Leonard G. Luyt, Ph.D. Page 1 of 9

# CURRICULUM VITAE LEONARD G. LUYT

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## PART A - PROFESSIONAL HISTORY

## **Professional Experience**

Assistant Professor Departments of Oncology, Chemistry, and Medical Imaging Western University, London, ON Canada	2005-present
Principal Investigator, London Regional Cancer Program	2005-present
Director, SPECT Radiochemistry and Medicinal Chemistry, Lawson Imaging Program	2007-present
Senior Medicinal Chemist - Berlex Laboratories (Schering AG), USA	2002–2004
Education/Academic Experience	
Post-Doctoral Fellow - University of Illinois at Urbana-Champaign, USA • Supervisor: <u>Prof. John A. Katzenellenbogen</u> , <i>Swanlund Professor of Chemistry</i>	1999-2002
Doctorate - Organic Chemistry, University of Western Ontario, Canada	1994-1999

#### **Awards**

Academic Excellence Award (Research and Teaching), Department of Oncology, Western University; 2013.

1990-1994

Early Researcher Award: Advances in the Design of Cancer Targeted Molecular Imaging Probes.

• Supervisor: <u>Prof. Duncan H. Hunter</u>, *Professor of Chemistry* 

• Supervisor: Prof. Robert P. Lemieux, Professor of Chemistry

Bachelor of Science - Engineering Chemistry, Queen's University, Canada

### **PART B – CONTRIBUTIONS**

### **Publications (past 5 years)**

24. Cho, CF; Behnam Azad, B; Luyt, LG; Lewis, JD. High-throughput screening of one-bead one-compound peptide libraries using intact cells. *ACS Combi. Sci.* 15(8), 393-400, 2013. DOI: 10.1021/co4000584 (IF = 3.6)

Leonard G. Luyt, Ph.D. Page 2 of 9

23. Esguerra, KVE; Akentieva, N; Cho, C-F; Lewis, JD; Turley, EA, Luyt, LG. Identification, Design and Synthesis of Tubulin-Derived Peptides as Novel High Affinity Ligands for the Receptor for Hyaluronan-Mediated Motility (RHAMM/HMMR). *J. Biol. Chem.* (In Revision, IF = 4.8)

