parent compound Cu(ATSM)
R. Hueting, R. Tavare, V. Kersemans, M. Tredwell, G. Mullen, M. Christlieb, V. Gouverneur, J.R. Dilworth

(A2-P18) Influence of cations on the coordination reaction of DOTATATE with yttrium and lutetium
M. Asti, D. Farioli, M. Iori, C. Guidotti, C.S. Cutler, P. Mayer, D. Salvo

(A2-P19) Modified ^{90}Y-hydroxyapatite microparticles, possible agent for lung cancer therapy
N.S. Nikolić, S.D. Vranješ-Djurić, D.L. Janković, D.D. Djokić

(A2-P20) Analysis of the yttrium-90-labelled human serum albumin microspheres (MAA)
D.D. Djokić, D.L. Janković, S.D. Vranješ-Djurić, N.S. Nikolić

(A2-P21) Preparation of DOTA-/DTPA-dendron cetuximab bioconjugates for targeted radionuclide therapy using yttrium-90, lutetium-177 and copper-67
J-M. Heldt, M. Zenker, H-J. Pietzsch, R. Bergmann, B. Mosch, J. Pietzsch, J. Steinbach

(A2-P22) Obtainement of ^{177}Lu-DOTA-lanreotide for in vivo studies
N. Nevares, Y. Villarea Jiménez, G. Deluca, M. Zapata, J. Perez, A. Rojo, J.L. Crudo

(A2-P23) Optimization of [^{89}Zr]$ZrCl_4$ production and purification for high resolution PET imaging
M. Walther, P. Gebhardt, L. Würbach, I. Irmler, P. Grosse-Gehling, S. Preusche, T. Opfermann, T. Kamradt, H-P. Saluz, J. Steinbach

Session B1. Radiopharmacy

(B1-P6) Technetium-99m labelling of HYNIC analogues using tricine and dithiocarbamate co-ligands
L.K. Meszaros, A. Dose, P.J. Blower, S.C.G. Biagini

(B1-P7) Novel estradiol based metal complexes of Tc-99m for breast cancer
C. Neto, M.C. Oliveira, L. Gano, F. Marques, I. Santos, T. Thiemann

(B1-P8) Diphenyldiazene complexed with Re/^{99m}Tc tricarbonyl for imaging aβ plaques in the brain
Y. Yang, M. Cui, R. Tang, R. Wu, L. Zhu, H. Zhang

(B1-P9) Studies of new [Tc(N)(PS)]-based mixed compounds as analogues of WAY100635
C. Bolzati, N. Salvarese, D. Carta, H.J. Pietzsch, R. Bergmann, A. Dolmella, G. Bandoli

(B1-P10) [^{99M}TcN]$^{2+}$ labeled novel 4-anilinoquinazoline derivatives as potential tumor imaging agent
M. Feng, Y. He, R. Ding, J.L. Xu, H. Liu, X. Wang, C.M. Qi, J.B. Zhang

(B1-P11) In vitro and in vivo characterization of new SST analogous labelled with ^{99m}Tc and ^{177}Lu
E. Zangoni, A. Di Cianni, C. Manfredi, D. D'Addona, L. Melendez Alafort, M.C. Giron, P. Erba, M. Ginanneschi, G. Mariani, U. Mazzi

(B1-P12) Synthesis and evaluation of ^{99m}Tc-carbonyl core labeled MPP derivative as 5-HT_{1A} receptor imaging agent
Y. Lin, W. Yang, X. Zhang, J. Zhang

(B1-P13) Synthesis and biodistribution of $^{99m}Tc(CO)_3$-NFXDTC as a novel potential infection imaging agent
S.J. Zhang, Y. Wang, J. F. Huo, X. Lin, J.B. Zhang, X.B. Wang

(B1-P14) Synthesis and biological evaluation of ^{99m}Tc-EDTA-MN as a novel tumor hypoxia imaging agent
X. Lin, J.L. Ren, J.F. Huo, J.B. Zhang, X.B. Wang

