## Sunday , August 26

| Time | |
|---|---|
| 16:00 | **University of Coimbra guided tour** - must be registered - limited registrations |
| 18:00 | Welcome Cocktail - Centro Cultural Dom Dinis (Dom Dinis Cultural Centre) |

## Monday , August 27

| Time | |
|---|---|
| 09:00 | Registration |
| 10:30 - 12:10 | Opening Ceremony & Welcome Address |
| 12:10 - 12:30 | Major Faina - Cod Fishing (Pesca do Bacalhau)<br>*Álvaro Garrido*<br>Prof. da Fac. De Economia da Universidade de Coimbra (Honor Member of Confraria Gastronómica do Bacalhau - Ílhavo) |
| 12:30 - 14:00 | Lunch with Confraria Gastronómica do Bacalhau - Ílhavo |
| **14:00 - 15:40** | **Workshop 1: Cyclotron Hardware Developments**<br>***Chair: Didier Le Bars***<br>***Co-Chair: John Clark*** |
| 14:00 | **Control System Upgrade for The RDS-111 / Eclipse Cyclotron**<br>*Douglas Playle*<br>PET Technical Consulting Inc., Ankeny, IA, USA |
| 14:20 | **New ion source filament for prolonged ion source operation**<br>*D. Prevost, K. Jayamanna, L. Graham, S. Varah, C. Hoehr*<br>TRIUMF, Canada |
| 14:40 | **Development of New Target Stations for the South African Isotope Facility**<br>*Gideon Steyn, Lyndon Anthony, Faical Azaiez, Shadley Baard, Robert Bark, Hugo Barnard, Philip Beukes, Johan Broodryk, Lowry Conradie, John Cornell, Garrett De Villiers, Stuart Dolley, Herman Du Plessis, William Duckitt, Dirk Fourie, Mike Hogan, Ivan Kohler, Jacobus Lawrie, Chris Lussi, Joele Mira, Vuyo Mjali, Henric Mostert, Clive Naidoo, Fumelani Nemulodi, David Saal, Nieldane Stodart, Rainer Thomae, Johan Van Niekerk, Pieter van Schalkwyk*<br>iThemba LABS, South Africa |
| 15:00 | **Solid Target Developments at the Bern medical Cyclotron**<br>*Tommaso Stefano Carzaniga, Philipp Häffner, Andreas Türler, Saverio Braccini*<br>University of Bern, Switzerland |
| 15:20 | **A complex solution for the solid target irradiation, transport and processing – CRAB2RABBIT**<br>*Daniel Seifert, Jan Ralis, Milan Bunata, Ondrej Lebeda*<br>Nuclear Physics Institute of the CAS; Nuvia a.s., Czech Republic |
| 15:40 - 16:10 | Coffee Break |
| **16:10 - 17:00** | **Siemens presentation (Vendor Session) - James Hinderer** |
| 17:00 - 18:30 | Light Refreshments |
| **18:30** | **ICNAS visit G1** - must be registered - limited registrations |

## Tuesday , August 28

| Time | |
|---|---|
| 08:30 | Registration |
| **09:00 - 10:40** | **Workshop 2: Gallium 68**<br>***Chair: Antero Abrunhosa***<br>***Co-Chair: Katie Gagnon*** |
| 09:00 | **Cross-section measurements at the Bern Medical Cyclotron**<br>*Tommaso Stefano Carzanigaa, Nicholas van der Meulen, Andreas Türler, Diana Würtrich, Saverio Braccini*<br>University of Bern, Paul Scherrer Imnstitut (PSI), Switzerland |
| 09:20 | **Fused zinc targets for the production of gallium radioisotopes**<br>*C. Hoehr[1], S. Zeisler[1], J. Kumlin[1], A. Limoges[1], J. Siikanen[2]*<br>1) TRIUMF, Life Sciences Division, Vancouver, B.C., Canada; 2) Karolinska University Hospital, Stockholm, Sweden |
| 09:40 | **Radionuclide Impurities in Cyclotron-produced Gallium-68 and Zirconium-89 for Positron Emission Tomography**<br>*A. M. Dabkowski, A. A. Al-Obaidi, W. D. Evans, C. Marshall*<br>Cardiff University, UK |
| 10:00 | **Update on liquid target production and isolation of [68Ga]GaCl3**<br>*K. Gagnon, T. Eriksson, J. Frigell*<br>GE Healthcare, GEMS PET Systems, Uppsala, Sweden |
| 10:20 | **Fine Tuning 68Ga Production with a Liquid Target: Effect of Solution Composition and Irradiation Parameters**<br>*Mukesh K. Pandey[1], John P. Byrne[2] and Nicholas R. Schmit[1], Timothy R. DeGrado[1]*<br>1) Department of Radiology, Mayo Clinic Rochester, MN USA; 2) Brigham and Women's Hospital Boston MA, USA |
| 10:40 - 11:00 | Coffee break |