- 22. Cho, CF; Amadei, G; Breadner, D; Luyt, LG; Lewis, JD. The discovery of novel integrin ligands from combinatorial libraries using a multiplex 'beads on a bead' approach. *Nano Lett.*, 12(11), 5957-5965, 2012. DOI: 10.1021/nl3034043 (IF = 13.2)
  - Publication highlighted in ACCN (Canadian Chemical News/L'Actualité chimique canadienne), 65(1), 19, 2013. Chemical News: Nanotech strategy speeds up hunt for 'smart drugs'.
- 21. Hickey, J.L.; Luyt, L.G. Synthesis of Rhenium-centric Reverse Turn Mimics. *Chemistry A European Journal*, 18(41), 12999-13007, 2012. DOI: 10.1002/chem.201201766 (IF = 5.9)
  - Publication identified by reviewers as "VIP" very important paper.
- 20. Tolg C; Zalinska E; Hamilton S; McCulloch L; Akentieva N; Winnik F; Savani R; Bagli D; Luyt LG; Amin, R; Cowman, MK; McCarthy, JB; Turley EA. A RHAMM mimetic peptide blocks the motogenic signaling of hyaluronan fragments and modifies skin excisional wound repair. *Am. J. Pathology*, 181(4): 1250–1270, 2012. DOI: 10.1016/j.ajpath.2012.06.036 (IF = 5.2)
- 19. Simpson, EJ; Hickey, JL; Breadner, D; Luyt, LG. Investigation of Isomer Formation Upon Coordination of Bifunctional Histidine Analogues with <sup>99m</sup>Tc/Re(CO)<sub>3</sub>. *Dalton Transactions* 41(10), 2950-2958, 2012. DOI:10.1039/C2DT11962E (IF = 3.6)
- 18. Behnam Azad, B; Cho, F; Lewis, JD; Luyt, LG. Synthesis, Radiometal labeling and In Vitro Evaluation of a Targeted PPIX Derivative. *Applied Radiation and Isotopes*. 70(3), 505-511, 2012. doi:10.1016/j.apradiso.2011.11.054 (IF = 1.0)
- 17. Veiseh, M, Breadner, D; Akentieva, N; Savani, RC; Harrison, RE; Mikilus, D; Collis, L; Lee, T-Y; Koropatnick, J; Bissell, MJ; Luyt, LG; Turley, EA. Hyaluronan-Based Imaging Probes Detect Injured and Neoplastic Tissues and their Microenvironments. *Biomacromolecules*. 13(1), 12-22, 2012. DOI: 10.1021/bm201143c. (IF = 5.3)
- 16. Lu, C; McFarland, MS; Williams, AK; Chan, S; Gomez-Lemus, J; Chin, J; Izawa, J; Luyt, LG; Lewis, JD. "Ghrelin Receptor as a Novel Imaging Target for Prostatic Neoplasms." *The Prostate*, 72(8), 825-833, 2012. DOI: 10.1002/pros.21484. (IF = 3.4)
  - Publication Highlighted by Clyne, M. *Nat. Rev. Urol.*, Prostate cancer: Ghrelin imaging probe specific for prostate cancer, 2012. DOI: 10.1038/nrurol.2012.93.
- 15. McTavish, J; McFarland, MS; Luyt, LG; Dhanvantari, S. "Design and Characterization of a Fluorescent Ghrelin Analogue for Imaging the Growth Hormone Secretagogue Receptor 1a." *Regulatory Peptides*, 172, 69-76, 2011. (IF = 2.5)
- 14. Toelg, C; Hamilton, SJ; Morningstar, L; Zhang, J; Esguerra, KVN; Telmer, P; Luyt, LG; Harrison, R; McCarthy, JB; Turley, E. "Rhamm promotes interphase microtubule instability and mitotic spindle integrity through Mek1/Erk1,2 activity." *J Biological Chemistry*, 285, 26461-26474, 2010. (IF = 5.3)
- 13. Steinmetz, NF\*; Ablack, A\*; Hickey, JL\*; Ablack, J; Mymryk, JS; Luyt, LG; Lewis, JD. Intravital imaging of human prostate cancer using bombesin-targeted viral nanoparticles. *Small*, 7(12), 1664-1672, 2011. (\* contributed equally, IF = 7.3).

Leonard G. Luyt, Ph.D. Page 3 of 9

12. Behnam Azad, B.; Rota, V.; Breadner, D.; Dhanvantari, S.; Luyt, L.G. Design, Synthesis and In Vitro Characterization of Glucagon-Like Peptide-1 Derivatives for Pancreatic Beta Cell Imaging by SPECT. *Bioorganic and Medicinal Chemistry*, 18, 1265-1272, 2010. DOI: 10.1016/j.bmc.2009.12.032 (IF = 3.0)

- 11. Amadei, G., Cho, C.F., Lewis, J.D., Luyt, L.G. Fast, reproducible and low-cost method for sequence deconvolution of "on-bead" peptides via "on-target" MALDI-TOF/TOF spectrometry. *J. Mass Spectrometry*, 45(3), 241-251, 2009. (IF = 3.3)
- 10. Martin, A.L., Hickey, J.L., Ablack, A., Lewis, J.D., Luyt, L.G., Gillies, E.R. Synthesis of bombesin-functionalized iron oxide nanoparticles and their specific uptake in prostate cancer cells. *J. Nanoparticle Research*, 12(5), 1599-1608, 2010. (IF = 3.3)
- 9. Rosita, D.; DeWit, M.; Luyt, L.G. Fluorine and rhenium substituted ghrelin analogues as potential imaging probes for the growth hormone secretagogue receptor. *J. Med. Chem.*, 52(8), 2196-2203, 2009. DOI: 10.1021/jm8014519 (IF = 5.2)
- 8. S. R. Hamilton, R.G. Tirona, C. Tölg, J. Richardson, R. Brown, M. Gonzalez, M. Vanzieleghem, P. Anderson, S. S. Asculai, F. Winnik, R. C. Savani, L.G. Luyt, J. Koropatnick, D. Freeman, and E. A. Turley. Pharmacokinetics and Pharmacodynamics of hyaluronan infused into human volunteers. *The Open Drug Met. J.*, 3, 43-55, 2009.

