

CURRICULUM VITÆ

Name: CARL GÖRAN WESTERBERG, Ph.D., MTOPRA, Associate Professor

Citizenship: Swedish

Languages: Fluent Swedish, English and Italian

Address: Podere La Crocina, Loc. Montisi
53020 San Giovanni d'Asso (SI), Italy

Tel.: +39 0577 80 30 65

Web Site: www.crocina.com

Cell: +39 338 915 7780

E-mail: Goran.Westerberg@crocina.com

VAT Reg. No. IT-01326410527

Positions held

2012 - Owner and Director, La Crocina Pharmaceutical Consultants
2004 - 2012 Senior Director, Clinical & Regulatory Development, Siena Biotech SpA, Italy
2002 - 2004 Director, Pharmacokinetics, Pfizer, Milan, Italy
2000 - 2002 R&D Interface Supervisor, Pharmacia, Milan, Italy
1997 - 2000 Senior Research Advisor, Pharmacia & Upjohn, Stockholm, Sweden
1993 - 1997 Associate Director, Uppsala PET Centre, Uppsala, Sweden
1988 - 1993 Research Scientist, Uppsala PET Centre, Uppsala, Sweden

Education, degrees

1997 Associate Professor, Radiopharmacology, Uppsala University, Sweden
1994 PhD, Radiopharmaceutical chemistry, Uppsala University, Sweden
1992 MSc, Radiopharmaceutical chemistry, Uppsala University, Sweden
1988 BSc, Organic Chemistry, Uppsala University, Sweden

Additional formal expertise

Clinical pharmacology, pharmacokinetics and metabolism, PK/PD modelling, toxicology, radiation physics, radiation biology, radiation safety and human internal dosimetry.

- Broad scientific and technical experience from >25 years in the pharmaceutical industry, across Metabolic, Respiratory and Infectious Diseases, Oncology, Pulmonary, Urology, Gynaecology, Ophthalmology, Cardiovascular and CNS
- Experience (in various roles, including Clinical Programme Director) from >550 clinical studies
- 10 Years in Clinical Contract Research; clinical and preclinical PK/PD-studies, PET imaging, clinical biomarker development, translational science
- Primary responsibility for 31 First-in-Human packages
- Material contributions to 8 NDAs/MAAs
- Member of European Commission H2020 and EUREKA Expert Panels
- Member of TOPRA, EUFEPS, the Swedish Academy of Pharmaceutical Sciences and Royal Society of Chemistry
- More than 100 peer-reviewed papers within the fields of pharmacokinetics, clinical research, PET imaging, *in vitro* and *in vivo* pharmacology
- Modern and participative management style; extensive experience as line manager (groups of 35-50) in international Pharma organisations

Areas of interest/expertise

Clinical Pharmacology, Regulatory Development, Clinical and Preclinical Development, PK/PD modelling, Portfolio Management, Licensing/Due Diligence, Project Governance; Portfolio Strategy.

Service Offering

La Crocina Pharmaceutical Consultants offers consultancy and advisory services to the Life Sciences Sector, particularly regarding the early Clinical Development phases and Regulatory Affairs. La Crocina provides a helicopter view of all facets of the development process from Preclinical Candidate to the start of registration studies, including setting up development plans, selection, qualification and management of service providers, clinical study protocol design, biomarker development and translational approaches, construction of budgets, risk management and decision trees. Regulatory services include compilation of CTA/IMPDs, INDs, IBs, Scientific Advice/Protocol Assistance dossiers, Orphan Designation dossiers and support in responding to regulatory questions and requests. Additional services include support to the In- or Outlicensing process as well as compilation of Business Plans.

Invited Speaker (2008 -)

- UK SITE Investigators Meeting, Birmingham, April 30, 2012
- 7th Annual Biomarkers/CNS Biomarkers Congress, Manchester, February 21-22, 2012
- Outsourcing in Clinical Trials, Europe, Zurich, May 10-11, 2011
- 12th Annual Phase I Clinical Trials, London February 15-16, 2011
- Third Annual Outsourcing Preclinical Development, Basle, December 2-3, 2009.
- 10th Annual Phase I Clinical Trials, February 10-11, 2009
- Second Annual Outsourcing Preclinical Development, Basle, December 2-3, 2008.

Full papers

1. Gati, I, Bergström, M., Westerberg, G., Csoka, K., Muhr, C. and Carlsson, J.
Effects of Prostaglandin and Leukotriene Inhibitors on the Growth of Human Glioma Spheroids.
Eur. J. Cancer (1990), **26**, 802.
2. Daniel-Szolgay, E., Carlsson, J., Westerberg, G., Acker, H.
Effects of Amiloride Analogues on Tumour Spheroids of Human Glioma and Colon Carcinoma Origin.
Acta Universitatis Upsaliensis (1991). *Comprehensive Summaries of Uppsala Dissertations from the Faculty of Science*, No. 335:V.
3. Westerberg, G., Lundqvist, H., Kilår, F. and Långström, B.
 β^+ -Selective Radiodetector for Capillary Electrophoresis.
J. Chromatogr. (1993), **645**, 319.
4. Westerberg, G. and Långström, B.
Synthesis of (¹³C)- and [¹¹C]Cyanogen Bromide, Useful Labelling Precursors.
Acta Chem. Scand. (1993), **47**, 974.
5. Tsukada, H., Lindner, K.-J., Tani, Y., Bjurling, P., Kihlberg, T., Westerberg, G., Watanabe, Y. and Långström, B.
Effect of 6R-L-Erythro-5,6,7,8-tetrahydrobiopterin on *in vivo* L-[¹¹C]DOPA Turnover in the Rat Striatum with Infusion of L-Tyrosine.
J. Neural Transmiss. (1993), **95**, 1.
6. Tani, Y., Ishihara, T., Kanai, T., Ohno, T., Watanabe, Y., Andersson, J., Lilja, A., Hartvig, P., Westerberg, G. and Långström, B.
6R-Tetrahydrobiopterin (R-THBP, SUN 0588) Acts on the Central Muscarinic and Nicotinic Receptors as Evaluated by Positron Emission Tomography (PET) Studies in Rhesus Monkey.
Adv. Exp. Med. Biol. (1993), **338**, 331-4.