**11:00 - 13:00** **Poster Presentation & Discussion 1 (Posters 1 to 14)**
***Chair: Saverio Braccini***
***Co-Chair: Francisco Alves***

P1 **A Low-Cost Retrieval System for Preliminary Production of Radiometals**
*D. Schick-Marti [1], D. Frattinger [1], J. Root [1], T. Toporowski [2]* - 1) Sylvia Fedoruk Centre for Nuclear Innovation; 2) Physics and Engineering Physics, University of Saskatchewan

P2 **Achievements of TECHN-OSP project: TECHNetium direct-production in hOSPital**
*Petra Martini [1,2], Alessandra Boschi [2], Licia Uccelli [2,3], Micòl Pasquali [1,2], Adriano Duatti [2], Hanna Skliarova [1], Sara Cisternino [1], Gaia Pupillo [1], Liliana Mou [1], Giovanni Di Domenico [2], Massimo Loriggiola [1], Gianfranco Cicoria [4], Federico Zagni [4], Andrea Corazza [4], Mario Marengo [4], Sara Carturan [1], Michele Bello [1], Nikolay Uzunov [1], Carlos Rossi Alvarez [1], Alessandro Zanon [1], Paolo Buso [1], Gianpietro Bezzon [1], Juan Esposito [1]*
1) Legnaro National Laboratories of the National Institute of Nuclear Physics (INFN-LNL), Padova, Italy; 2) University of Ferrara; 3) S. Anna

P3 **Application of the Nirta® Solid irradiation system at the cyclotron Cyclone 18/9® at the HZDR in Leipzig**
*Karsten Franke, Alexander Mansel* - HZDR

P4 **Comparison of gas phase and wet methods of [11C]CH3I preparation for [11C]choline and [11C]methionine synthesis**
*P. Rajec1, P.Kruk, M. Leporis, I. Mítová, L. Rada, O.Szöllös, M. Štefečka, D. Tothová* - BIONT, Karloveska 63, 842 29 Bratislava, Slovakia

P5 **Construction of Solid Targetary for RI production at KOMAC**
*Sang-Pil Yun, Hyeok-Jung Kwon, Han-Sung Kim, Kye-Ryung Kim, Yong-sub Cho*- Korea Multi-purpose Accelerator Complex, Korea Atomic Energy Research Institute

P6 **Cyclotron production of 99mTc from highly enriched 100Mo**
*I. Cieszykowska, T. Janiak, W. Wojdowska, D. Pawlak, M. Żółtowska, T. Barcikowski, J.L .Parus, R. Mikołajczak* - National Centre for Nuclear Research, Radioisotope Centre POLATOM, Otwock, Poland

P7 **Determination of Incident Beam Energy at End of Beam Line on a GE PETtrace Cyclotron**
*Benjamin Bender, Colbin Erdahl, David Dick* - Department of Radiology, University of Iowa Hospitals & Clinics

P8 **Development of an exclusive target system for cyclotron-produced Sn-117m**
*Seyoung Oh* - Korea Institute of Radiological & Medical Sciences

P9 **Diffusion cladding of solid radioisotope production targets**
*William Gelbart, Richard R. Johnson* - ASD Inc.