## **Book Chapters**

- 3. Sourabh, S; Simpson, EJ; Steinmetz, NF; Luyt, LG; Lewis, JD. Molecular targeted viral nanoparticles as tools for imaging cancer. Methods in Molecular Biology, Walker, JM ed.; Humana Press: New York. (ISSN: 1064-3745) In press.
- 2. Luyt, L.G. Design of Radiolabeled Peptides for Targeting Malignancies. In, *Monoclonal Antibody and Peptide-Targeted Radiotherapy of Cancer*, Reilly, RM ed.; John Wiley & Sons, Inc.: Hoboken, New Jersey. (ISBN 978-0-470-24372-5)
  - Awarded 1st prize for Oncology books (2011), by the British Medical Association: bma.org.uk/about-the-bma/bma-library/medical-book-awards/2011-book-awards-winners
- Chambers, A.F.; Turley, E.A.; Lewis, J.; Luyt, L.G. Innovative Preclinical Models for Evaluating Radiopharmaceuticals in Oncology. In, *Monoclonal Antibody and Peptide-Targeted Radiotherapy of Cancer*, Reilly, RM ed.; John Wiley & Sons, Inc.: Hoboken, New Jersey. (ISBN 978-0-470-24372-5)

## Published Abstracts (Refereed) and Short Notes (past 5 years)

- 20. Charlton, CL; McGirr, R; McFarland, MS; Kovacs, MS; Dhanvantari, S; Luyt, LG. [68Ga] Labeled Ghrelin(1-19) Analogue for Targeting the Growth Hormone Secretagogue Receptor. 20<sup>th</sup> International Symposium on Radiopharmaceutical Science, 2013, *J. Labelled Cmpds. Radiopharm.* 56, S392 (IF = 1.1)
- 19. Ngo, BN; Luyt, LG. Re/Tc(I) Tricarbonyl Turn Mimetics To Form Cyclic Metallopentapeptides. 20<sup>th</sup> International Symposium on Radiopharmaceutical Science, 2013, *J. Labelled Cmpds. Radiopharm.* 56, S192 (IF = 1.1)
- 18. McFarland, MS; McTavish, J; Dhanvantari, S; Kovacs, MS; Luyt, LG. Synthesis and Characterization of a [F-18]-Naphthyl Prosthetic Group for Radiolabeling Ghrelin. 19<sup>th</sup>

