

Curriculum Vitae

Personal information **Sergio Todde**

Work experience

1. Employer: Tecnomed, Foundation of the University of Milano_Bicocca
 - Start date: 112010
 - End date:
 - Position: Director
 - Activities: Management, organization of a University Foundation
 - Country: Italy
2. Employer: University of Milano_Bicocca; Tecnomed, Foundation of the University of Milano_Bicocca, Via Pergolesi 33, 20052 Monza
 - Start date: 092009
 - End date:
 - Position: Senior Investigator _ Head of Radiopharmacy
 - Activities: Synthesis, development and quality control of radiopharmaceuticals labelled with positron emitting isotopes
 - _ Responsible of quality assurance system dedicated to the production of PET radiopharmaceuticals in agreement with Italian and European guidelines
 - _ Teaching and tutorial activity at the University of Milano_Bicocca. Teaching and tutorial activity at the University of Ferrara. Teaching and tutorial activity at the University of Pavia
 - Country: Italy
3. Employer: University of Milano_Bicocca, c/o Cyclotron/PET Centre of Scientific Institute Hospital San Raffaele, Via Olgettina 60, 20132, Milano
 - Start date: 042002
 - End date: 082009
 - Position: Senior Investigator
 - Activities: Synthesis, development and quality control of radiopharmaceuticals labelled with positron emitting isotopes
 - _ Supervisor of the two cyclotrons hosted by the Facility, namely RDS Eclipse RD and IBA Cyclone 18/9
 - _ Implementation of quality assurance system dedicated to the production of PET radiopharmaceuticals
 - _ Teaching and tutorial activity at the University of Milano_Bicocca. Teaching and tutorial activity at the University of Ferrara. Teaching and tutorial activity at the University of Pavia
 - Country: Italy
4. Employer: University of Milano_Bicocca, c/o Cyclotron/PET Centre of Scientific Institute Hospital San Raffaele, Via Olgettina 60, 20132, Milano
 - Start date: 012000
 - End date: 042002
 - Position: Investigator
 - Activities: Synthesis, development and quality control of radiopharmaceuticals labelled with positron emitting isotopes
 - _ Supervisor of the two cyclotrons hosted by the Facility, namely RDS Eclipse RD and IBA Cyclone 18/9
 - Country: Italy
5. Employer: Kernforschungsanlage, Institut fuer Nuklearchemie. D_52425 Juelich, Germany
 - Start date: 051992
 - End date: 101992
 - Position: Fellow Investigator
 - Activities: Automated production of C_11 labelled radiopharmaceuticals
 - Country: Germany
6. Employer: University of Milano, c/o Cyclotron/PET Centre of the Scientific Institute Hospital San Raffaele, Via Olgettina 60, 20132, Milano
 - Start date: 101989
 - End date: 121999
 - Position: Investigator
 - Activities: Synthesis, development and quality control of radiopharmaceuticals labelled with positron emitting isotopes
 - Country: Italy

Education and training

1. Subject: University of Milano
 - Start date: 111980
 - End date: 101987
 - Qualification: Degree in Biology
 - Organisation:
 - Country: Italy

Additional information

Publications

n. 52 articles published by peer reviewed international scientific journals editor of a book on radiochemistry