P10 **Excitation functions of the deuteron-induced nuclear reaction on gold**
*Jaroslav Cervenak, Ondrej Lebeda* - Nuclear Physics Institute of the CAS

P11 **High yield automated production of the positron emitting radioisotope 86Y using a biomedical cyclotron**
*Thien Dinh, Stan Poniger, Harris Panopoulos, Henri Tochon-Danguy, Andrew Scott*- Department of Molecular Imaging & Therapy, Austin Health, Australia. Olivia Newton-John Cancer Research Institute, Australia

P12 **Indigenous development of Semi-Automated Solid target irradiation assembly compatible with PETtrace-800**
*Kanchan Kushwaha [1,2], Pravind Maletha [1], Sunil Kamble [3], Jyothish Babu [3], Tejindar Singh Sabharwal [3], Kavindra Pathak [3], Manish Kumar [3], Nand Kishore Prasad [3], Tushar Kanti Saha [3], Sharmila Banerjee [1, 2]* - 1) Radiation Medicine Centre, BARC, Mumbai, India; 2). Homi Bhabha National Institute, BARC, Mumbai, India; 3) Technical Physics Division, BARC, Mumbai, India

P13 **Initial Experiences on the Production of Astatine-211 at Fukushima Medical University using "CYPRIS MP-30" Cyclotron**
*Takashi Oda [1], Kohshin Washiyama [2], Miho Aoki [2], Manami Taniguchi [1], Jun Kato [1], Francisco Guerra Gomez [1], Toru Ishizuka [1], Kazuhiro Takahashi [2]* - 1) Sumitomo Heavy Industries, Ltd.; 2) Fukushima Medical University

P14 **Installation of PET Trace Cyclotron in Skopje**
*Marina Zdraveska Kochovska, Emilija Janevik, Sasho Nikolovski, Zlatko Filipovski*
JZU University institute for PET of R. of Macedonia

13:00 - 14:30 Lunch with a Target Dinosaur (must be registered)

**14:30 - 15:50** **Workshop 3: The Classics F18, C11, O15, N13**
**Chair: John Clark**
**Co-Chair: Stefan Zeisler**

14:30 **O-15 water with low energy protons**
*Mikael Jensen, Jesper Fonslet*
Hevesy Lab, DTU NUTECH, Denmark

14:50 **Production of 15O suitable for clinical use via the 16O(p,pn)15O reaction**
*Samuel Ferran, Jennifer Burkemper, Jean-Pierre Appiah, Suzanne Lapi*
Department of Radiology, University of Alabama at Birmingham, USA; Department of Chemistry, University of Alabama at Birmingham, USA

15:10 **Fast-Paced Oxygen-15 delivery to remote PET/MR camera (having fun with λ=0.34 min-1)**
*D. Le Bars, T. Iecker, C. Tourvieille*
CERMEP Imagerie du Vivant 59 Bd Pinel 69677 BRON - France

15:30 **Boron Nitride Nanotube Cyclotron Targets for Recoil-Escape Production of Carbon-11**
*Johanna L. Peeples, Sang-Hyon Chu, James P. O'Neil, Mustafa Janabi, Bruce W. Wieland, Matthew H. Stokely*
BTI Targetry, LLC, USA; National Institute of Aerospace, USA; Lawrence Berkeley National Laboratory, USA

15:50 - 16:10 Coffee break

**16:10 - 17:30** **Workshop 3: The Classics F18, C11, O15, N13**
**Chair: John Clark**
**Co-Chair: Mikael Jensen**

16:10 **[11C]CH4 from gas targets: the effects of forced convection and adsorption on target walls**
*Nicholas Zacchia, Trevor Uittenbosch, Ken Buckley, Thomas J. Ruth, Mark Martinez, Cornelia Hoehr*
TRIUMF, Canada; University of British Columbia, Canada

16:30 **[11C]CO2 with <8 MeV protons – Conventional and 3D printed targets**
*M. Pärnaste [1], M. Jensen [2], J. Larsson [1], M. Carlbom [1], F. Rensei [1]*
1) GE Healthcare, GEMS PET Systems, Uppsala, Sweden; 2) The Hevesy Laboratory, DTU-NUTECH, Roskilde, Denmark

16:50 **Radionuclide by-products characterization of a 2 hours 100µA 16MeV proton beam irradiation use for 18F-production with a single [18O]-H2O target**
*Guillaume Andreolety; Justin Panarin; Nick Walter; Gilles Triscone; Tomas Eriksson*
Advanced Accelerator Applications a Novartis company; HEPIA HES-SO University of Applied Sciences, Switzerland; GEMS PET Systems AB, Sweden