Leonard G. Luyt, Ph.D. Page 4 of 9

- International Symposium on Radiopharmaceutical Chemistry, 2011, *J. Labelled Cmpds. Radiopharm*. 54, S519. (IF = 1.1)
- 17. Simpson, EJ; Breadner, D; Hickey, JL; Luyt, LG. Click to cyclize and chelate. 19<sup>th</sup> International Symposium on Radiopharmaceutical Chemistry, 2011, *J. Labelled Cmpds. Radiopharm*. 54, S350. (IF = 1.1)
- 16. Hickey, J. L.; Luyt, L. G. Design and Synthesis of Metal-Centric Reverse-Turn Peptidomimetics. 19<sup>th</sup> International Symposium on Radiopharmaceutical Chemistry, 2011, *J. Labelled Cmpds. Radiopharm.* 54, S21. (IF = 1.1)
- 15. Akentieva, N.P; Esguerra, K. V. N.; Ward, C.; Tolg, C.; Veiseh, M.; Zhang, J.; Koropatnick, J.; Bissell, M. J. Shepherd, T.; McCarthy, J.; Lewis, J.; Luyt, L.G.; Turley, E. (2010). The discovery of hyaluronan peptide mimics as selective ligands for RHAMM in ovarian cancer. *Mol. Biol. Cell*, 21, 4299 (253). (IF = 5.9)
- 14. Simpson, EJ; Breadner, D; Hickey, JL; Luyt, LG. Isomers of the  $(N^{\alpha}His)Ac$  chelator upon coordination of  $^{99m}Tc/Re(CO)_3$ . *Technetium and other radiometals in chemistry and medicine*, 117-118, Padova: SGEditoriali, 2010.
- 13. Simpson, EJ; Breadner, D; Hickey, JL; Luyt, LG. Isomers of the ( $N^{\alpha}$ His)Ac chelator upon coordination of  $^{99m}$ Tc/Re(CO)<sub>3</sub>. *Nuclear Medicine and Biology*, 37, 685, 2010. (IF = 2.6)
- 12. Hickey, J. L.; Luyt, L. G. "Technetium-99m Labelled Macrocyclic Peptides as Integrated Radiopharmaceuticals" 18<sup>th</sup> International Symposium on Radiopharmaceutical Chemistry, Edmonton, ON, 2009, *J. Labelled Cmpds. Radiopharm.*, 52(S1), S71, 2009. (IF = 1.1)
- 11. Behnam Azad, B; Rota, V.; Dhanvantari, S; Kovacs, M.; Luyt, LG. <sup>18</sup>F-labeled GLP-1 peptides for beta cell imaging. 18<sup>th</sup> International Symposium on Radiopharmaceutical Chemistry, Edmonton, ON, 2009, *J. Labelled Cmpds. Radiopharm.*, 52(S1), S174, 2009. (IF = 1.1)

### **Conference Presentations (past 5 years)**

- 42. Siddiqui, K; Biggs, C; Billia, M; Charlton, C; Mazzola, C; Power, N; Chambers, A; Yang, J; Luyt, L; Chin, J; Leong, H. Prostate cancer microparticles as a next generation screening tool for prostate cancer. Society of Urologic Oncology Annual Meeting, Bethesda, MD, 2013. (submitted)
- 41. Randolph, LN; Bruckman, MA; Simpson, EJ; Luyt, LG; Steinmetz, NF. Targeting atherosclerotic plaques in vivo using rod-shaped tobacco mosaic virus. Biomedical Engineering Society (BMES) Annual Meeting, Sept 2013, Seattle, WA (submitted)
- 40. Bruckman, MA; Jiang, K; Randolph, LN; Simpson, EJ; Luyt, LG; Yu, X; Steinmetz, NF. Distribution and Compatibility of VCAM-1 Targeted Rod-Shaped Viral Nanoparticles in an Atherosclerosis Mouse Model. Biomedical Engineering Society (BMES) Annual Meeting, Sept 2013, Seattle, WA (submitted)
- 39. Cho, CF; Luyt, LG; Steinmetz, NF; Lewis, JD. In vivo imaging of tumor angiogenesis using viral nanoparticles targeting EGFL7. World Molecular Imaging Symposium, Sept 2013. (submitted)
- 38. Yu, L; McGirr, R; Behnam Azad, B; St. Amant, AH; Lee, TY; Dhanvantari, SD; Luyt, LG. PET imaging and biodistribution analysis of an acetylated [68Ga]GLP-1 analogue in a xenograft insulinoma mouse model. Society of Nuclear Medicine and Molecular Imaging Annual Meeting, Vancouver, 2013.
- 37. Esarik, A; Esguerra, KVN; Turley, EA; Luyt, LG. Tubulin-derived Peptides as Molecular Imaging Probes for Aggressive Breast Cancer Tumours. 96th Canadian Chemistry Conference, Quebec City, 2013. (oral presentation)
- 36. Yu, L; Lewis, JD; Luyt, LG. Development of 68Ga-labeled peptides for imaging EGFL7 in prostate cancer. Imaging Network of Ontario, Feb 2013. (oral presentation)