7. Tani, Y., Ishihara, T., Kanai, T., Ohno, T., Onoe, H., Watanabe, Y., Andersson, J., Lilja, A., Hartvig, P., Westerberg, G. and Långström, B.
Positron Emission Tomography (PET) Study: The Effects of 6R-L-Erythro-tetrahydrobiopterin (R-THBP, SUN 0588) on the Central Dopamine D1, D2 and D3 Receptors in Rhesus Monkey.
Adv. Exp. Med. Biol. (1993), **338**, 327-30.
8. Westerberg, G. and Långström, B.
Labelling of Proteins in High Specific Radioactivity: ^{11}C -Albumin and ^{11}C -Transferrin.
Appl. Radiat. Isot. (1994), **45**, 773.
9. Hartvig, P., Valtysson, J., Antoni, G., Westerberg, G., Långström, B., Ratti-Moberg, E., Øye, I.
Brain Kinetics of (R)- and (S)-N-[methyl- ^{11}C]ketamine in the Rhesus Monkey Studied by Positron Emission Tomography.
Nucl. Med. Biol. (1994), **21**, 927.
10. Westerberg, G. and Långström, B.
Synthesis of Sodium [^{11}C]Thiocyanate Using [^{11}C]Cyanogen bromide.
J. Labelled Comp'ds. Radiopharm. (1994), **34**, 545.
11. Westerberg, G., Kärger, W., Onoe, H. and Långström, B.
[^{11}C]Cyanogen Bromide in the Synthesis of 1,3-Di(2-tolyl)-[^{11}C]guanidine.
J. Labelled Comp'ds. Radiopharm. (1994), **34**, 691.
12. Hellman, P., Ahlström, H., Bergström, M., Sundin, A., Långström, B., Westerberg, G., Juhlin, C., Åkerström, G., Rastad, J.
Positron Emission Tomography with ^{11}C -Methionine in Hyperparathyroidism
Surgery (1994), **116**, 974 - 981.
13. Tani, Y., Ishihara, T., Kanai, T., Ohno, T., Andersson, J., Lilja, A., Antoni, G., Fasth, K.-J., Bjurling, P., Westerberg, G., Hartvig, P., Onoe, H., Watanabe, Y. and Långström, B.
Effects of 6R-L-erythro-5,6,7,8-tetrahydrobiopterin on the Dopaminergic and Cholinergic Receptors as Evaluated by Positron Emission Tomography in the Rhesus Monkey.
J. Neural Transmiss. (1995), **102**, 189-208.
14. Westerberg, G., Bergström, M., Gustafson, S., Lindqvist, U., Sundin, A. and Långström, B.
Labelling of Polysaccharides Using [^{11}C]Cyanogen bromide. *In Vivo* and *In Vitro* Evaluation of ^{11}C -Hyaluronan.
Nucl. Med. Biol. (1995), **22**, 251 - 256.
15. Kumlien, E., Bergström, M., Lilja, A., Westerberg, C.-E., Antoni, G., Westerberg, G. and Långström, B.
Positron Emission Tomography with [Methyl- ^{11}C]-Deuterium-L-Deprenyl in Patients with Partial Complex Epilepsy.
Epilepsia (1995), **36**, 712 - 721.
16. Hartvig, P., Valtysson, J., Lindner, K.-J., Kristenssen, J., Karlsten, R., Gustafsson, L.L., Persson, J., Svensson, J.O., Øye, I., Antoni, G., Westerberg, G. and Långström, B.
CNS Effects of Subdissociative Doses of (S)-Ketamine are Related to Plasma and Brain Concentrations Measured With Positron Emission Tomography in Healthy Volunteers.
Clin Pharmacol. Ther. (1995), **58**, 165 - 173.
17. Matsumura, K., Bergström, M., Onoe, H., Takechi, H., Westerberg, G., Antoni, G., Bjurling, P., Jacobson, G.B., Långström, B. and Watanabe, Y.
In Vitro Positron Emission Tomography (PET): Use of Positron Emission Tracers in Functional Imaging in Living Brain Slices.
Neuroscience Research (1995), **22**, 219 - 229.