(B1-P15) Synthesis and biodistribution of ^{99m}TcO-MNPrXT as a potential agent to target tumor hypoxia
Q. Yu, J.F. Huo, X. Lin, Y. Pang, J.B. Zhang, X.B. Wang

(B1-P16) Preparation, characterization and biodistribution of ^{99m}Tc-HYNIC-MN as a novel potential tumor hypoxia imaging agent
L.Q. Liu, M. Zhang, G.R. Zhong, X.B. Wang

(B1-P17) Oxotechnetium-CCK4 derivatives as potential imaging agents for CCK2-R targeting
B. Mestre-Voegtlé, S. Dorbes, C. Picard, E. Benoist

(B1-P18) Technetium(I)-99m tricarbonyl complexes for targeting melanotic melanoma
C. Moura, L. Gano, P.D. Raposinho, A. Paulo, A.M. Abrantes, M.F. Botelho, I. Santos

(B1-P19) Preparation, characterization and biodistribution of new technetium-99m complexes with DMP-AMDP, DMP-ACPDP and HYNIC-ACPDP
L.Q. Liu, G.R. Zhong, M. Zhang, X.B. Wang

(B1-P20) 2,3-Diamino propionic acid based chelators for labeling biomolecules with ^{99m}Tc(I)
B.L. Oliveira, Y. Liu, J.D.G. Correia, I. Santos, L. Gano, B. Spingler, R. Alberto

(B1-P21) ^{99m}Tc-labelled vasopressin peptide as a potential radiopharmaceutical for small-cell lung cancer (SCLC) imaging
P. Koźmiński, E. Gniazdowska, K. Bańkowski, H-J. Pietzsch

(B1-P22) Ligand exchange mechanism of *fac*-$[^{99m}Tc(CO)_3(H_2O)_3]^+$ complex for ^{99m}Tc-CO-MIBI radiopharmaceuticals
L-H. Yu, D-C. Fang, H-Y. Ren, B-L. Liu, H-M. Jia

(B1-P23) Evaluation of hydrolyzed impurities in radiochemical analysis and biological distribution of ^{99m}Tc-ECD
E.V. Almeida, N.G. Silva, N.T.O. Fukumori, J. Mengatti, M.M.N. Matsuda, C.P.G. Silva, M.B.A. Vasconcellos

(B1-P24) Structural modification of small technetium complexes for melanoma imaging
Y. Peng, N. Limpa-Amara, A.G. Jones, A. Mahmood

(B1-P25) ^{188}Re, ^{99m}Tc and ^{64}Cu bifunctional bisphosphonate complexes for targeting bone metastases
R. T. M. de Rosales, C. Finucane, S.J. Mather, P.J. Blower

(B1-P26) Development of a new ^{99m}Tc(I) carbonyl complex with selectivity towards hypoxic tissue using the concept of "click chemistry"
J. Giglio, S. Dematteis, S. Fernández, H. Cerecetto, A. Rey

(B1-P27) HER2 targeting with ^{99m}Tc-labeled second generation synthetic affibody molecule
V. Tolmachev, H. Wållberg, J. Feldwisch, A. Orlova

Session B2. Radiopharmacology

(B2-P5) Radiochemical and radiobiological evaluation of a new ^{99m}Tc-labeled litorin derivative
K. Durkan, E. Gourni, P. Bouziotis, S. Xanthopoulos, C. Zikos, C. Karahaliou, M. Paravatou, E. Livaniou, A.D. Varvarigou

(B2-P6) Noninvasive in vivo imaging of MMP-7 activity
S. Soebbing, M.N. Tantawy, R.M. Baldwin, T.E. Peterson, L.M. Matrisian, J.O. McIntyre

(B2-P7) [^{99m}Tc]Demomedin 1 for GRPR-targeted tumor imaging
T. Maina, E. Ketani, P.I. Marsouvanidis, B. Waser, J.C. Reubi, B.A. Nock