17:10 **High-yield and straight-forward production of ammonia (13N) using a Siemens Eclipse HP cyclotron**
*Mateusz Synowiecki, Julie Bernard, Lars Perk*
Radboudumc, Radboud Translational Medicine B.V., Nijmegen, The Netherlands

**17:45** Messias Cellars Visit - everybody must register - limited registrations

## Time — Wednesday , August 29

08:30 Registration

**09:00 - 10:40** **Workshop 4: Targetry**
**Chair: Jonathan W Engle**
**Co-Chair: Stefan Zeisler**

09:00 **Use of electrodeposition for manufacturing of targets**
*Thomas Sounalet*
SUBATECH, Université de Nantes; ARRONAX, France

09:20 **Ga-Co Compounds for Production of Germanium Radioisotopes**
*C.J. Kutyreff, P.A. Ellison, E. Aluicio-Sarduy, A.P. Olson, T.E. Barnhart, R.J. Nickles, J.W. Engle*
University of Wisconsin School of Medicine and Public Health, Department of Medical Physics, Cyclotron Research Group, Madison, USA

09:40 **Production and characterization of titanium-45**
*Ivis F. Chaple [1], Adriana V. Massicano [1], Brian Wright [1], Eszter Boros [2], Suzanne E. Lapi [1]*
1) University of Alabama at Birmingham, USA; 2) Chemistry, Stony Brook University, USA

10:00 **Production of Cu-61 in liquid targets**
*Sergio J.C. do Carmo [1], Vítor H.P. Alves [1], Antero J. Abrunhosa [2] and Francisco Alves [2,3]*
1) ICNAS — Produção, University of Coimbra, Portugal 2) ICNAS – University of Coimbra; Portugal; 3) IPC - Instituto Politécnico de Coimbra - Coimbra Health School, Portugal

10:20 **Optimized non-conventional radioisotopes production with industrial mid-energy cyclotron**
*Jozef Comor [1], Francisco Alves [2], Jean-Michel Geets [3], Samy Bertrand [3], Benoit Nactergal [3], Fabienne Devillet [3], Eric Kral [3], Sebastien de Neuter [3]*
1) ELEX Commerce, Serbia; 2) University of Coimbra, Portugal; 3) IBA SA, Belgium

10:40 - 11:00 Coffee break

**11:00 - 13:00** **Poster Presentation & Discussion 2 (Posters 15 to 27)**
**Chair: Cornelia Hoehr**
**Co-Chair: Saverio Braccini**

P15 **Isolation of cyclotron produced gallium by thermal diffusion and its use in preparation of Ga-PSMA11**
*Jonathan Siikanen, Serge K. Lyashchenko, Eva Burnazi, Ryan Kerslake, Alejandro Amor-Coarasa, Naga Vara Kishore Pillarsetty, Jason S. Lewis*
Karolinska University, Memorial Sloan Kettering Cancer Center, and Cornell University

P16 **Medical cyclotron solid target preparation by magnetron sputtering technique**
*Hanna Skliarova [1], Sara Cisternino [1], Gianfranco Cicoria [2], Mario Marengo [2], Emiliano Cazzola [3], Giancarlo Gorgonic [3], Vincenzo Palmieri [1,4]*
1) National Institute of Nuclear Physics-Legnaro National Laboratories (INFN-LNL), Italy, 2)"S. Orsola-Malpighi" Hospital, Medical Physics Dep., Bologna, Italy, 3) "Sacro Cuore" Hospital, Cyclotron and Radiopharmacy Department, Negrar (Verona), Italy, 4) University of Padova, Italy

P17 **Novel and Improved Solid Target for Medical Cyclotrons**
*Yiauchung Sheh, Gregory Ayzenberg, Serge Lyashchenko* - Memorial Sloan Kettering Cancer Center

P18 **Preparation of calcium targets for 44Sc production in cyclotron**
*Tomasz Janiak [1], Izabela Cieszykowska [1], Tadeusz Barcikowski [1], Dariusz Pawlak [1], Wioletta Wojdowska [1], Małgorzata Żółtowska [1], Jarosław Choiński [2], Renata Mikołajczak [1]* - 1) National Centre for Nuclear Research, Radioisotope Centre POLATOM, Otwock, Poland; 2) Heavy Ion Lab. at the Univ. of Warsaw, Poland