18. Göller, L., Bergström, M., Nilsson, S., Westerberg, G. and Långström, B.
MAO-A Enzyme Binding in Bladder Cancer Characterized with [¹¹C]Harmine in Frozen Section Autoradiography.
Oncology Reports (1995), **2**, 717 - 721.
19. Tsukada, H., Lindner, K.J., Hartvig, P., Tani, Y., Valtysson, J., Bjurling, P., Kihlberg, T., Westerberg, G., Watanabe, Y. and Långström, B.
Effect of 6R-L-Erythro-5,6,7,8-Tetrahydrobiopterin and Infusion of L-Tyrosine on the *In Vivo* L-[¹¹C]DOPA Disposition in the Monkey Brain.
Brain Res. (1996) **713**, 92 - 98.
20. Jacobson, G.B., Westerberg, G., Markides, K.E. and Långström, B.
Synthesis of ¹¹C-Labelled Guanidines in Supercritical Ammonia.
J. Am. Chem. Soc. (1996) **118**, 6868 - 6872.
21. Westerberg, G., Bamford, M., Daniel, M.J., Långström, B and Sutherland, D.R.
Synthesis of 5-Acetyl-amino-4-[¹¹C]guanidino-2,6-anhydro-3,4,5-trideoxy-D-glycero-D-galacto-non-2-enoic acid ([¹¹C]GG167) - An Influenza Virus Neuraminidase Inhibitor.
J. Lab. Compd's Radiopharm. (1996) **38**, 585 - 589.
22. Westerberg, G. and Långström, B.
On-Line Production of [¹¹C]Cyanogen Bromide.
Appl. Radiat. Isot. (1997), **48**, 459 - 461.
23. Danfors, T., Bergström, M., Feltelius, N., Ahlström, H., Westerberg, G., Långström, B.
Positron Emission Tomography with ¹¹C-D-Deprenyl in Patients with Rheumatoid Arthritis. Evaluation of Knee Joint Before and After Intra-Articular Glucocorticoids.
Scand. J. Rheum.(1997) **26**, 42 - 48.
24. Bergström, B., Westerberg, G., Greger, G., Müller-Pelzer, H., Traut, M., Safer, A., Németh, G., Gross, G., Eckernäs, S.-Å. and Långström, B.
MAO-A Inhibition in Brain After Dosing of Esuprone, Moclobemide and Placebo in Healthy Volunteers - *In Vivo* Studies with Positron Emission Tomography.
Eur. J. Clin. Pharm. (1997) **52**, 121-128.
25. Westerberg, G. and Långström, B.
Synthesis of *meta*-iodobenzyl[¹¹C]guanidine.
J. Lab. Compd's Radiopharm. (1997), **39**, 525 - 529.
26. Tedroff, J., Torstensson, R., Hartvig, P., Lindner, K.-J., Watanabe, Y., Bjurling, P., Westerberg, G. and Långström, B.
L-DOPA Modulates Striatal Dopaminergic Function *In Vivo*. Evidence from PET Investigations in Non-Human Primates.
Synapse (1997) **25**, 56 - 61.
27. Torstensson, R., Hartvig, P., Långström, B., Westerberg, G., and Tedroff, J.
Differential Effects of Levodopa on Dopaminergic Function in Early and Advanced Parkinson's Disease.
Annals of Neurology (1997) **41**, 334 - 340.
28. Kälkner, K.-M., Nilsson, S., Bergström, M., Lindner, K.-J., Westerberg, G., Långström, B. and Westlin, J.-E.
PET with Hydroxytryptophan as Tracer in Hormone-Refractory Prostatic Adenocarcinoma: Evaluation of Decarboxylation *In Vivo*.
In Vivo (1997) **11**, 377 - 382.

29. Bergström, M., Westerberg, G. and Långström, B.
[¹¹C]Harmine as a tracer for Monoamine Oxidase A (MAO-A): *In Vitro* and *In Vivo* Studies.
Nucl. Med. Biol. (1997) **24**, 287 - 293.
30. Bergström, M., Westerberg, G., Kihlberg, T. and Långström, B.
Synthesis of ¹¹C-Labelled MAO-A Inhibitors. *In vivo* Uptake Kinetics in Rhesus Monkey Brain.
Nucl. Med. Biol. (1997) **24**, 381 - 388.
31. Sihver, W., Sihver, S., Bergström, M., Murata, T., Matsumura, K., Onoe, H., Andersson, Y., Bjurling, P., Fasth, K.-J., Westerberg, G., Ögren, M., Jacobson, G., Lundqvist, H., Orelund, L., Watanabe, Y. and Långström, B.
Methodological Aspects of *In Vitro* Characterization of Receptor Binding Using ¹¹C-labelled Receptor Ligands: A Detailed Study with the Benzodizepine Receptor Antagonist [¹¹C]Ro 15-1788.
Nucl. Med. Biol. (1997) **24**, 723 - 731.
32. Lindner, K.-J., Hartvig, P., Bjurling, P., Fasth, K.-J., Westerberg, G. and Långström, B.
Determination of 5-Hydroxy-L-[β-¹¹C]tryptophan and *In Vivo* Formed Radiolabeled Metabolites in Brain Tissue Using High Performance Liquid Chromatography. A Study Supporting Radiotracer Kinetics Measured with Positron Emission Tomography.
Nucl. Med. Biol. (1997), **24**, 733 - 738.
33. Andersson, J.L.R., Onoe, H., Hetta, J., Lidström, K., Valind, S., Lilja, A., Sundin, A., Fasth, K.-J., Westerberg, G., Broman, J.-E., Watanabe, Y. and Långström, B.,
Brain Networks Affected by Synchronised Sleep Visualised by Positron Emission Tomography.
J.Cereb. Blood Flow (1998), **18**, 701 - 715.
34. Bergström, B., Kumlien, E., Lilja, A., Tyrefors, N., Westerberg, G. and Långström, B.
Temporal lobe Epilepsy Visualized with PET with ¹¹C-L-Deuterium-Deprenyl - Analysis of Kinetic Data.
Acta Neorol. Scand. (1998), **98**, 224 - 231,
35. Wiesel, F.-A., Andersson, J.R., Westerberg, G., Wieselgren, I.-M., Bjerkenstedt, L., Hagenfeldt, L. and Långström, B.
Tyrosine Transport is Differently Regulated in Patients with Schizophrenia.
Schizophrenia Res. (1999), **40**, 37 - 42.
36. Bergström, M., Cass, L.M.R., Valind, S., Westerberg, G., Lundberg, E.L., Gray, S., Bye, A. and Långström, B.
Deposition and Disposition of [¹¹C]Zanamivir Following Administration as an Intranasal Spray - Evaluation with Positron Emission Tomography
Clinical Pharmacokinetics (1999), **36**, 33-39.
37. Westerberg, G., Carr, R.M., Långström, B. and Sutherland, D.R.
Synthesis of (*E*)-3-[2-([1-¹¹C]phenylcarbamoyl)ethenyl]-4,6-dichloroindole-2-carboxylic acid ([¹¹C]GV150526A) - A Glycine Antagonist for the NMDA-Receptor Complex.
J. Lab. Compd's Radiopharm. (2000) **42**, 339-346.
38. Frykholm, P., Enblad, P., Valtysson, J., C:son Silander, H., Hillered, L., Persson, L., Olsson, Y., Ru Yu, W., Andersson, J., Westerberg, G., Watanabe, Y. and Långström, B.
Sequential PET Studies of Temporary Middle Cerebral Artery Occlusion (MCAO) and Reperfusion in Primates. A Metabolic Threshold Discriminates Between Irreversible Ischemia and Penumbra.
Eur J Clin Invest. 2000 Jul;30(7):600-7.
39. Westerberg, G., Cheng, A.-P., Fellows, I. and Långström, B.
Synthesis of a Selective COX-2 Inhibitor: 8-Acetyl-3-(4-Fluorophenyl)-2-(4-(Methylsulphonyl)Phenyl)-1-Aza-Indolizine ([¹¹C]GR253035X).
J. Lab. Compd's Radiopharm. (2000) **42**, 1161-1169.

