

CURRICULUM VITAE

Morley D. Hollenberg

CONTACT INFORMATION:

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EDUCATION:

- University of Manitoba, Winnipeg, Canada, B.Sc. (Honors), Chemistry, 1963
- University of Manitoba, M.Sc., Chemistry, 1964
- Oxford University, Oxford, England, D.Phil., Pharmacology, 1967
- The Johns Hopkins University School of Medicine Baltimore, Maryland, M.D., 1972
- Fellowship in Medicine, The Johns Hopkins University School of Medicine, 1972-73

HONOURS AND AWARDS:

- National Research Council of Canada Scholarship 1963-64
- Rhodes Scholarship, 1964-67
- Johns Hopkins Medical Society Award for Undergraduate Research, The Johns Hopkins School of Medicine, 1971
- Upjohn Award for Clinical Proficiency, The Johns Hopkins School of Medicine, 1972
- Medical Research Council of Canada Fellowship, 1972-73
- Member elect: The Johns Hopkins University Society of Scholars, 1993
- Pharmacological Society of Canada Novartis Award for Outstanding Contribution to Pharmacology in Canada, 1999.

- Member elect, The Royal Society of Canada, Academy of Science, Life Sciences Division, 2003
- Smith Distinguished Achievement Award for Senior Faculty of the University of Calgary Faculty of Medicine, 2003 and 2010
- Distinguished Scientist Award, Canadian Society for Clinical Investigation, 2009
- University of Calgary Faculty of Medicine '10000 Club 2009' award recognising extensive citations of published work in the literature (citation index records).
- McLaughlin Medal, Royal Society of Canada award for important research of sustained excellence in medical science, 2011.
- Henry Friesen Award for demonstrated leadership in developing biomedical research at local, national and international levels, the Canadian Society for Clinical Investigation/Royal College of Physicians and Surgeons of Canada, 2012
- The E. K. Frey - E. Werle Commemorative Gold Medal to a scientist with outstanding contributions on the role of the kallikrein-kinin system and related subjects in health and disease and with significant influence on the development in these fields, 2013.
- Named on the Thomson Reuters 2014 list of Highly Cited Researchers in the sciences; World's most influential Scientific Minds, 2014
- D. Sc. Honoris Causa University of Manitoba, 2019

APPOINTMENTS:

- 1964-1967: Rhodes Scholar, Pharmacology, D. Phil. Programme, Department of Pharmacology, Oxford, England
- 1967-1968: Postdoctoral Fellow with Dr. D.B. Hope, Department of Pharmacology, Oxford, England
- 1971-1972: Medical Intern, The Johns Hopkins Hospital, Baltimore, USA
- 1972-1973: Postdoctoral Fellow, Dr. Pedro Cuatrecasas, Department of Pharmacology and Experimental Therapeutics, The Johns Hopkins University School of Medicine, Baltimore, USA
- 1973-1979: Assistant Professor, Department of Pharmacology and Experimental Therapeutics, The Johns Hopkins University School of Medicine, Baltimore, USA
- 1974-1979: Investigator, Department of Medicine, The Johns Hopkins University School of Medicine, Baltimore, USA
- 1974-1975: Instructor, Department of Medicine, The Johns Hopkins University School of Medicine, Baltimore, USA

- 1975-1979: Assistant Professor, Department of Medicine, The Johns Hopkins University School of Medicine, Baltimore, USA
- 1979-1989: Professor and Head, Department of Pharmacology and Therapeutics, University of Calgary, Faculty of Medicine, Calgary, Canada
- 1979- Professor, Department of Pharmacology and Therapeutics and Department of Medicine, University of Calgary, Faculty of Medicine, Calgary, Canada
- 1990-1996: Chairperson, Endocrine Research Group, University of Calgary, Faculty of Medicine, Calgary, Canada
- 1999-2022 Director/Associate Director, Leaders in Medicine/MD-Plus, MD/MSc/PhD programme, University of Calgary, Faculty of Medicine, Calgary, Canada

ADVISORY BOARDS:

- 1982-1994: Medical Advisory Council, Alcoholic Beverage Medical Research Foundation, Baltimore, USA
- 1996: Medical Advisory Council, Alcoholic Beverage Medical Research Foundation, Baltimore, USA
- 1991-1996: Advisory Board, The Gairdner Foundation Awards Committee, Toronto, Canada
- 2009-2019: Selection Committee, Ernest C. Manning Innovation Awards, Calgary, Canada

SOCIETIES:

- American Society for Pharmacology and Experimental Therapeutics
- American Society for Clinical Investigation
- Canadian Society for Clinical Investigation
- The Johns Hopkins University Society of Scholars
- The Pharmacological Society of Canada
- The Royal Society of Canada

1. Hollenberg, M.D. and Cuatrecasas, P. Hormone receptors and membrane glycoproteins during in vitro transformation of lymphocytes. In *Control of Proliferation in Animal Cells* (Clarkson, B. and Baserga, R., eds.). Cold Spring Harbor Laboratory, pp. 423-434, 1974.
2. **Hollenberg, M.D.** and Cuatrecasas, P. Biochemical identification of membrane receptors: Principles and techniques. In *Handbook of Psychopharmacology* (Iverson, L.L., Iverson, S.D. and Snyder, S.H., eds.), Plenum Publication Co., N.Y., Section I, Basic Neuropharmacology, Vol. 2, pp. 129-177, 1975.
3. **Hollenberg, M.D.** and Cuatrecasas, P. Studies on the interaction of hormones with plasma membrane receptors. In *Biochemical Actions of Hormones* (Litwack, G., ed.), Vol. 3, Academic Press, NY, pp. 42-85, 1975.
4. Cuatrecasas, P. and **Hollenberg, M.D.** Membrane receptors and hormone action. *Adv. Protein Chem.* 30, 251-451, 1976.
5. **Hollenberg, M.D.**, and Cuatrecasas, P. Techniques for the study of plasma membrane receptors related to hormone action. In *Methods in Cancer Research* (Busch, H., ed.), Vol. 12, chapter VI, pp. 317-366, 1976.
6. **Hollenberg, M.D.** and Cuatrecasas, P. Methods for the biochemical identification of insulin receptors. In *Methods in Receptor Research* (Blecher, M., ed.), Marcel Dekker, pp. 429-477, 1976.
7. **Hollenberg, M.D.** and Cuatrecasas, P. Distinction of receptor from non-receptor interactions in binding studies: Historical and practical perspectives. In *The Receptors, a Comprehensive Treatise* (O'Brien, R.D., ed.), Plenum Publishing Corporation, N.Y., Vol. 1, pp. 193-214, 1979.
8. **Hollenberg, M.D.** New drugs in perspective beclomethasone. In *The Johns Hopkins University School of Medicine Postgraduate Course in Internal Medicine*, Vol. II, Program 12, pp. 15-17, 1977.
9. **Hollenberg, M.D.** Receptor models and the action of neurotransmitters and hormones. In *Neurotransmitter Receptor Binding* (Yamamura, H., Enna, S.J. and Kuhar, M.J., eds.), Raven Press, Chapter 2, pp. 13-39, 1978.
10. **Hollenberg, M.D.** Insulin receptors in target and "non-target" cells, cyclic nucleotides and cell growth. In *First International Symposium on Endocrine Pancreas and Diabetes*, Venezuela, June, 1977, Excerpta Medica, Amsterdam, Oxford, pp. 96-118.
11. Spivak, J.L. and **Hollenberg, M.D.** Affinity chromatography with agarose-lectin derivatives: Separation of human glycoproteins and application to erythropoietin purification. In *Biomedical Applications of the Horseshoe Crab (Limulidae)* (Cohen, E., ed.), Alan R. Liss, Inc., N.Y., pp. 641-653, 1979.
12. **Hollenberg, M.D.** Acceptors, receptors and other cell surface markers: An overview. In *Advanced Cell Biology* (Schwartz, L.M. and Azar, M.M., eds.), VanNostrand/Reinhold, N.Y., pp. 267-270, 1981.