P19 **Production rate of PET radioisotopes by deuterons from linear accelerators**
*Ignacio Porras, Fernando Arias de Saavedra, Javier Praena* - Departamento de Fisica Atomica, Molecular y Nuclear, Universidad de Granada

P20 **Reduction of radiolysis in liquid targets for radiometal production: What not to do**
*Nicholas Zacchia, Mark Martinez, Stefan Zeisler, Cornelia Hoehr* - TRIUMF, University of British Columbia Department of Chemical and Biological Engineering

P21 **Report from the lab: UNAM cyclotron facility current status and perspectives**
*Armando Flores-Moreno, Adolfo Zarate-Morales, Miguel A. Avila-Rodriguez* - Universidad Nacional Autónoma de México

P22 **Selection of accelerator production routes of 67Cu**
*Sandor Takacs-* Institute for Nuclear Research, Hungarian Academy of Sciences

P23 **Simple, immediate and calibration-free cyclotron proton beam energy determination using commercial targets**
*Sergio J.C. do Carmo* [1], *P.M. de Oliveira* [1], *Francisco Alves* [2,3] - 1) ICNAS - Produção, Univ. of Coimbra, Coimbra, Portugal; 2) ICNAS – Institute for Nuclear Sciences Applied to Health; Univ. of Coimbra; Pólo das Ciências da Saúde, Coimbra, Portugal; 3) IPC - Instituto Politécnico de Coimbra - Coimbra Health School, Coimbra; Portugal

P24 **Solid targets system with in-situ target dissolution**
*William Gelbart, Richard R. Johnson -* ASD Inc.

P25 **Enhancement and Validation of a 3D-Printedsolid Target Holderat Cyclotron Facility in Perth, Australia**
*Sun Chan* [1], *DavidCryer* [1], *RogerPrice* [1,2] - 1) Department of Medical Technology and Physics, Sir Charles Gairdner Hospital, Perth, Western Australia; 2)School of Physics, University of Western Australia, Nedlands, Western Australia

P26 **New solid target irradiation system (SOLTARIS) for industrial mid-energy cyclotrons**
*Jozef Comor* [1], *Jean-Michel Geets* [2], *Benoit Nactergal* [2] - 1) ELEX Commerce, Bulevar Mihajla Pupina 10Z/IV Novi Beograd, Serbia; 2) Ion Beam Applications SA, Louvain-la-Neuve, Belgium

P27 **Cryogenic methods of Mo target cooling**
*Ruben Dallakyan, Gurgen Elbakyan, Albert Avetisyan, Nikolay Dobrovolski, Alexander Melkonyan* - A.Alikhanyan National Science Laboratory (Yerevan Physics Institute), Amenia

13:00 - 14:30 Lunch with a Target Dinosaur (must be registered)

**14:30 - 15:50 Workshop 5: Scandium**
**Chair: Suzanne Lapi**
**Co-Chair: David Dick**

14:30 **Targetry Developments for 44Sc Production Using Enriched CaO**
*Nicholas van der Meulen, Roger Hasler, Christiaan Vermeulen, Tommaso Carzaniga, Saverio Braccini*
Paul Scherrer Institute, Switzerland; University of Bern, Switzerland

14:50 **Production of medical Sc radioisotopes: 44Sc and 47Sc**
*I. Cieszykowska, D. Pawlak, W. Wojdowska, T. Janiak, M. Żółtowska, T. Barcikowski, J.L. Parus, R. Mikołajczak*
National Centre for Nuclear Research, Radioisotope Centre POLATOM, Otwock, Poland

15:10 **Proton induced production of the theranostic matched-pair radionuclides 43,44g,44m,47Sc for nuclear imaging and therapy**
*C. Shaun Loveless, George L. Diehl III, Jose R. Blanco, Suzanne E. Lapi*
University of Alabama at Birmingham, USA

15:30 **Radiochemical separation and chelation of Sc-44**
*Aeli Olson* [1], *Eduardo Aluicio-Sarduy* [1], *Lily Li* [2], *Thomas Kostelnik* [2], *Reinier Hernandez* [1], *Dawei Jiang* [1], *Emily Ehlerding* [1], *Todd Barnhart* [1], *Valery Radchenko* [3], *Paul Schaffer* [3], *Weibo Cai* [1], *Jonathan Engle* [1]
1) Department of Medical Physics, University of Wisconsin, USA; 2) Medicinal Inorganic Chemistry Group, Department of Chemistry, University of British Columbia, Canada; 3) Life Sciences Division, TRIUMF, Canada