40. Lindqvist, U., Westerberg, G., Bergström, M., Torsteinsdottir, I., Gustafson, S., Sundin, A. and Långström, B.
Liver Uptake of [¹¹C]Hyaluronan Evaluated with Positron Emission Tomography in Patients with Alcoholic Liver Disease.
Eur J Clin Invest. 2000 Jul;30(7):600-7.
41. Westerberg G, Wiklund L.
Beta-cyclodextrin reduces bioavailability of orally administered [³H]benzo[a]pyrene in the rat.
J. Pharm Sci. 2005 Jan;94(1):114-9.
42. Lamanna C, Bellini M, Padova A, Westerberg G, Maccari L.
Straightforward recursive partitioning model for discarding insoluble compounds in the drug discovery process.
J Med Chem. 2008 May 22;51(10):2891-7.
43. Smith MR, Syed A, Lukacsovich T, Purcell J, Barbaro BA, Worthge SA, Wei SR, Pollio G, Magnoni L, Scali C, Massai L, Franceschini D, Camarri M, Gianfriddo M, Diodato E, Thomas R, Gokce O, Tabrizi SJ, Caricasole A, Landwehrmeyer B, Menalled L, Murphy C, Ramboz S, Luthi-Carter R, Westerberg G, Marsh JL.
A potent and selective Sirtuin 1 inhibitor alleviates pathology in multiple animal and cell models of Huntington's disease.
Hum. Mol. Genet. 2014; 23(11):2995-3007.
44. Westerberg, G, Chiesa, JAL, Andersen, CA, Diamanti, D, Magnoni, L, Pollio, G, Darpo, B and Zhou, M.
Safety, Pharmacokinetics, Pharmacogenomics and QT Concentration Effect Modelling of the SirT1 Inhibitor Selisistat in Healthy Volunteers.
British Journal of Clinical Pharmacology, 2014; 79(3): 477-491.
45. Süssmuth, SD, Haider, S, Landwehrmeyer, GB, Farmer, R, Frost, C, Tripepi, G, Andersen, CA, Di Bacco, M, Lamanna, C, Diodato, E, Massai, L, Diamanti, D, Mori, E, Magnoni, L, Dreyhaupt, J, Schiefele, K, Craufurd, D, Saft, C, Rudzinska, M, Ryglewicz, D, Orth, M, Brzozy, S, Baran, A, Pollio, G, Andre, R, Tabrizi, SJ, Darpo, B, Westerberg, G.
An exploratory double-blind, randomized clinical trial with selisistat, a SirT1 inhibitor, in patients with Huntington's disease.
British Journal of Clinical Pharmacology, 2014; 79(3): 465-476.
46. Reilmann, R, Darpo, B, Squitieri, F, Priller, J, Saft, C, Mariotti, C, Sussmuth, S, Nemeth, A, Tabrizi, SJ, Quarrell, O, Craufurd, D, Rickards, H, Rosser, A, Tessari, MA, Szynol, A, Fischer, D Macdonald, D, Munoz-Sanjuan, I, Pacifici, R, Frost, C, Farmer, R, Landwehrmeyer, GB, and Westerberg, G. Safety and Tolerability of Selisistat for the Treatment of Huntington's Disease: Results from a Randomized, Double-Blind, Placebo-Controlled Phase II Trial.
JAMA Neurology 2016. Submitted.
47. **Proceedings**

Långström, B., Andersson, Y., Antoni, G., Axelsson, S., Bjurling, P., Fasth, K.-J., Gee, A., Hörnfeldt, K., Kihlberg, T., Ulin, J., Westerberg, G. and Watanabe, Y.
Design and synthesis of tracers labelled with a short-lived radionuclide - ¹¹C and some applications.
19th Japan Conference on Radiation and Isotopes, Tokyo, Japan, 1989.
48. Långström, B., Andersson, Y., Antoni, G., Axelsson, S., Bjurling, P., Fasth, K.-J., Gee, A., Hörnfeldt, K., Kihlberg, T., Ulin, J., Westerberg, G. and Watanabe, Y.
New tracers for use in PET-studies - some aspects on future developments.
Third Conference on Peace Through Mind/Brain Science, Hamamatsu, Japan, 1990.