Leonard G. Luyt, Ph.D. Page 5 of 9

35. Luyt, LG; Cho, CF; Lewis, JD. Peptides targeting EGFL7 as anit-angiogenic agents. Medicinal and Bioorganic Chemistry Foundation, Jan 2013.

- 34. Dhanvantari, S.; Behnam Azad, B; Rota, V; McGirr R; Lee, T-Y; Luyt, LG. Designing GLP-1-based Peptides for SPECT, PET and Fluorescence Imaging of Beta Cell Mass in the Intact Pancreas. World Molecular Imaging Symposium, Sept 2012.
- 33. Cruickshank, D; Luyt, LG. Organometallic OBOC Peptide Libraries for use in Molecular Imaging. 95th Canadian Chemistry Conference, Calgary, 2012. (oral presentation)
- 32. Ngo, BN; Wang, W; Luyt, LG. Pentapeptides as 2+1 chelation systems for Re/Tc tricarbonyl. 95th Canadian Chemistry Conference, Calgary, 2012.
- 31. Rota, V, Behnam Azad, B, Lee TY, Luyt, LG, Dhanvantari, S. GLP-1 derivatives for PET imaging of pancreatic islets in vivo. Canadian Diabetes Association/Canadian Society for Endocrinology and Metabolism Professional Conference and Annual Meetings, October 2011. (oral presentation)
- 30. McGirr R, Hu S, McTavish J, McFarland MS, Chakrabarti S, Luyt LG, Dhanvantari S. Ghrelin analogues for the molecular imaging of the growth hormone secretagogue receptor GHSR-1a in cardiomyopathy. 4th World Molecular Imaging Congress, September 2011. (oral presentation)
- 29. McFarland, MS; McTavish, J; Lu, C; Lewis, JD; Dhanvantari, S; Luyt, LG. A Novel Ghrelin Analogue for Molecular Imaging of Human Prostate Cancer. 94<sup>th</sup> Canadian Chemistry Conference, 2011. (oral presentation)
- 28. Nsiama, TK; Luyt, LG. Synthesis of cyclic tetrapeptide-based imaging probe. 94<sup>th</sup> Canadian Chemistry Conference, 2011.
- 27. Hickey, JL; Simpson, EJ; Luyt, LG. Synthesis of macrocyclic β-sheet mimics as molecular imaging probes. 94<sup>th</sup> Canadian Chemistry Conference, 2011. (oral presentation)
- 26. Esguerra, K.; Akentieva, N; Ward, C; Shepherd, TG; Turley, EA; Luyt, LG. Tubulin-derived peptides as ligands for RHAMM/HMMR expressing cancer cells. 94<sup>th</sup> Canadian Chemistry Conference, 2011. (oral presentation)
- 25. McFarland, MS; McTavish, J; Lu, C; Lewis, JD; Dhanvantari, S; Luyt, LG. Ghrelin analogues for the molecular imaging of the growth hormone secretagogue receptor GHSR-1a. Evolving Approaches to Early Stage Drug Discovery, Keystone, 2011.
- 24. Behnam Azad, B; Luyt, LG. Development of a dual modality imaging probe for PET and fluorescence imaging. Pacifichem, Honolulu, HI, 2010. (oral presentation)
- 23. Cho, C.F., Amadei, G., Breadner, D., Luyt, L. and Lewis, J.D. (2010) The discovery of novel non-RGD-containing avb3 ligands for molecular imaging. 2010 World Molecular Imaging Congress.
- 22. Rota, V, Behnam Azad, B, Lee TY, Luyt, LG, Dhanvantari, S. Targeting beta cells for PET imaging using a novel GLP-1-based peptide labeled with Ga-68. 3rd World Molecular Imaging Congress, September 2010.
- 21. Esguerra, K.; Zhang, J.; Cho, CF; Toelg, C; Lewis, JD; Turley, EA; Luyt, LG. Tubulin derived peptides as optical molecular imaging probes targeting the hyaluronan binding domain of RHAMM in breast cancer cells. Society of Nuclear Medicine Annual Meeting, Salt Lake City, UT 2010. (oral presentation)
- 20. Cho, C.F., Amadei, G., Breadner, D., Luyt, L. and Lewis, J.D. (2010) The discovery of novel non-RGD-containing avb3 ligands for molecular imaging. AACR 102nd Annual Meeting 2011.
- 19. Luyt, LG. Ghrelin analogues for the molecular imaging of the growth hormone secretagogue receptor. 2009 International Symposium on Ghrelin (oral presentation), Tokyo, Japan, 2009.
- 18. Rota, V; Behnam Azad, B; Luyt, LG; Dhanvantari, S. Characterization of Indium-labeled GLP-1 derivatives for beta cell mass estimation. World Molecular Imaging Congress 2009, Montreal, Canada, Sept, 2009.