15:50 - 16:10 Coffee break

**16:10 - 17:00 GE Healthcare presentation (Vendor Session)**
Enabling True Discovery with GE PET Radiopharmacy- *Philippe Preaudat*

17:00 - 18:30 Light refreshments

**18:30 ICNAS visit G2** - must be registered - limited registrations

## Time — Thursday , August 30

08:30 Registration

**09:00 - 10:40 Workshop 6: High Energy & Heavy Isotopes**
**Chair: Suzanne Lapi**
**Co-Chair: Tom Ruth**

09:00 **Research on production of 97Ru with the use of Radionuclide Yield Calculator at ARRONAX**
*Mateusz Sitarz* [1,2], *Etienne Nigron* [3], *Arnaud Guertin* [3], *Férid Haddad* [1], *Roberto Formento* [1]
1) GIP ARRONAX, France; 2) University of Warsaw, Poland; 3) SUBATECH laboratory – CNRS/IN2P3, IMT Atlantique, Nantes University, France

09:20 **Scaling up Ac-225 production at Brookhaven Linac Isotope Producer using multi target Thorium target stack**
*D. Medvedev, J. Fitzsimmons, J. Cooley, S. Kurczak, L. Mausner, C. S. Cutler, P. Pile, F. M. Nortier, K. John*
Collider-Accelerator Department, Brookhaven National Laboratory, Upton, NY, USA; Los Alamos National Laboratory, Los Alamos, NM, USA

09:40 **Electrodeposition and recovery of Sn targets for Sb-119 production**
*Aeli Olson* [1], *Paul Ellison* [1], *Valery Radchenko* [2], *Todd Barnhart* [1], *Jonathan Engle* [1]
1) Department of Medical Physics, University of Wisconsin, Madison, USA; 2) Life Sciences Division, TRIUMF, Vancouver, Canada

10:00 **A start to finish story of producing a new radioisotope (205-Bi) at the University of Washington Medical Cyclotron Facility**

*Eric Dorman, Yawen Li, Gregory Moffitt, David C. Argento*

University of Washington Medical Cyclotron Facility, USA; UW School of Medicine, USA

10:20 **Ac-225 and Pb-212 production at TRIUMF via proton-spallation of thorium metal**

*Andrew Kyle Henderson Robertson, Hua Yang, Stefan Zeisler, Valery Radchenko, Cornelia Hoehr, Paul Schaffer*

Life Sciences De, Germany

10:40 - 11:00 Coffee break

**11:00 - 13:00 Workshop 6: High Energy & Heavy Isotopes**
**Chair: Tom Ruth**
**Co-Chair: Meiring Nortier**

11:00 **High yield production and chemical isolation of high radionuclidic purity bromine-80m for targeted Auger radionuclide therapy**

*Paul A. Ellison, Aeli P. Olson, Todd E. Barnhart, R. Jerry Nickles, Jonathan W. Engle*

Department of Medical Physics, University of Wisconsin School of Medicine and Public Health, Madison, USA

11:20 **Production and separation of 230Pa for targeted alpha therapy applications utilizing progeny radionuclides 230U/226Th**

*Tara Mastren, Benjamin Stein, Gannon Parker, Valery Radchenko, Roy Copping, Mark Brugh, Christiaan Vermeulen, Francois Nortier, Eva Birnbaum, Kevin John, Michael Fassbender*

Los Alamos National Laboratory, Oak Ridge National Laboratory, USA

11:40 **Developments of exotic Rn at Orleans: 89Zr, 52Mn and 165Er**

*Isidro Da Silva, Louis Frealle*

CNRS, Conditions Extrêmes et Matériaux : Haute Température et Irradiation (CEMHTI), France

12:00 **Radiolysis in a Water-Filled Heavy-Ion Target**

*Hannah Clause, Emily Abel, Greg Severin*

National Superconducting Cyclotron Laboratory at Michigan State University, USA

12:20 **Using an Aqueous Target and a Fast Heavy Ion Beam for Radionuclide Production at a Heavy-Ion Fragmentation Facility**