49. Långström, B., Andersson, Y., Antoni, G., Axelsson, S., Bjurling, P., Fasth, K.-J., Gee, A., Hörnfeldt, K., Kihlberg, T., Ulin, J. and Westerberg, G.
Aspects of the design and synthetic strategies in development of β^+ -emitting radiotracers for PET.
Deutscher Chemiker Conference, Hamburg, Germany, 1990.
50. Tedroff, J.M., Aquilonius, S.M., Hartvig, P., Lundqvist, H., Andersson, Y., Bjurling, P., Westerberg, G. and Långström, B.
Cerebral kinetics of ^{11}C -L-DOPA in the primate.
Movement Disorders, Washington, USA, 1990.
51. Westerberg, G., Malmberg, P. and Långström, B.
Synthesis of electrophilic ^{11}C -synthons: [^{11}C]cyanogen bromide and some ^{11}C -cyano reagents.
Eighth International Symposium on Radiopharmaceutical Chemistry, Princeton, USA, 1990. J. Lab. Compd's Radiopharm. 30, 126 (1991).
52. Westerberg, G. och Långström, B.
[^{11}C]Bromcyan - syntes och användning.
XIV:e Organikerdagarna, Ystad, Sweden, 1991.
53. Långström, B., Antoni, G., Bjurling, P., Fasth, K.-J., Hörnfeldt, K., Kihlberg, T., Westerberg, G., Bergström, M., Muhr, C., Lilja, A., Lundqvist, H., Inoue, O., and Watanabe, Y.
Studies of Amino Acid Metabolism in Man by Use of a Non-Invasive Method - Positron Emission Tomography and Amino Acids Labelled With Short-Lived Positron Emitting Radionuclides.
First Biennial International Conference on Amino Acids Research-Frontiers and New Horizons, Kyoto, Japan, 1991.
54. Långström, B., Andersson, Y., Antoni, G., Axelsson, S., Bjurling, P., Fasth, K.-J., Hedberg, E., Hörnfeldt, K., Kihlberg, T., Ulin, J., Westerberg, G. and Watanabe, Y.
Design and synthesis of tracers labelled with positron emitters for non-invasive submicromole studies.
Neuromedicinal Chemistry of G-Protein Coupled Receptors, Lund, Sweden, 1992.
55. Kilär, F., Westerberg, G. and Långström, B.
A radiodetector for capillary electrophoresis.
Sixth Symposium on the Medical Applications of Cyclotrons, Turku, Finland, 1992.
56. Westerberg, G., Kilär, F. and Långström, B.
[^{11}C]Cyanogen bromide in the labelling of macromolecules.
Sixth Symposium on the Medical Applications of Cyclotrons, Turku, Finland, 1992.
57. Kilär, F., Westerberg, G. and Långström, B.
Capillary Zone Electrophoresis and Isoelectric Focusing - Tools for the Analysis of ^{11}C -labelled macromolecules.
Eighth International Symposium on Capillary Electrophoresis and Isotachopheresis., Rome, Italy, 1992.
58. Hartvig, P., Valtysson, J., Antoni, G., Westerberg, G., Öye, I. and Långström, B.
Brain kinetics of (R)- and (S)-N-[methyl- ^{11}C]ketamine studied in monkeys by positron emission tomography.
VII:th Congress on Pain, Paris, France, 1993.
59. Tani, Y., Ishihara, T., Kanai, T., Ohno, T., Watanabe, Y., Andersson, J., Lilja, A., Hartvig, P., Westerberg, G. and Långström, B.
6R-Tetrahydrobiopterin (R-THBP, SUN 0588) acts on the central muscarinic and nicotinic receptors as evaluated by positron emission tomography (PET) studies in Rhesus monkey.
10th International Symposium on Chemistry and Biology of Pteridines and Folates, March 1993, Alabama, USA.

60. Tani, Y., Ishihara, T., Kanai, T., Ohno, T., Onoe, H., Watanabe, Y., Andersson, J., Lilja, A., Hartvig, P., Westerberg, G. and Långström, B.
Positron emission tomography (PET) study: The effects of 6R-L-Erythro-tetrahydrobiopterin (R-THBP, SUN 0588) on the central dopamine D1, D2 and D3 receptors in Rhesus monkey.
10th International Symposium on Chemistry and Biology of Pteridines and Folates, March 1993, Alabama, USA.
61. Långström, B., Antoni, G., Bjurling, P., Fasth, K.-J., Westerberg, G., Watanabe, Y.
Asymmetric synthesis including enzymatic catalysis of ^{11}C - and ^{13}N -labelled amino acids.
ACS National Meeting, Chicago, USA, 1993.
62. Westerberg, G., Långström, B.
 ^{11}C -Labelling of Macromolecules Using ^{11}C Cyanogen Bromide.
J. Lab. Compd's Radiopharm. 35, 300 - 302 (1994).
63. Westerberg, G., Lundqvist, H. and Långström, B.
A β^+ -Selective Radiodetector for Capillary Electrophoresis.
J. Lab. Compd's Radiopharm. 35, 598 - 600 (1994).
64. Långström, B., Antoni, G., Bjurling, P., Fasth, K.-J., Westerberg, G., Andersson, Y., Hörnfeldt, K., Hedberg, E., Kihlberg, T., Jacobson, G., Lidström, P., Neu, H., Ögren, M., Andersson, J., Bergström, M., Hartvig, P., Lilja, A., Valind, S. and Watanabe, Y.
Design of PET tracers and their use in multi-tracer protocols.
Quantification of Brain Function, Akita, Japan, May 1993. Elsevier Science Publishers B.V. Amsterdam, Netherlands; USA 45-47.
65. Kumlien, E., Bergström, M., Lilja, A., Westerberg, G. and Långström, B.
Positron emission tomography with ^{11}C -L-deuterium-deprenyl in patients with complex partial epilepsy.
Uppsala Journal of Medical Sciences suppl. (1993), 52, 58.
66. Kumlien, E., Bergström, M., Lilja, A., Westerberg, G., Antoni, G. and Långström, B.
Positron emission tomography with [methyl- ^{11}C]-deuterium-L-deprenyl in patients with partial complex epilepsy.
20th International Epilepsy Congress, Oslo, Norway, 1993.
67. Watanabe, Y., Onoe, H., Hartvig, P., Valtysson, J., Lilja, A., Valind, S., Bjurling, P., Westerberg, G., Inoue, O., Kobayashi, K., Matsumura, K., Onoe, K. and Långström, B.
In vivo changes of dopaminergic and cholinergic systems in monkey brain under various anesthesia as evaluated by PET.
17th Annual Meeting of the Japanese Neuroscience Society, Nagoya, Japan, 1993. Neuroscience Research Supplement 18.
68. Långström, B., Bjurling, P., Hartvig, P., Andersson, Y., Jacobson, G., Westerberg, G., Antoni, G., Tyrefors, N., Bergström, M. and Watanabe, Y.
PET tracers for non-invasive assessment of dopamine and serotonin turnover *in vivo*.
7th International Conference on Pteridines and Related Biogenic Amines, Hokkaido, Japan, 1994.
69. Tsukada, H., Lindner, K.-J., Hartvig, P., Tani, Y., Bjurling, P., Kihlberg, T., Westerberg, G., Watanabe, Y. and Långström, B.
Effect of 6R-L-erythro-5,6,7,8-tetrahydrobiopterine and 6R-L-biopterine on *in vivo* L- ^{11}C]DOPA turnover in rat and monkey striatum with infusion of L-tyrosine.
7th International Conference on Pteridines and Related Biogenic Amines, Hokkaido, Japan, 1994.