Leonard G. Luyt, Ph.D. Page 6 of 9

17. Choi-Fong Cho; Giulio Amadei; Leonard G. Luyt; John Lewis. A novel "beads on a bead" approach enables high throughput discovery of ligands for non-invasive molecular imaging. World Molecular Imaging Congress 2009, Montreal, Canada, Sept, 2009.

- 16. Hickey, J.L., Martin, A.M., Ablack, A.L., Lewis, J.D., Gillies, E.R., Luyt, L.G. "Pan—Bombesin Analogues for Nanoparticle Conjugation using Click Chemistry". 92nd Canadian Chemistry Conference, oral presentation, Hamilton, ON, May 2009.
- 15. Breadner, D.; Hickey, J.L.; Ablack, A.; Lewis, J.D.; Luyt, L.G. "In Vivo Screening of cancer imaging probes using the chick chorioallantoic membrane (CAM) model." Targeted Cancer Therapies, Keystone Symposia, Whistler, BC, Mar 2009.
- 14. Hickey, JL, Luyt, LG. The Synthesis of Metal Chelates for Use as Integrated Technetium-99m Peptidomimetics. The 19<sup>th</sup> annual Quebec Ontario Minisymposium in Synthetic and Bioorganic Chemistry. Toronto, Ontario, Nov 2008.
- 13. Behnam Azad, B; Breadner, D; Tai, J-H; Dhanvantari, S; Luyt, LG. Glucagon-Like Peptide-1 Derivatives for SPECT Imaging of Pancreatic Islets. World Molecular Imaging Congress 2008, Nice, France, Sept, 2008.
- 12. Amadei, GA; Cho, CF; Lewis, JD; Luyt, LG. "A novel approach to high throughput discovery of ligands for molecular imaging." 7<sup>th</sup> Symposium Imaging Network Ontario, Toronto, ON, Sept 2008.
- 11. Amadei, GA; Cho, CF; Lewis, JD; Luyt, LG. "Library Screening Using a Novel "Beads on a Bead" Approach Coupled with a Fast Single-bead MS/MS Deconvolution Enables High Throughput Discovery of Peptides for Molecular Imaging." 91st Canadian Chemistry Conference, Edmonton, AB, May 2008.
- 10. Rosita, D.; Luyt, L.G. "Ghrelin Analogues as New Probes for Cancer Imaging." 91st Canadian Chemistry Conference, oral presentation, Edmonton, AB, May 2008.
- 9. Veiseh, M.; Qi, Y.; Luyt, L.G.; Bissell, M.J.; Turley, E.A. "Use of Hyaluronan Nanoparticles to detect breast tumor progenitor cells." Era of Hope Breast Cancer Conference, Baltimore, MD, June 2008.
- 8. Breadner, D.; Cho, F.; Fung, L.; Abalck, A.; Luyt, L.G.; Lewis, J. "High throughput *in vivo* screening of cancer and angiogenesis imaging probes in an avian model of human breast cancer." American Association of Cancer Research, Annual Meeting 2008.