(B2-P8) Copolymer based ^{99m}Tc hepatocyte ASGP receptor targeting agent for SPECT
W. Yang, W. Fang, G. Shao, F. Wang, X. Zhang

(B2-P9) Synthesis and biodistribution of a novel ^{99m}Tc-HYNIC conjugate of pteroyl-Lys
H. Guo, Y. Pang, M. Zhu, F. Xie, J. Lu

(B2-P10) New $[^{99m}Tc(N)(DTC)(PNP)]^{+}$ complexes as potential myocardial imaging agents
C. Bolzati, D. Carta, N. Salvarese, G. Gerardi, D. Bernardini, F. Refosco, M. Porchia, G. Bandoli

(B2-P11) ^{99m}Tc(I) cationic complexes for tumoral detection
S. Cunha, L. Gano, C. Fernandes, A. Paulo, I. Santos

(B2-P12) Correlation between guantlate cyclase C (GC-C) expression and uptake of GC-C-targeted imaging agents in vitro and in vivo
D. Liu, L.R. Forte, M.F. Giblin

(B2-P13) Evaluation of $[^{99m}Tc(CO)_3]$-labeled ErbB-2-targeting peptides for breast carcinoma imaging
S.L. Deutscher

(B2-P14) Trifunctional tricarbonyl complexes for cell-specific and nuclear targeting
T. Esteves, F. Marques, J. Rino, A. Paulo, C.J. Smith, I. Santos

(B2-P15) The preparation of ^{99m}Tc-DTPA-LSA and its instant lyophilized kit for hepatic receptor imaging
W. Yang, X. Zhang, W. Fang, X. Wang, Z. Tang

(B2-P16) Synthesis and in-vitro/in-vivo evaluation of a novel folic acid derivative with ^{99m}Tc
Y. Pang, H. Guo, M. Zhu, F. Xie, J. Lu

(B2-P17) 1-Hydroxybisphosphonate-containing amino acids for radioactivity delivery
E. Palma, J.D.G. Correia, L. Gano, I. Santos

(B2-P18) Delopment of ^{188}Re-BMEDA encapsulated PEGylated liposome as a diagnostic and therapeutic agent for glioma
F.Y.J. Huang, T.W. Lee, C.H.K. Kao, C.H. Chang, W.Y. Lee, W.Y. Chen, J.M. Lo

(B2-P19) $[^{188}Re(N)(cys\sim)(PNP)]^{+/0}$ mixed ligand compounds as models for target specific agents
C. Bolzati, S. Thieme, S. Agostini, D. Carta, N. Salvarese, F. Refosco, R. Bergmann, J. Pietzsch, H.J. Pietzsch

(B2-P20) Radiopharmacokinetic and dosimetic studies of ^{188}Re-HA: comparison with ^{188}Re-HDD/lipiodol
L. Meléndez-Alafort, A. Nadali, E. Zangoni, A. Banzato, A. Rosato, U. Mazzi

(B2-P21) Comparative stability studies of antibody anti-CD20 labeled with ^{188}Re by direct method and tricarbonyl core
C.R. Dias, S. Jeger, J.A. Osso Jr., C. Müller, C. De Pasquale, A. Hohn, R. Waibel, R. Schibli

Session B3. Metal Radionuclide Production

(B3-P6) CYCLOTECH – direct production of ^{99m}Tc using low energy cyclotrons
R.R. Johnson, W.M. Gelbart, M. Benedict, L. Cunha, L.F. Metello

(B3-P7) Current industry developments in the production of Mo-99
D.M. Lewis

(B3-P8) The ^{99m}Tc shortage: lessons learned
B. Ponsard

(B3-P9) Production of Mo-99 without HEU or LEU
J.T. Harvey, G.P. Messina, G.H. Isensee, R.C. Block, Y. Danon

(B3-P10) Proposal of Mo-100(gamma,n)Mo-99 reaction study using Compton back-scattering x-ray beams at INFN-LNF, Rome
M.L. Bonardi, F. Broggi, F. Groppi, L. Serafini