70. Watanabe, Y., Fernell, E., Valtysson, J., Lilja, A., Tani, Y., Onoe, H., Bjurling, P., Westerberg, G., Antoni, G., Kanai, T., Hartvig, P., Nakane, N., Bergström, M. and Långström, B.
Positron emission tomography studies in autistic patients with 6R-l-5,6,7,8-tetrahydrobiopterine treatment.
7th International Conference on Pteridines and Related Biogenic Amines, Hokkaido, Japan, 1994.
71. Långström, B., Kihlberg, T., Valind, S., Bjurling, P., Hartvig, P., Andersson, Y., Jacobson, G., Westerberg, G., Antoni, G., Tyrefors, N., Bergström, M., Lilja, A., Sundin, A., Watanabe, Y.
Novel biochemical approaches for studying energy metabolism with PET.
4th International Conference on Peace Through Mind/Brain Science, Hamamatsu, Japan, February 1994.
72. Matsumura, K., Bergström, M., Onoe, H., Takechi, H., Westerberg, G., Antoni, G., Bjurling, P., Jacobson, G. and Långström, B.
In vitro PET using living brain slices.
4th International Conference on Peace Through Mind/Brain Science, Hamamatsu, Japan, February 1994.
73. Watanabe, Y., Onoe, H., Hartvig, P., Valtysson, J., Lilja, A., Valind, S., Fernell, E., Bjurling, P., Westerberg, G., Fasth, K.-J., Antoni, G., Inoue, O., Kobayashi, K., Tsukada, H., Matsumura, K., Onoe, K., Bergström, M. and Långström, B.
Neurotransmitter dynamics under various anesthesia.
4th International Conference on Peace Through Mind/Brain Science, Hamamatsu, Japan, February 1994.
74. Matsumura, K., Bergström, M., Onoe, H., Takechi, H., Westerberg, G., Långström, B. and Watanabe, Y.
In vitro PET using living brain slices.
71st Annual Meeting of the Physiological Society of Japan, Kagawa, Japan, March 24-26, 1994. Japanese Journal of Physiology 44 (Suppl).
75. Gustafson, S., Björkman, T., Forsberg, N., McCourt, P., Wikström, T., Lilja, K., Tinner, B., Fuxe, K., Westlin, J.-E., Lidholt, K., Lind, T., Westerberg, G., Bergström, M., Långström, B., de la Torre, M., Bergh, J., Hagberg, H., Glimelius, B., Lindahl, U. and Laurent, T.
Studies on receptors for hyaluronan and the turnover of radioactively labelled hyaluronan in mice and rats.
Hyaluronan in Drug Delivery, Toronto, Canada, May, 1994. Round Table Series, Royal Society of Medicine, 36, 5 - 7 (1995).
76. Långström, B., Kihlberg, T., Westerberg, G., Hörnfeldt, K., Andersson, Y., Hedberg, E., Jacobsson, G., Lidström, P., Neu, H., Ögren, M., Antoni, G., Bjurling, P., Fasth, K.-J., Andersson, J., Bergström, M., Hartvig, P., Lilja, A., Valind, S. and Watanabe, Y.
Design och syntes av spårämnen för *in vivo* mätning av biokemisk funktion.
Proceedings of the 15:e Organikerdagarna, Göteborg Juni 1994
77. Långström, B., Kihlberg, T., Bjurling, P., Andersson, Y., Jacobsson, G., Westerberg, G., Antoni, G., Fasth, K.-J., Tyrefors, N., Hartvig, P., Bergström, M., Valind, S., Lilja, A., Sundin, A., Watanabe, Y., Neu, H., Lidström, P., Hörnfeldt, K., Hedberg, E., and Ögren, M.
Multiple isotope and position specific ¹¹C-labelling, a new tool for tuning of a PET-tracer.
5th Int. Symp. on The Synthesis and Application of Isotopes and Isotopically Labelled Compounds, Strasbourg, France, June 1994.
78. Westerberg, G. and Långström, B.
[¹¹C]Cyanogen halides as electrophilic cyanation agents.
5:th International Symposium on the Synthesis and Applications of Isotopes and Isotopically Labelled Compounds, Strasbourg, France, June, 1994. Eds.: Allen, J., Voges, R. Publisher: Wiley, Chichester, UK.
79. Sundin, A., Hellman, P., Ahlström, H., Bergström, M., Långström, B., Westerberg, G., Juhlin, C., Åkerström, G. and Rastad, J.
Preoperativ lokalisering av parathyreoideavävnad med positronemissionstomografi.
Läkarstämman, Stockholm, Sweden, 1994.