13. **Hollenberg, M.D.** Polypeptide hormone receptors. In *Advanced Cell Biology* (Schwartz, L.M. and Azar, M.M., eds.), VanNostrand/Reinhold, N.Y., pp. 325-337, 1981.
14. **Hollenberg, M.D.** and Nexø, E. Receptor binding assays. In *Membrane receptors: Methods for purification and characterization* (Jacobs, S. and Cuatrecasas, P., eds.), "Receptors and Recognition" series B., Vol. 1, Ch. 1, Chapman and Hall, London, pp. 1-31, 1981.
15. Valentine, K. and **Hollenberg, M.D.** Membrane receptors and hormone action. In *Cell Biology of the Secretory Process* (Cantin, M., ed.), Karger, Basel, pp. 1-51, 1984.
16. Armstrong, G.D. and **Hollenberg, M.D.** Receptor Characterization. In *Methods in Diabetes Research, Vol. 1, Lab Methods - Part c* (Pohl, S. and Larner, J., eds.), John Wiley and Sons, New York, pp. 4-24, 1984.
17. **Hollenberg, M.D.** and Armstrong, G.D. Epidermal growth factor- urogastrone and its receptor. In *Polypeptide Hormone Receptors* (Posner, B., ed.), Marcel Dekker, New York, pp. 201-226, 1985.
18. **Hollenberg, M.D.** Receptor Models and the Action of Neurotransmitters and Hormones: Some New Perspectives. In *Neurotransmitter Receptor Binding, 2nd edition* (Yamamura, H.I., Enna, S.J. and Kuhar, M.J., eds.), Raven Press, New York, pp. 1-39, 1985.
19. Lederis, K., Goren, H.J. and **Hollenberg, M.D.** Oxytocin: An insulin-like hormone. In *Oxytocin: Clinical and Laboratory Studies* (J.A. Amico and A.G. Robinson, eds.), Elsevier Ltd., Amsterdam, pp. 284-302, 1985.
20. **Hollenberg, M.D.** Insulin, Its Receptor and Diabetes: An Overview. In *Insulin, Its Receptor and Diabetes* (**Hollenberg, M.D.**, ed.), Marcel Dekker, New York, pp. 1-6, 1985.
21. **Hollenberg, M.D.** Relationship of the Insulin Receptor to Receptors for Other Insulin-Like Growth Factors. In *Insulin, Its. Receptor and Diabetes* (**Hollenberg, M.D.**, ed.), Marcel Dekker, New York, pp. 57-84, 1985.
22. **Hollenberg, M.D.** Receptor Dynamics and Insulin Action. In *Insulin, Its Receptor and Diabetes* (**Hollenberg, M.D.**, ed.), Marcel Dekker, New York, pp. 85-104, 1985.
23. **Hollenberg, M.D.** Control of Receptor Function by Homologous and Heterologous Ligands. In *Mechanisms of Receptor Regulation* (Poste, G. and Crooke, S.T., eds.), Plenum Press, 295-322, 1985.
24. **Hollenberg, M.D.** and Goren, H.J. Ligand-Receptor Interactions at the Cell Surface. In *Mechanisms of Receptor Regulation* (Poste, G. and Crooke, S.T., eds.), Plenum Press, New York, pp. 323-373, 1985.
25. **Hollenberg, M.D.**, Atkison, P.R. and Bala, R.M. Regulation of Growth Factors and Their Receptors: Implications for the Control of Normal and Abnormal Tissue Growth. In *Somatomedins and Other Peptide Growth Factors: Relevance to Pediatrics* (Hintz, R. and Underwood, L.E., eds.), Proceedings 89th Ross Conference on Pediatric Research, Ross Laboratories, Columbus, Ohio, pp. 4-11, 1985.

