Cristina Lois Gómez

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Summary

9 years of experience in Biomedical Imaging, covering a wide range of topics from detector development to clinical applications. Proven track record of successful management, innovation, and impact in bioengineering. Proven ability to work in a team environment on multi-disciplinary, international projects, as well as independently. Proven communication skills.

Professional Experience

Harvard Medical School & Massachusetts General Hospital — Boston, MA
Research Fellow in Radiology — *Jul. 2015–present*

- Applied PET/MR imaging to search for markers of disease and progression in Huntington's Disease. This is being used in a clinical trial to test new treatments.
- Worked on multi-modal human neuroimaging to explore and develop new concepts in healthy and diseased brain function.

Massachusetts Institute of Technology — Cambridge, MA
"M+Vision" Research Fellow — *Jul. 2012–June 2015*

- Intensive training on identifying unmet clinical needs and design solutions with high translational potential and marketability.
- Investigated the biological basis of the placebo effect in depression using PET/MR imaging.
- Worked on the development of a new PET tracer for early assessment of treatment response in melanoma patients. Received a $283K grant as co-PI to develop this project.

Hospital Clinic Barcelona — Barcelona, Spain
Visiting Researcher — *Jan. 2012– Jun. 2012*

Evaluated dual-time point PET for prediction of treatment response in lung cancer patients.

Imaging Science Institute — Tübingen, Germany
Visiting Researcher — *Feb. 2011– Jul. 2011*

Analyzed the effect of MRI contrast agents on PET quantification for PET/MRI applications, and demonstrated how to avoid potential artifacts that could impact clinical decisions.

University of Santiago de Compostela — Santiago de Compostela, Spain
"Ángeles Alvariño" Fellow — *Dec. 2008–Dec 2011*

Designed and built an affordable preclinical SPECT system by reusing a clinical gamma-camera. Recipient of a 60K € grant as PI to carry out the project. Supervised a graduate student.

University of Tennessee Medical Center — Knoxville, TN
Postdoctoral Research Associate — *Feb. 2007– Jul. 2008*

Demonstrated the benefits of incorporating time-of-flight information in PET/CT by carrying out a study on a large population of 100 oncology patients. Published two highly cited papers, one chosen as cover in *Journal of Nuclear Medicine*.

University of Santiago de Compostela — Santiago de Compostela, Spain
Postdoctoral Research Assistant — *Sep. 2006–Jan 2007*

Measured the neutron fluency in a linear accelerator to estimate its contribution to the radiation dose in radiotherapy patients.

University of Zürich Zürich, Switzerland
&
University of Santiago de Compostela Santiago de Compostela, Spain
Research & Teaching Assistant *Sep. 2002–Jun. 2006*
Contributed to the design and development, and carried out performance studies of the silicon microstrip detectors installed in the Silicon Tracker of the LHCb experiment at CERN.

Education

PhD in Physics, with European Doctorate *Oct. 2001 - May 2006*
University of Santiago de Compostela Santiago de Compostela, Spain

MSc in Particle Physics & Non-linear Dynamics *Oct. 2001 - Sep. 2003*
University of Santiago de Compostela Santiago de Compostela, Spain

BSc in Physics *Oct. 1995 - Sept. 2001*
University of Santiago de Compostela Santiago de Compostela, Spain

Leadership service

Chair of the " PET imaging" session at the 2011 IEEE Nuclear Science Symposium and Medical Imaging Conference, Valencia, Spain.

Referee for *Medical Physics*, *Physics in Medicine and Biology*, and *Zeitschrift für Medizinische Physik*.

Management Committee Member to EU COST Action TD1007 for "Bimodal PET-MRI molecular imaging technologies and applications for in vivo monitoring of disease and biological processes".

Reviewer for the Instituto de Salud Carlos III Grants 2015, in the modality of Technological Developments for Health Applications (AES 2015).

Skills

- Imaging techniques: (TOF)-PET/CT, SPECT, and PET/MR.
- Radioactive Facilities Supervisor License, Spanish Nuclear Safety Council, 2009.
- Experience in international, large-scale R&D environments.
- Experience working in multi-disciplinary teams with members from academia, industry, and clinics.
- Principal Investigator in 3 research grants and collaborator in other 11 grants and contracts with industry.
- Authored +60 scientific publications, and delivered +20 invited talks and conference presentations.
- Languages: Native Spanish, Native Galician, good English, and basic German.

Awards

M+Vision Fellowship
Madrid-MIT M+Vision Consortium *Jul. 2012*
Ranked 2nd among more than 100 applicants.

"Best Oral Presentation in Nuclear Medicine"
Spanish Nuclear Society Annual Meeting *Oct. 2010*

Front cover of the Journal of Nuclear Medicine, Vol. 50 *Aug. 2009*
Featuring results on "Impact of Time-of-Flight on PET Tumor Detection".

José Castillejo Fellowship
Ministerio de Educación y Ciencia, Spain *Sep. 2007–Jun. 2008*

Ángeles Alvariño Fellowship
Xunta de Galicia, Spain *Dec. 2008–Dec. 2011*

Ranked 2nd among more than 200 applicants.

Predoctoral research grant
Universidad de Santiago de Compostela, Spain *Oct. 2005–May 2006*
Excma. Diputación Provincial de A Coruña, Spain *Jul. 2003–Jul. 2004*
Excma. Diputación Provincial de A Coruña, Spain *Jul. 2002–Jul. 2003*

Selected Publications

See also my Google Scholar profile at bit.ly/cloispubs.

- P. Aguiar *et al.*, "A portable device for small animal SPECT imaging in clinical gamma-cameras", *JINST* **9** P07004 (2014).
- C. Lois *et al.*, "Effect of MR contrast agents on quantitative accuracy of PET in combined whole-body PET/MR imaging", *Eur. J. Nucl. Med.*, **39**, 1756 (2012).
- C. Lois *et al.*, "An assessment of the impact of incorporating Time-of-Flight (TOF) into clinical PET/CT imaging", *J. Nucl. Med.*, **51**, 1315 (2010).
- D. J. Kadrmas *et al.*, "Impact of Time-of-Flight on PET Tumor Detection", *J. Nucl. Med.*, **50**, 3104 (2009).
- AA. Alves *et al.* (The LHCb Collaboration), "The LHCb Detector at the LHC", Journal of Instrumentation 3 (2008).