80. Långström, B., Kihlberg, T., Andersson, Y., Jacobson, G., Westerberg, G., Neu, H., Lidström, P., Hedberg, E., Ögren, M., Bjurling, P., Fasth, K.-J., Antoni, G., Tyrefors, N., Bergström, M., Valind, S., Sundin, A., Westlin, J.-E., Hartvig, P., Matsumura, K., Onoe, H. and Watanabe, Y.
Positron-Emission Tomography-PET- a tracer technique for visualization of biological function.
5th Int. Symposium on Pharmaceutical and Biomedical Analysis, Stockholm , November 1994.
81. Långström, B., Bergström, M., Valind, S., Hartvig, P., Bjurling, P., Westerberg, G., Fasth, K.-J., Antoni, G., Andersson, Y., Jacobson, G., Lidström, P., Hedberg, L., Neu, H., Ögren, M., Kihlberg, T., Lindner, K.-J., Tyrefors, N., Andersson, J., Sundin, A., Westlin, J.-E., Onoe, H., Matsumura, K., Murata, T., Takechi, HG., Watanabe, Y., Sihver, S., Kärger, W. and Watanabe, Y.
Positron emitting molecular probes in studies of cell function and differentiation - Research and Applications in Man.
3rd JRDC International Symposium on Cellular Growth and Development - Commonality and Diversity of Regulatory Systems, Osaka, Japan, March 1995.
82. Hartvig, P., Andersson, J., Gordh, T., Gustafsson, L., Karlsten, R., Kristenssen, J., Långström, B., Persson, J., Torebjörk, E., Valtysson, J., Westerberg, G. och Öye I.
Neuronal aktivitet i hjärnan kvantiterad med positron emissions tomografi vid olika typ av smärta.
Svenskt Farmakologiskt Vårmöte, Stockholm, Mars 1995.
83. Jacobson, G., Westerberg, G., Markides, K.E. and Långström, B.
¹¹C-Labeling of Guanidines via the Corresponding Cyanamides Using Supercritical Ammonia.
J. Lab. Compd's Radiopharm. 37 (1995) 187-189.
84. Westerberg, G., Bergström, M., Kihlberg, T. and Långström, B.
Synthesis and *In Vivo* Characterisation of Some Potential Monoamine Oxidase-A Inhibitors: [¹¹C]Harmine, [¹¹C]Methylharmine, [¹¹C]Harmaline, [¹¹C]Clorgyline and [¹¹C]Brofaromine.
J. Lab. Compd's Radiopharm. 37 (1995) 243-245.
85. Bjurling, P., Reineck, R., Westerberg, G., Gee, A.D., Sutcliffe, J. and Långström, B.
SYNTHIA, a Compact Radiochemistry System for Automated Production of Radiopharmaceuticals.
Vith Workshop on Targetry and Target Chemistry, Vancouver, Canada, August 17 - 20, 1995.
86. Långström, B., Bergström, M., Hartvig, P., Sundin, A., Takala, R., Valind, S., Torstensson, R., Antoni, G., Bjurling, P., Fasth, K.-J., Westerberg, G., Andersson, Y., Kihlberg, T., Jacobsson, G., Ögren, M., Neu, H. and Watanabe, Y.
Radiopharmaceuticals for PET Studies.
Invited paper, Proceedings of the IAEA-SM-337/44 International Symposium on Tomography in Nuclear Medicine, Vienna, August 21 - 5, 1995, pp 359 - 36.
87. Jacobson, G.B., Westerberg, G., Långström, B. and Markides, K.
Synthesis and On-Line Preparative SFC of ¹¹C-Labelled Guanidines Using Supercritical Ammonia.
Third European Symposium on Analytical Supercritical Fluid Chromatography and Extraction and Sixth International Symposium on Supercritical Fluids, Uppsala, Sweden, August 1995.
88. Hartvig, P., Kristensen, J., Gustafsson, L., Persson, J., Øye, I., Antoni, G., Westerberg, G. and Långström, B.
Positron emission tomography as a tool in clinical pharmacology: Relation of CNS effects of (S)-ketamine to plasma and brain concentrations in healthy volunteers.
1st Congress of the European Association for Clinical Pharmacology and Therapeutics, Paris, France, September 27-30, 1995.