### **Invited Lectures (selected)**

- Alberta Prostate Cancer Research Initiative (APCaRI), Red Deer AB, Oct 19, 2013.
- Siemens PET/MRI User Group Meeting, "PET imaging agents for insulinoma, prostate cancer and breast cancer", London ON Sept 28, 2013.
- Citywide Cancer Imaging Seminar, "Unraveling the Secrets of PET Imaging Agents: A PET Agent Roadmap", London ON Sept 25, 2013.
- Imaging Applications in Prostate Cancer Workshop, London, ON, Nov 2012.
- Laboratory Medicine and Pathology Grand Rounds, Univ. Minnesota Minneapolis, Nov 2012
- TRIUMF, University of British Columbia, Vancouver, BC, Oct 2012.
- Dept. Chemical & Physical Sciences, University of Toronto Mississauga, Oct 2012.
- Dept. Oncology, University of Alberta, Edmonton, AB, Aug 2012.
- Molecular Function and Imaging Symposia, Ottawa, ON, June 2012.
- Dept Medical Imaging, Grand Rounds, University of Western Ontario, May 2012.
- Thunder Bay Regional Research Institute, Lakehead University, 2010.

Leonard G. Luyt, Ph.D. Page 7 of 9

- CTRIC Lecture Series, University of Colorado Denver, 2010.
- CSC, Canadian Chemistry Conference and Exhibition, Toronto, ON, 2010.
- Dept Nuclear Medicine, Grand Rounds, University of Western Ontario, 2009.
- CAMH, University of Toronto, Toronto, ON, 2009.

#### **Patents**

#### Patents Non-Provisional and Granted

- 5. Luyt, LG; Turley, EA; Esguerra, KV. Rhamm Binding Peptides. International Patent WO2011/150495, Filed 31May2011, London Health Sciences Centre Research Inc.
- 4. Luyt, LG; Rosita, D. WO 2009140763 Novel ghrelin analogs. PCT Int. Appl. (2009), The University of Western Ontario Technology Transfer Office, London ON, Canada.
- 3. Tolg, C.; Luyt, L. G.; Turley, E.; McCarthy, J. WO2009046530 Compositions affecting hyaluronic acid mediated activity. PCT Int. Appl. (2009) London Health Sciences Centre, London ON, Canada.
- 2. Srinivasan, A.; Luyt, L. G. WO2006114324 Compounds comprising cyclized somatostatin receptor binding peptides. Application filed 2006, Schering Aktiengesellschaft, Berlin, Germany.
- 1. Srinivasan, A.; Luyt, L. G. WO2006114323 Orthogonally protected bifunctional amino acid. Application filed 2006, Schering Aktiengesellschaft, Berlin, Germany.

### **Patent Provisional Applications**

1. Lewis, JD; Luyt, LG; Cho, C-F. Polypeptides and Methods for Inhibiting Angiogenesis. U.S. Provisional Application 4767-277, 27Mar2012.

### PART C – TRAINING

### **Teaching Experience**

CHEM 4493 The Chemistry of Biological Macromolecules 2006, 2008, 2010, 2012 A 4<sup>th</sup> year undergraduate course acting as a survey of the chemistry of monosaccharides, amino acid and nucleosides with modern synthetic methods to oligosaccharides, polypeptides and polynucleotides.