- Magni F, Casati R, Todde S, Colombo F, Fazio F, and Galli Kienle M. Sensitive GC-MS method for the determination of specific-activity of $16\alpha^{18}\text{F}$ Fluoro-estra-1,3,5(10)-triene-3,17b-diol. *Appl Radiat Isot*, 1992; 43: 1299-1300.
- Moresco RM, Casati R, Lucignani G, Carpinelli A, Schmidt K, Todde S, Colombo F, and Fazio F. Systemic and cerebral kinetics of $16\alpha^{18}\text{F}$ fluoro-17b-estradiol: a ligand for the in vivo assessment of estrogen receptor parameters. *J Cerebr Blood F Met*, 1995; 15: 301-311.
- Cappa SF, Perani D, Grassi F, Bressi S, Alberoni M, Franceschi M, Bettinardi V, Todde S, and Fazio F. A PET follow-up study of recovery after stroke in acute aphasics. *Brain Lang*, 1997; 56: 55-67.4.
- Matarrese M, Soloviev D, Todde S, Magni F, Colombo F, Galli Kienle M, and Fazio F. Synthesis of [O-methyl- ^{11}C]fluvoxamine - a potential serotonin uptake Uptake Site Radioligand. *Appl. Radiat. Isot.* 1997; 48:749-754
- Matarrese M, Soloviev D, Moresco RM, Ferri V, Simonelli P, Magni F, Colombo D, Todde S, Carpinelli A, Fazio F and Galli Kienle M. Synthesis and Biodistribution of (R,S)-[O-methyl- ^{11}C]-1-[3-(5-methoxy-1,2,3,4-tetrahydro-1-naphtalenyl)propyl]-4-phenylpiperazine (PNU-157760), A Putative Radioligand for 5-HT1A Receptors. *Bioorganic Chemistry* 1998; 26:91-102
- Angelini G, Carnevaletti F, Margonelli A, Corsi G, Ragni P, Fazio F, Todde S, Tinti O. Mild synthesis of [N-methyl- ^{11}C]-isovaleroyl-(L)-carnitine. The usefulness of a tritium approach. *Appl. Radiat. Isot.* 1999; 50:303-309.
- Studenov AR, Berridge MS, Soloviev DV, Matarrese, Todde S. High yield synthesis of [^{11}C]-Acetone through selective quenching of methyl lithium. *Nucl. Med. Biol.* 1999; 26: 431-435
- Matarrese M, Soloviev D, Moresco RM, Todde S, Simonelli P, Colombo D, Magni F, Carpinelli A, Fazio F, Galli Kienle M. Synthesis and in vivo evaluation of 3-[^{11}C]methyl-(3-methoxy-naphthalen)-2-yl-(1-benzyl-piperidin)-4-yl-acetate (SB-235753), as a putative dopamine D_4 receptor antagonist for PET. *J. Labelled Cpd. Radiopharm.* 2000; 43: 359-374
- Todde S, Moresco RM, Froestl W, Stampf P, Matarrese M, Carpinelli A, Magni F, Galli Kienle M, Fazio F. Synthesis and in vivo evaluation of [^{11}C]CGP62349, a new GABA_B receptor antagonist. *Nucl. Med. Biol.* 2000; 27(6): 565-569
- Moresco RM, Matarrese M, Soloviev D, Simonelli P, Rigamonti M, Gobbo C, Todde S, Carpinelli A, Galli Kienle M, Fazio F. Synthesis and in vivo evaluation of [^{11}C]ICI118551 as a putative subtype selective β -adrenergic radioligan. *Int. J. Pharm.* 2000; 204: 101-109