(B3-P11) Studies on separation and purification of ^{99}Mo from uranium, ^{131}I and ^{103}Ru
W. Wojdowska, J. Parus, D. Pawlak

(B3-P12) Experimental production of M.S.A. ^{177}Lu form highly enriched ^{176}Lu
J. Crudo, N. Nevares, A. López Bularte

(B3-P13) Production of GMP compliant lutetium-177: an investigational radiochemical precursor for targeted cancer therapy
M. Chinol, C. Cutler, S. Papi, A. Ketring, L. Garaboldi, G. Paganelli, L. Murray

(B3-P14) Evaluation of possibilities for ^{47}Sc production by neutron irradiation of ^{47}Ti and consecutive solid phase extraction chromatography
D. Pawlak, J.L. Parus, R. Mikolajczak

(B3-P15) Preliminary studies on the preparation of ^{68}Ge-^{68}Ga generator at IPEN/CNEN-SP
T.P. Brambilla, J. A.Osso Jr.

(B3-P16) New method for ^{47}Sc production in nuclear reactor Maria at Swierk
B. Bartoś, A. Bilewicz

(B3-P17) A novel method for ^{67}Cu production
J. Kozempel, K. Abbas, N. Gibson, U. Holzwarth, F. Simonelli

(B3-P18) SPLASH: a project to educate, train and bring the young generation to discover the radioactivity
F. Groppi, S. Manenti, M.L. Bonardi, L. Gini, E. Sabbioni

(B3-P19) Production of innovative radionuclides at ARRONAX
J. Barbet

(B3-P20) The SPES project for the production of non-standard medical radionuclides
G. Fiorentini

(B3-P21) A feasibility study of a new method for production of U-230/Th-226 for alpha-immunotherapy applications
K.I. Abbas, F. Simonelli, I. Cydzik, J. Kozempel, C. Apostolidis, B. Zielinska, F. Bruchertseifer, A. Morgenstern

(B3-P22) Comparing cyclotron- with generator-produced ^{99m}Tc
B. Guérin, A. Zyuzin, S. Tremblay, E.J. van Lier, S. Rodrigue, J.A. Rousseau, V. Dumulon-Perreault, R. Lecomte, J.E. van Lier

(B3-P23) Cyclotron production of medium-lived NCA technetium radiotracers. Use for biodistribution studies and setting up new ^{99m}Tc production methods
M.L. Bonardi, F. Groppi, S. Manenti, E. Sabbioni

Session C. New Clinical Application of Radiometal Labelled Radiopharmaceuticals

(C-P1) Tc-99m-labeled novel antiproliferative curcuminoid
P. Lagisetty, H. Agashe, K. Sahoo, V. Awasthi

(C-P2) Radiolabeled short neuropeptide Y derivatives with bifunctional chelators for breast cancer
P. Antunes, T. Esteves, P. Raposinho, I. Santos

(C-P3) A new technique to evaluate experimental acute oedema induced by two different drugs using giant unilamellar liposomes
A.C. Santos, C.M. Mato, M.A. Silva, S.L. Perestrelo, F.J. Borges, T. Almeida, N. Ferreira, L. Gano, M. Neves, B. Oliveiros

(C-P4) Evaluation of acute non-cardiogenic experimental pulmonary oedema using giant unilamellar liposomes
A. C. Santos, C.M. Matos, S.L. Perestrelo, M.A. Silva, F.J. Borges, L. Gano, M. Neves, B. Oliveiros

(C-P5) Comparison of [^{111}In]SAR-G2 and [^{111}In]SAR-3 in GRPR^{+} cells and animal models
P.I. Marsouvanidis, T. Maina, E.P. Krening, M. de Jong, B.A. Nock

(C-P6) [(^{111}In-DOTA)Lys^{0}]TATE: effects of Lys^{0}-introduction on AR4-2J tumor and kidney uptake in SCID mice
A.Tatsi, X. Kotsaka, T. Maina, E.P. Krenning, M. de Jong, B.A. Nock