89. Långström, B., Bergström, M., Hedberg, E., Westerberg, G., Hartvig, P., Fasth, K.-J., Valind, S., Jacobson, G., Bjurling, P., Andersson, Y., Antoni, G., Ögren, M., Takalo, R., Sundin, A., Nilsson, D., Löfqvist, A., Lundqvist, H., Lindqvist, U., Takechi, H. and Watanabe, Y.
PET as a Tracer Technique in Drug/Biomacromolecule Pharmacokinetic and Pharmacodynamic Studies.
6th International Conference on Peace through Mind/Brain Science, Hamamatsu, Japan, February, 1996.
90. Westerberg, G., Bergström, M., Cass, L.M., Dandiker, Y. and Långström, B.
PET as a Biopharmaceutical Tool - Intranasal and Inhaled Administration of [¹¹C]Zanamivir, An Influenza Neuraminidase Inhibitor.
XIIth International Symposium on Radiopharmaceutical Chemistry, Uppsala, Sweden, June 15 - 19, 1997.
91. Westerberg, G. and Långström, B.
On-Line Production of [¹¹C]Cyanogen Bromide.
XIIth International Symposium on Radiopharmaceutical Chemistry, Uppsala, Sweden, June 15 - 19, 1997.
92. Westerberg, G., Carr, R.M., Långström, B. and Sutherland, D.R.
Synthesis of (E)-3-[2-([1-¹¹C]Phenylcarbamoyl)ethenyl]-4,6-Dichloroindole-2-Carboxylic Acid ([¹¹C]GV150526A) - A Glycine Antagonist For The NMDA-Receptor Complex.
XIIth International Symposium on Radiopharmaceutical Chemistry, Uppsala, Sweden, June 15 - 19, 1997.
93. Westerberg, G. and Långström, B.
Synthesis of meta-Iodobenzyl [¹¹C]Guanidine.
XIIth International Symposium on Radiopharmaceutical Chemistry, Uppsala, Sweden, June 15-19, 1997.
94. Gaviraghi, G., Westerberg, G. and Robertson, G.
Functional Imaging as a Tool To Validate PK/PD Profiles and Predict Individual Sensitivity to CNS Drugs.
Biological Basis of Individual Sensitivity to Psychotropic Drugs, Moscow, Russia, March 6-8, 2006.
95. Westerberg, G.
Using Biomarkers and PK/PD Approaches to Accelerate Drug Discovery
ESMEC, Urbino, Italy, July 1-6, 2007.
96. Westerberg, G.
Strategies and Methods for Assessing Blood-Brain-Barrier Penetration in the Drug Discovery Process.
13th SCPA, Rimini, Italy, September 2008.
97. Westerberg, G.
Setting Up Non-Mainstream Studies: Understanding the Potential Hurdles
Outsourcing Preclinical Development, Basel, Switzerland, 2 – 3 December 2008.
98. Westerberg, G.
Small or Large Service Provider ?
Outsourcing Preclinical Development, Basel, Switzerland, 2 – 3 December 2009.
99. Westerberg, G.
Proof-of-Concept in Orphan Disease: A Role for Phase I Studies ?
12th Phase I Clinical Studies, London, February 15-16, 2011.
100. Westerberg, G.
Analysing Best Practices for Multiple Vendor Management – The Revised Hub Model
Outsourcing in Clinical Trials Europe, Zurich, Switzerland, April 10 – 11 May 2011.
101. Andersen, C. and Westerberg, G.
Trial Sample Size Estimation and Assessment of Study Design using Monte Carlo Sampling.
20th Population Approach Group Europe Meeting, Athens, Greece, June 7-11, 2011.

102. Westerberg, G., Puntoriero, G., Andersen, C., Lamanna, C., Diodato, E. and Di Bacco, M.
Early Clinical Development of Selisistat for Huntington's Disease.
7th Annual HD Therapeutics Conference, Palm Springs, CA, February 27 - March 1, 2012.
103. Smith M, Burke J, Lukacsovich T, Barbaro B, Purcell JM, Franceschini D, Diodato E, Scali C, Massai L, Thomas R, Magnoni L, Gokce O, Seredenina T, Tabrizi SJ, Westerberg G, Gaviraghi G, Luthi-Carter R, Caricasole A and Marsh JL. SirT1 Inhibition by Selisistat Alleviates Pathology in Multiple Animal and Cell Models of Huntington's Disease.
7th Annual HD Therapeutics Conference, Palm Springs, CA, February 27 - March 1, 2012.
104. Massai, L., Pollio, G., Magnoni, L., Tripepi, G., Diodato, E., Bernocco, S., Lahiri, N., Tabrizi, S., Getliffe, K., White, P., Westerberg, G., Caricasole, A.
A Randomized, Double-Blind, Placebo-Controlled Phase Ib Pharmacodynamic Study with Selisistat (SEN0014196) in HD Patients: Htt Protein Levels as a Potential Pharmacodynamic Readout.
European Huntington's Disease Network Plenary Meeting, September 12-14, 2012.
105. Süßmuth, S.D., Landwehrmeyer, G.B., Tabrizi, S.J., Andersen, C., DiBacco, M., Tripepi, G., Westerberg, G. & the PADDINGTON Consortium.
A Randomized, Double-Blind, Placebo-Controlled Phase Ib Pharmacodynamic Study with Selisistat (SEN0014196) in HD Patients.
European Huntington's Disease Network Plenary Meeting, September 12-14, 2012.
106. Westerberg G, Diamanti D, Pollio G, Mori E, Fondelli C, Morena E, Magnoni L, Tarditi A, Malusa F, Tabrizi SJ, Landwehrmeyer B, Caricasole A. Selisistat: potential pharmacodynamic readouts based on transcriptomics.
J Neurol Neurosurg Psychiatry 2012; 83: Suppl 1 A22.
107. Haider S, Andre R, Farmer R, Süßmuth S, Frost C, Bjorkqvist M, Westerberg G, Landwehrmeyer B, Tabrizi SJ. SirT1 mediated modulation of circulating cytokines in huntington's disease- pharmacodynamics results from phase 1B study of selisistat— a SirT1 inhibitor.
J Neurol Neurosurg Psychiatry 2012;83:Suppl 1 A5.5
108. Westerberg G, Massai L, Magnoni L, Pollio G, Tripepi G, Diodato E, Caricasole A, Bernocco S, Tabrizi SJ, Landwehrmeyer B. Selisistat: soluble HTT protein levels as a potential pharmacodynamic readout.
J Neurol Neurosurg Psychiatry 2012; 83: Suppl 1 A21-A22.
109. Reilmann, R., Squitieri, F., Priller, J., Saft, C., Mariotti, C., Süßmuth, S., Nemeth, A., Tabrizi, SJ., Quarrell, O., Craufurd, D., Rickards, H., Rosser, A., Darpo, B., Tessari, M., Szyndol, A., Fischer, D., Macdonald, D., Munoz-Sanjuan, I., Pacifici, R., Frost, C., Farmer, R., Landwehrmeyer, B. and Westerberg, G.
Safety and Tolerability of Selisistat for the Treatment of Huntington's Disease: Results from a Randomized, Double-Blind, Placebo-Controlled Phase II Trial.
American Academy of Neurology 66th Annual Meeting, April 26-May 3, 2014, Philadelphia, PA, USA. Neurology 2014; 82(10): S47.004.