- Todde S, Moresco RM, Simonelli P, Baraldi PG, Cacciari B, Spalluto G, Varani K, Monopoli A, Matarrese M, Carpinelli A, Magni F, Galli Kienle M, Fazio F. Design, radiosynthesis and biodistribution of a new potent and selective ligand for the in vivo imaging of adenosine A_{2A} receptor system using positron emitting tomography. *J. Med. Chem.* 2000; 43: 4359-4362
- Soloviev D, Matarrese M, Moresco RM, Todde S, Bonasera T, Sudati F, Simonelli P, Magni F, Colombo D, Carpinelli A, Galli Kienle M, Fazio F. Asymmetric synthesis and preliminary evaluation of (R)- and (S)-[¹¹C]bisoprolol, a putative β-selective adrenoceptor radioligand. *Neurochem. Int.* 2001; 38: 169-180
- Carpinelli A, Matarrese M, Moresco RM, Simonelli P, Todde S, Magni F, Galli Kienle M, Fazio F. Radiosynthesis of [¹²³I]βCIT, a selective ligand for the study of dopaminergic and serotonergic system in human brain. *Appl. Radiat. Isot.* 2001; 54: 93-86
- Moresco RM, Messa C, Lucignani G, Rizzo G, Todde S, Gilardi MC, Grimaldi A, Fazio F. PET in Psychopharmacology. *Pharmacol. Res.* 2001, Sep 44(3):151-9
- Matarrese M, Moresco RM, Cappelli A, Anzini M, Vomero S, Simonelli P, Verza E, Magni F, Sudati F, Soloviev D, Todde S, Carpinelli A, Galli Kienle M, Fazio F. Labeling and evaluation of N-[¹¹C]methylated quinoline-2-carboxamides as potential radioligands for visualization of peripheral benzodiazepine receptors. *J. Med. Chem.* 2001, 44:579-585
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- Matarrese M, Moresco RM, Romeo G, Turolla EA, Simonelli P, Todde S, Belloli S, Carpinelli A, Magni F, Russo F, Galli Kienle M, Fazio F. [¹¹C]RN5: a new agent for the in vivo imaging of myocardial α₁-adrenoceptors. *Eur J Pharmacol.* 2002, 453(2-3):231-238
- Matarrese M, Soloviev D, Todde S, Neutro F, Petta P, Carpinelli A, Brussermann M, Galli Kienle M, Fazio F. Preparation of [¹¹C]radioligands with high specific activity on a commercial PET tracer synthesizer. *Nucl. Med. Biol.* 2003; 30: 79-83
- Matarrese M, Salimbeni A, Turolla EA, Turozzi D, Moresco RM, Poma D, Magni F, Todde S, Rossetti C, Sciarrone MT, Bianchi G, Galli Kienle M, Fazio F. ¹¹C-Radiosynthesis and preliminary human evaluation of the disposition of the ACE inhibitor [¹¹C]zofenoprilat. *Bioorg. Med. Chem.* 2004, 12: 603-611

- Moresco RM, Todde S, Belloli S, Simonelli P, Panzacchi A, Rigamonti M, Galli-Kienle M, Fazio F. In vivo imaging of adenosine A(2A) receptors in rat and primate brain using [(11)C]SCH442416. *Eur J Nucl Med Mol Imaging*. 2005, 32(4): 405-413
- Turolla EA, Matarrese M, Belloli S, Moresco RM, Simonelli P, Todde S, Fazio F, Magni F, Galli Kienle M, Leopoldo M, Berardi F, Colabufo NA, Lacivita E, Perrone R. ¹¹C-labeling of N-[4-[4-(2,3-Dichlorophenyl)piperazin-1-yl]butyl]arylcarboxamide derivatives and evaluations as potential radioligands for PET imaging of dopamine D₃ receptors. *J.Med.Chem.* 2005,48: 7018-7023
- Carpinelli A, Magni F, Cattaneo A, Matarrese M, Turolla E, Todde S, Galli Kienle M, Fazio F. Improved synthesis and radiolabelling of [¹¹C]MP4A, a suitable ligand for the investigation of the cholinergic system using PET. *Appl. Radiat. Isot.* 64 (2006) 182–186
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- Calandrino R, Del Vecchio A, Savi A, Todde S, Belloli S. Intake risk and dose evaluation methods for workers in radiochemistry

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- Matarrese M, Bedeschi P, Scardaoni R, Sudati F, Savi A, Pepe A, Masiello V, Todde S, Gianolli L, Messa C, Fazio F. Automated production of copper radioisotopes and preparation of high specific activity [^{64}Cu]Cu-ATSM for PET studies. *Appl. Radiat. Isot.* 2010; 68: 5-13
- Elsinga P, Todde S, Penuelas I, Meyer G, Farstad B, Faivre-Chauvet A, Mikolajczak R, Westera G, Gmeiner-Stopar T, Decristoforo C. Guidance on Current Good Radiopharmacy Practice (cGRPP) for the small-scale preparation of radiopharmaceuticals. *Eur. J. Nucl. Med. Mol. Imaging.* 2010; 37: 1049-1062
- Crivellaro C, Signorelli M, Guerra L, De Ponti E, Buda A, Dolci, C, Pirovano C, Todde S, Fruscio R, Messa C. ^{18}F -FDG PET/CT can predict nodal metastases but not recurrence in early stage uterine cervical cancer. *Gynecologic Oncology.* 2012; 127: 131-135
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- Koziorowski J, Behe M, Decristoforo C, Ballinger J, Elsinga P, Ferrari V, Kolenc Peitl P, Todde S, Mindt T.L. Position paper on

requirements for toxicological studies in the specific case of radiopharmaceuticals. *EJNMMI Radiopharmacy and Chemistry*. 2016; 1: 1.