26. **Hollenberg, M.D.** Surface Recognition Receptors and Disease. In The Receptors, Vol. IV (Conn, M., ed.), Academic Press, New York, pp. 75-95, 1986.
27. **Hollenberg, M.D.** Receptor Screening Assays for Insulin and Other Growth Factors: Potential Uses and Pitfalls for Detecting New Biologically Active Compounds. In Receptor Binding in Drug Research (R.A. O'Brien, ed.), Marcel Dekker Inc., New York, pp. 352-377, 1985.
28. **Hollenberg, M.D.** Receptor Regulation and Receptor-Receptor Communication. Wenner-Gren Center International Symposium Series, Vol. 48, Stockholm, Sweden, October 9-11, 1986. MacMillan Press, U.K., pp. 546-554, 1987.
29. **Hollenberg, M.D.** Receptors: Their Reactions and Interactions. In Receptor Pharmacology and Function (M. Williams, R. Glennon and P.B.M.W.M. Timmerans, eds.), Marcel Dekker, Inc., New York, pp. 1-16, 1988.
30. **Hollenberg, M.D.** Pharmacological and biochemical aspects of receptor regulation. In Recent Advances Receptor Chemistry (C. Melchiorre and M. Giannella (eds.)), Proceedings of the 6th Camerino-Noordwijkerhout Symposium, Camerino, September 6-10, 1987, Elsevier Science Publishers B.V., Amsterdam, pp. 21-28, 1988.
31. **Hollenberg, M.D.** Insulin action and diabetes: Epilogue and Prologue. In Insulin Action and Diabetes. Progress in Endocrine Research and Therapy. Goren, H.J., **Hollenberg, M.D.**, Roncari, D.A.K. (eds.) Vol. 4., Raven Press, New York, 243-244, 1988.
32. Goren, H.J., **Hollenberg, M.D.**, Roncari, D.A.K. (eds.) Insulin Action and Diabetes. Progress in Endocrine Research and Therapy. Vol. 4. Raven Press, New York, 1988.
33. **Hollenberg, M.D.** Receptors for neurotransmitters and hormones: Models for cellular activation. In Neuroscience Year. Supplement 1 to the Encyclopedia of Neuroscience (G. Adelman, ed.) Birkhauser, Boston, Basel, Berlin, pp. 147-150, 1989.
34. **Hollenberg, M.D.** Insulin receptor-mediated transmembrane signalling. In Insulin, Handbook of Experimental Pharmacology, Vol. 92 (P. Cuatrecasas and S. Jacobs, eds.), Springer Verlag, Berlin, New York, pp. 183-207, 1990.
35. **Hollenberg, M.D.** Receptor solubilization, characterization and isolation. In Methods in Neurotransmitter Receptor Analysis (Yamamura, H.I., Enna, S.J. & Kuhar, M.J. (eds.)), Raven Press, New York, 111-145, 1990.
36. Maturo, J.M. III and **Hollenberg, M.D.** Insulin receptor purification. In Receptor Purification, Litwack, G. (ed.) Humana Press, Clifton, N.J., 419-433, 1990.
37. **Hollenberg, M.D.** Receptor-membrane interactions: A new focus for structure-activity relationships. In Trends in Drug Research, Vol. 13 (Claasen, V., ed.) Elsevier Science Publishers, Amsterdam, New York, pp. 11-22, 1990.
38. Severson, D.L. and **Hollenberg, M.D.** The plasma membrane as a transducer and amplifier. In Foundations of Medical Cell Biology (Bittar, M. ed.), Chapter 11, JAI Press, Greenwich, CT, USA, Vol. 5A, Membrane Dynamics and Signaling, pp. 223-254, 1992.

39. **Hollenberg, M.D.** Growth factors and signal transduction in smooth muscle systems. In Lung Biology in Health & Disease: Signal Transduction in Lung Cells Section Eds. Brody, J.S., Center, D.M. and Tkachuk, V.A. Series Editor: Lenfant, C. Marcel Dekker, New York, Chapter 17, pp 369-390, 1993.
40. **Hollenberg, M.D.**, Severson, D.L., Drummond, G.I. and Godin, D.V. (Section Editors) Section I. General Principles of Pharmacology. In Principles of Pharmacology. Basic concepts and clinical applications. (Editors, Munson, P.L., Mueller, R.A. and Breese, G.R.) Chapman and Hall, London, pp 1-84, 1995.
41. **Hollenberg, M.D.** General Principles of Pharmacology. Introduction. In Principles of Pharmacology. Basic concepts and clinical applications. (Editors, Munson, P.L., Mueller, R.A. and Breese, G.R.) Section I. Chapman and Hall, London, pp 3-5, 1995.
42. **Hollenberg, M.D.** and Severson, D.L. Pharmacodynamics: Drug Receptors and Receptors/Mechanisms. In Principles of Pharmacology. Basic concepts and clinical applications. (Editors, Munson, P.L., Mueller, R.A. and Breese, G.R.) Section I. Chapter 1, Chapman and Hall, London, pp 7-37, 1995.
43. **Hollenberg, M.D.** and Kleinzeller, A. Membrane receptors in Comprehensive Biochemistry Vol. 39, A. Kleinzeller, ed., Elsevier Press, Amsterdam, pp 187-230, 1995.
44. **Hollenberg, M.D.** G-protein-linked receptors and tyrosine kinase-mediated signal transduction pathways: a mid-nineties perspective, with working hypotheses. In Cuello, C. and Collier, B. (eds.) Pharmacological Sciences: Perspectives for research and therapy in the late 1990s. Birkhauser, Basel, pp 81-89, 1995.
45. DiMaio, J., Winocour, P., Leblond, L., Saifeddine, M., Laniyonu, A. and **Hollenberg, M.D.** Thrombin inhibitors and thrombin receptor agonists/antagonists. In Perspectives in Receptor Research, eds. Giardinà, D., Piergentili, A., and Pigini, M. Elsevier, Amsterdam, Vol. 24, pp 271-289, 1996.
46. Severson, D.L. and **Hollenberg, M.D.** The plasma membrane as a transducer and amplifier. In Principles of Medical Biology Vol. 7B, Membranes and Cell Signalling. JAI Press, Greenwich Conn.USA, pp. 387-419, 1997.
47. Zwiers, H., **Hollenberg, M.D.**, McLean, K.N., Philibert, K.D. Endogenous ADP-ribosylation of phosphoprotein B-50/GAP-43 and other neuronal substrates. In ADP-Ribonylation in Animal Tissue, eds Haag, Koch-Nolte Plenum Press, N.Y., USA, pp. 279-288, 1997.
48. Watson, S.P., Keeling, D. and **Hollenberg, M.D.** Platelet membrane receptors and signalling pathways: new therapeutic targets. In "Anti-thrombotics", Uprichard, A.G.C. & Gallagher, K.P. eds, Handbook of Experimental Pharmacology, 132, pp. 209-257, 1998.
49. **Hollenberg, M.D.** Protease-activated receptors (Synopsis Table) In Alexander, S.P.H. & Peters, J.A. eds, "1998 Receptor & Ion Channel Nomenclature Supplement", Trends in Pharmacol Sci., 9th ed., p.67, 1998.
50. **Hollenberg, M.D.** Proteinase-activated Receptors (Synopsis Table), In Watling, K.J. ed. "The RBI Handbook of Receptor Classification and Signal Transduction," 3rd ed., RBI Publisher, Natick, MA, U.S.A., pp. 108-109, 1998.