(C-P7) Bimodal ligand-tailored hyperbranched polyglycerols for magnetic resonance and SPECT imaging studies
K. Saatchi, P. Soema, R.K. Kainthan, D.E. Brooks, U.O. Häfeli

(C-P8) In vivo SPECT/CT imaging of focused ultrasound induced extravasation
P. Sanches, R. Rossin, M. Böhmer, K. Tiemann, H. Grüll

(C-P9) Truncated minigastrin analogues with improved metabolic stability for diagnosis and therapy of medullary thyroid carcinoma
E. von Guggenberg, C. Rangger, M. Klingler, M. Ocak, J.K. Sosabowski, S.J. Mather, C. Decristoforo

(C-P10) Preparation and characterization of ^{90}Y- and ^{177}Lu-labeled cetuximab for applications in vitro and in vivo
M. Zenker, R. Bergmann, B. Mosch, M. Walther, J-M. Heldt, J. Pietzsch, H-J. Pietzsch, J. Steinbach

(C-P11) A retrospective study on the delayed soft-tissue to bone clearance of ^{99m}Tc-MDP
R. Gadiraju, S. Bommireddipalli, M. Ghesani

(C-P12) Preparation of therapeutic doses of ^{177}Lu or ^{90}Y DOTATATE for PRRT
D. Pawlak, W. Wojdowska, R. Mikolajczak

(C-P13) Dosimetric studies in normal mice of ^{177}Lu-DOTA-SP and ^{177}Lu-DOTA-His2-MG
N. P. Yepes, A.C. L. Bularte, N. Nevares, M. Zapata, J. Pérez, A.M. Rojo, J. Crudo

(C-P14) SPECT metalloprobes for monitoring *MDR1* P-glycoprotein-mediated transport at the blood-brain barrier (BBB)
J. Sivapackiam, S.E. Harpstrite, J.L. Prior, D. Piwnica-Worms, V. Sharma

(C-P15) Imaging biomarkers for diagnosis and quantification with positron emission tomography. Assistance to therapy
I. Velikyan, A. Sundin, B. Eriksson, H. Lundqvist, J. Sörensen, M. Bergström, B. Långström

(C-P16) Monitoring AAV mediated somatostatin receptor gene tranfer by PET with ^{68}Ga-DOTATATE
L. Aloj, M. Aurilio, V. Rinaldi, A. Faella, P. Annunziata, A. Capalbo, G. Cotugno, A. Auricchio

(C-P17) Imaging changes of P-glycoprotein activity in vivo with ^{68}Ga-Schiff base
M. Fellner, W. Dillenburg, F. Rösch, O. Thews

(C-P18) Can PET hypoxia tracers predict radioresistance?
K. Chia, A.J. Weeks, R.L. Paul, M. Cleij, P.J. Blower

(C-P19) Cu-64-galectin-3-specific peptide as an in vivo PET imaging agent
S.R. Kumar, F. Gallazzi, T.P. Quinn, S.L. Deutscher

(C-P20) A comparative study of ^{64}Cu-NO2A-bombesin antagonist and agonist ligands
P.K. Nanda, U. Pandey, S. Lane, G.L. Sieckman, T.J. Hoffman, T. Rold, C.J. Smith

(C-P21) Comparison of ^{68}Ga-siderophores for imaging *Aspergillus fumigatus* infections with PET
M. Petrik, H. Haas, A. Helbok, M. Blatzer, M. Schrettl, C. Decristoforo

(C-P22) Multiple patient batch production of ^{195m}Pt cisplatin and ^{195m}Pt carboplatin for use in drug risk assessment and optimisation of patient dose
G. Perkins, S.V. Smith

(C-P23) ^{45}Ti-cations as potential PET-tracers for cerebral neurodegeneration
D. Salber, J. Manuvelpillai, I. Spahn, S. Klein, F. Uhlenbrock, C. Palm, A. Matusch, S. Becker, K-J. Langen, H.H. Coenen