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- Decristoforo C, Penuelas I, Patt M, Todde S. European regulation for the introduction of novel radiopharmaceuticals in the clinical setting. *Quarterly Journal of Nuclear Medicine and Molecular Imaging*. 2017, 61(2): 135-144
- Todde S, Kolenc Peitl, Elsinga P, Kozirowski J, Ferrari V, Ocak EM, Hjelstuen O, Patt M, Mindt TL, Behe M. Guidance on validation and qualification of processes and operations involving radiopharmaceuticals. *EJNMMI Radiopharmacy and Chemistry*. 2017; 2:8
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- Dolci C, Spadavecchia C, Crivellaro C, De Ponti E, Todde S, Morzenti S, Turolla EA, Crespi A, Guerra L, Landoni C. Treatment response assessment in [^{18}F]FDG-PET/CT oncology scans: impact of count statistics variation and reconstruction protocols. *Physica Medica*. 2019; 57: 177-182
- Gillings N, Todde S, Behe M, Decristoforo C, Elsinga P, Ferrari V, Hjelstuen O, Kolenc Peitl P, Kozirowski J, Laverman P, Mindt TL, Ocak M and Patt M. EANM Guideline on the validation of

analytical methods for radiopharmaceuticals. EJNMMI Radiopharmacy and Chemistry. 2020. 5:7, <https://doi.org/10.1186/s41181-019-0086-z>.

- Gillings N, Hjelstuen O, Ballinger J, Behe M, Decristoforo C, Elsinga P, Ferrari V, Kolenc Peitl P, Koziorowski J, Laverman P, Mindt TL, Neels O, Ocak M, Patt M, Todde S. Guideline on current good radiopharmacy practice (cGRPP) for the small-scale preparations of radiopharmaceuticals. EJNMMI Radiopharmacy and Radiochemistry. 2021; 6:8, <https://doi.org/10.1186/s41181-021-00123-2>
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- S. Boschi, S. Todde. From radiotracer to radiopharmaceutical: a philosophical approach. EJNMMI. 2021. <https://doi.org/10.1007/s00259-021-05588-6>
- Iannone MN, Stucchi S, Turolla EA, Beretta C, Ciceri S, Chinello C, Pagani L, Todde S, Ferraboschi P. Synthesis and automated fluorine-18 radiolabeling of new PSMA-617 derivatives with a CuAAC radiosynthetic approach. J. Labelled Compd Radiopharm. 2022; 65: 48-62. DOI: 10.1002/jlcr.3959.
- De Ponti E, Crivellaro C, Morzenti S, Monaco L, Todde S, Landoni C, Elisei F, Musarra M, Guerra L. Clinical Application of high sensitivity BGO PET/CT scanner: effects of acquisition protocols and reconstruction parameters on lesion quantification. Current Radiopharmaceuticals. 2022, doi: [10.2174/1874471015666220107100200](https://doi.org/10.2174/1874471015666220107100200)
- [Gillings N, Hjelstuen O, Behe M, Decristoforo C, Elsinga PH, Ferrari V, Kiss OC, Kolenc P, Koziorowski J, Laverman P, Mindt TL, Ocak M, Patt M, Todde S, Walte A. EANM guideline on risk management for radiopharmaceuticals. EJNMMI. 2022; https://doi.org/10.1007/s00259-022-05738-4](https://doi.org/10.1007/s00259-022-05738-4)
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- Boschi S, Todde S. PET radiopharmacy and automation. Nuclear Medicine and Molecular Imaging. 2022 (1); 227-234.

Projects

- development of new PET radiopharmaceuticals
- development of new targets for radionuclide production

Memberships

- Member of the Italian Group of Radiopharmaceutical Chemistry (GICR)
- Member of the Italian Medicine Agency (AIFA) working group on Radiopharmaceuticals
- Member of the European Association of Nuclear Medicine

Other Relevant Information

Collaboration with the International Atomic Energy Agency (IAEA) and World Health Organization (WHO)