#### MBP 9518 Molecular Imaging

2007, 2008, 2010-2013

Lecture and problem session on "Targeted probes for SPECT/PET and optical imaging"

## **Nuclear Medicine Residents**

• Lecture to nuclear medicine residents on imaging agents for SPECT and PET

University of Toronto Pharmacy, PHM 1115H "Special Topics in Radiopharmaceuticals II"

2011,2013

• Guest lecturer for graduate course, on "Peptide-based Radiopharmaceuticals"

### Training of Highly Qualified Personnel (HQP, 2005-2013)

	<b>Currently Supervising</b>	Previously Supervised	Total
Undergraduate	1	11	12

Leonard G. Luyt, Ph.D. Page 8 of 9

Graduate	8	11	19
PDF	2	2	4
Others	1	3	4
Total	12	27	39

#### **Other Teaching and Mentoring Roles**

- Mentor for the CIHR Strategic Training Program in Cancer Research and Technology Transfer (CaRTT)
- Mentor for the Graduate Program in Molecular Imaging (collaborative) at the University of Western Ontario

## PART D - ASSOCIATION AND SERVICE

#### **Professional Association**

- The Chemical Institute of Canada, member
- American Chemical Society, member
- Society of Radiopharmaceutical Sciences, member
- Canadian Association for Radiopharmaceutical Sciences, member
- World Molecular Imaging Society, member
- Society of Nuclear Medicine and Molecular Imaging, member

#### **Professional Service**

- Co-organizer, Pacifichem 2015 session, "The Chemistry of Molecular Imaging".
- Panel member for: CIHR, Canadian Cancer Society Research Institute (CCSRI)
- Peer reviews: ACS Combinatorial Sciences; BBA Proteins and Proteomics; Biomacromolecules; Bioorganic and Medicinal Chemistry; Bioorganic and Medicinal Chemistry Letters; Canadian Journal of Chemistry; Current Bioactive Compounds; European Journal of Inorganic Chemistry; European Journal of Medicinal Chemistry; European Journal of Nuclear Medicine and Molecular Imaging; Journal of Medicinal Chemistry; Journal of Nuclear Medicine; Molecular Pharmaceutics; Steroids; Toxicology and Applied Pharmacology.
- Grant reviews: CIHR, CCSRI, NSERC, MITACS, Ireland Health Research Board.
- Abstract Reviews: World Molecular Imaging Congress (2011-2013).

#### **Committee Service**

- Selection Committee, Tier 2 Canada Research Chair in Chemical Biology, Western, 2012-2013
- Graduate Education Committee, Department of Chemistry, Western, 2009 present
- Faculty Council, NMR Spectroscopy (liquids), Dept. Chemistry, Western, 2011 present
- Chair and secretary, City-wide Radionuclide Imaging Group, London, ON

## **Community and Public Relations/Media Service**

- Wish You Were Here, prostate cancer fundraising event, The Grand Theatre, London, ON, 2010
- Grand opening and tours of the Gerald C Baines Centre for Translational Cancer Research. Press release: http://www.lhsf.ca/media/2046/September%2028,%202010%20-%20worldclass%20research%20centre%20opens%20in%20London.pdf
- Think PINK, opening media event, The Tasting Room, London, ON, 2011

Leonard G. Luyt, Ph.D. Page 9 of 9

Cell news highlight (news.cell.com/story.php?title=new-imaging-agent-has-an-appetite-for-dangerous-prostate-tumors), and media release, "New Imaging Agent has an Appetite for Dangerous Prostate Tumors", Dec 2011

- Media interview, http://londonlifetime.wordpress.com/2011/12/08/zeroing-in-on-prostate-cancer/
- Director (2009-2012) and Chair (2011-12) for non-profit organization, "London Campus Ministry Committee"
  - Coordinates, fundraising, employer for 1.6 FTE Chaplains for Western and Fanshawe College
- Tastings, London Health Sciences Foundation fundraising event for translational cancer research, 2012, 2013
- Lecture for Grade 12 Chemistry Class, London District Christian Secondary School, 2013