*Emily Paige Abel, Hannah Clause, Greg Severin*

Michigan State University, USA

12:40 **State of art of cyclotron solid target preparation at INFN-LNL for production of medical radionuclides in the framework of LARAMED project**

*Hanna Skliarova[1], Sara Cisternino[1], Gianfranco Cicoria[2], Mario Marengo[2], Juan Esposito[1], Carlos Rossi Alvarez[1], Vincenzo Palmieri[1,3]*

1) National Institute of Nuclear Physics-Legnaro National Laboratories (INFN-LNL), Italy; 2)"S. Orsola-Malpighi" Hospital, Medical Physics Department, Bologna, Italy; 3) University of Padova, Italy

13:00 - 14:30 Lunch with a Target Dinosaur (must be registered)

**14:30 - 15:50 Workshop 6: High Energy & Heavy Isotopes**
**Chair: David Dick**
**Co-Chair: Mikael Jensen**

14:30 **Advanced Clinical Research Center of Fukushima Medical University: two cyclotrons installed facility for basic research and clinical application of medical radioisotopes**

*K. Takahashi, H. Tominaga, K. Washiyama, K. Nishijima, M. Aoki, S. Zhao, N. Ukon, N. Oriuchi*

Advanced Clinical Research Center, Fukushima Medical University, Japan

14:50 **Introduction of the new Center for Radiopharmaceutical Cancer Research at Helmholtz-Zentrum Dresden-Rossendorf**

*Martin Kreller[1], Hans-Juergen Pietzsch[1], Martin Walther[1], Jaden Sader[2], Russel Watt[2], Henrik Tietze[3], Peter Kaever[3], Frank Fuechtner[1], Joerg Steinbach[1], Stephan Preusche[1]*

1) Helmholtz-Zentrum Dresden Rossendorf, Institute of Radiopharmaceutical Cancer Research, Dresden, Germany; 2) Advanced Cyclotron Systems, Inc., Richmond, Canada; 3) Helmholtz-Zentrum Dresden Rossendorf, Department of Research Technology, Dresden, Germany

15:10 **Arronax a facility to produce nonstandard radionuclides and radiopharmaceuticals**

*Roberto Formento, Férid Haddad*

GIP Arronax and Subatech, France

15:30 **Production of Radiochemical Products for Research, and Industry**

*A. J. DeGraffenreid, K. Olewine, J. Parker, G. Barbin*

Lantheus Medical Imaging, USA

15:50 - 16:10 Coffee break

**16:10 - 17:30** **Workshop 6: High Energy & Heavy Isotopes**
**Chair: Katie Gagnon**
**Co-Chair: Jonathan W. Engle**

16:10 **The Role of Thermal Contact in High Power Targets**
*Meiring Nortier, Rishi Bhandia, Eva Birnbaum, Jason Cooley, Kevin John, Chris Martinez, Eric Olivas*
Los Alamos National Laboratory, USA

16:30 **Assessment of the Predictive Capabilities of Two-Way Multi-Physics Coupling to Model High Power RbCl Isotope Production Targets**
*Ellen O'Brien, Joseph Doster, Meiring Nortier, Eric Olivas, Matthew Stokely*
Los Alamos National Laboratory, USA; North Carolina State University, USA; BTI Targetry, LLC, USA

16:50 **Isotope Production Activities at LBNL and LANSCE-IPF: Development of a new Nb(p,x)90Mo Monitor Reaction and Fe,La(p,x) Production Cross-Section Measurements**
*Andrew S. Voyles [1], Shamsu Basunia [2], Lee A. Bernstein [1,2], Eva R. Birnbaum [3], Jon W. Engle [4], Stephen A. Graves [5], Toshihiko Kawano [6], Amanda M. Lewis [1], Eric F. Matthews [1], Jon Morrell [1], Meiring Nortier [3], Alexander Springer [7]*
1) Dep. of Nuclear Engineering - UC Berkeley, USA; 2) Nuclear Science Division - Lawrence Berkeley National Laboratory, USA; 3) Isotope Production Facility - Los Alamos National Lab., USA; 4) Department of Medical Physics - Univ. of Wisconsin - Madison, USA; 5)Dep. of Radiation Oncology - Univ. of Iowa, USA; 6) Theoretical Division - Los Alamos National Lab., USA; 7) Karlsruhe Institute of Technology,

17:10 **Kicking the tires of the upgraded Isotope Production Facility at Los Alamos National laboratory**
*Christiaan Vermeulen [1], Meiring Nortier [1], Eva Birnbaum [1], Kevin John [1], David Reass [1], Michael Connors [1], Adam Davis [1], Martin Pieck [2], Eric Olivas [2], Austen Patten [2], Scott Baily [2], Keith Woloshun [2], Heath Watkins [2], Erik Swensen [3]*
*1) Chemistry Division, Los Alamos National Lab., Los Alamos, NM, USA; 2) Accelerator Operations Technology Division, Los Alamos National Lab., Los Alamos, NM, USA; 3) Applied Engineering Technology Division, Los Alamos National Lab., Los Alamos, NM, USA*

20:00 Cocktail + Gala Dinner - Palácio de São Marcos (Palace of St. Mark), São Silvestre, Coimbra

## Time — Friday , August 31

**09:00 - 11:00** **Workshop 7: Target Chemistry**
**Chair: Jerry Nickles**
**Co-Chair: Tom Ruth**

09:00 **Laser Processing Based Technology Of Mo Target Preparation And Target Chemistry Of 99mTc Extraction**
*Ruben Dallakyan, Gurgen Elbakyan, Albert Avetisyan, Nikolay Dobrovolski, Alexander Melkonyan*
A.Alikhanyan National Science Laboratory (Yerevan Physics Institute), Armenia

09:20 **Specific activity, peroxides, and kit labelling using cyclotron produced [99mTc]TcO4-**
*B. Thomas [1], J. Entrada [1], K. Gagnon [2], J. Wilson [1], D. Abrams [1], A.J.B. McEwan [1], J.D. Andersson [1]*
1) Medical Isotope and Cyclotron Facility, University of Alberta, Department of Oncology, Edmonton, AB, Canada; 2) Cyclotrons and TRACER Center, GE Healthcare, GEMS PET Systems AB, Sweden

09:40 **Chromium/Manganese Separation via Ion Exchange Column with Application to Octadentate Chelator**
*Kendall E. Barrett [1], Eduardo Aluicio-Sarduy [1], Xiaozhu Wang [2], Christopher Kutyreff [1], Aeli P. Olson [1], Paul A. Ellison [1], Todd E. Barnhart [1], Robert J. Nickles [1], Jonathan W. Engle [1]*
1) University of Wisconsin-Madison, Department of Medical Physics, USA; 2) University of British Columbia, Department of Chemistry, USA

10:00 **Improving specific activity of Cu-67 at Brookhaven Linac Isotope Producer**
*D. G. Medvedev, V. Sanders, A. Degraffenreid, L. Muench, A. Goldberg, C. S. Cutler*
Collider-Accelerator Department, Brookhaven National Laboratory, Upton, NY, USA

10:20 **A Simple and Efficient Method to Recover 64Ni from Electrolytic Solutions**
*E.A. Aguilar-Ortiz, J.C. Manrique-Arias, A.R. Jalilian, M.A. Avila-Rodriguez*
Unidad Radiofarmacia-Ciclotrón, División de Investigación, Facultad de Medicina, Universidad Nacional Autónoma de México, Mexico; Department of Nuclear Sciences and Applications, International Atomic Energy Agency, Vienna, Austria

10:40 **Automated system for "doses on demand" production and remote dispensing of N-13 Ammonia and F-18 Sodium Fluoride**
*Erol Bars*
Isolab Technology LLC, USA

11:00 **Galileo An automated synthesis module for development and manufacturing of novel radio-metallic tracers**
*Erol Bars, Anthony Belanger, Stephen Dragotakes*
Dana Farber Molecular Cancer Imaging Facility (MCIF), USA; Brigham and Woman's Hospital (BICOR), USA

11:20 - 11:45 Coffee break

**11:45 - 13:00** **Closing Ceremony**

13:00 - 15:00 Lunch

**15:30** **ICNAS visit G3** - must be registered - limited registrations
16:00 **University of Coimbra guided tour -** must be registered - limited registrations