51. **Hollenberg, M.D.** Proteinase-activated tethered ligand receptors (PARs): Novel targets for drug development. *In* Bioactive Peptides in Drug discovery and Design: Medical Aspects, Matsoukas, J., and Mavromoustakos, T. eds., pp265-274, IOS Press, Amsterdam, 1999.
52. **Hollenberg, M.D.** Receptors for neurotransmitters and hormones: Models for cellular activation. *In* Encyclopedia of Neuroscience (Adelman, G. and Smith, B.H. eds.), Elsevier Science Publishers, N.Y., Vol. 351, pp1758-1764, 1999
53. Robbins, S.M. and **Hollenberg, M.D.** Plasma Membrane-Localized Signal Transduction In Current Topics in Membranes, 48, pp351-395, Academic Press, NY, 1999.
54. **Hollenberg, M.D.** Protease-activated receptors (Synopsis Table) *In* Alexander, S.P.H. & Peters, J.A. eds, "1999 Receptor & Ion Channel Nomenclature Supplement", Trends in Pharmacol. Sci., 10th Anniversary ed., p72, 1999
55. Kawabata, A., Kuroda, R., and **Hollenberg, M.D.** Physiology of protease-activated receptors (PARs): involvement of PARs in digestive functions. Folia Pharmacol. Japan (Nippon Yakurigaku Zasshi) 114, Suppl. 1, 173P-179P, 1999.
56. **Hollenberg, M.D.** Protease-activated receptors. Trends in Pharmacological Sciences 2000. Receptor and Ion Channel Nomenclature Supplement eds. Alexander, S.P.H. & Peters J.A., p88, 2000.
57. **Hollenberg, M.D.** Proteinase-activated receptors. RBI Handbook of Receptor Classification and Signal Transduction ed. Watling, K. J. p118-119, 2001.
58. **Hollenberg, M.D.** Protease-activated receptors. Trends in Pharmacological Sciences 2001. Nomenclature Supplement, eds. Alexander, S.P.H., Mathie, A. & Peters, J.A. p88, 2001.
59. **Hollenberg, M.D.** and Compton, S.J. International Union of Pharmacology. XXVIII. Proteinase-activated receptors. Pharmacol. Rev. 54(2): 203 – 217, 2002.
60. **Hollenberg, M.D.** Proteinase-mediated Signaling: Proteinase-activated receptors (PARs) and Much More. Proceedings 4th International Symposium on Receptor Mechanisms, Signal Transduction and Drug Effects, Fukui Medical University, May 2003. Life Sciences. 74(2-3):237-246. 2003.
61. **Hollenberg, M.D.** Proteinase-Activated Receptors (PARs): An Evolving Hormonal System. Drug Development Research 59:334-335, 2003.
62. **Hollenberg, M.D.** Proteinase-Activated Receptors: Tethered Ligands and Receptor-Activating Peptides. Drug Development Research 59:336-343, 2003.
63. **Hollenberg, M.D.**, and Compton, S.J. Proteinase-Activated Receptor Domains and Signaling. Drug Development Research 59:344-349, 2003.
64. **Hollenberg, M.D.**, Wijesuriya, S.J., Gui, Y. and Loutzenhiser, R. Proteinase-Activated Receptors (PARs) and the Kidney. Drug Development Research 60:36-42, 2003.
65. McGuire J.J., Gui, Y., Wang, Loutzenhiser, R., Triggle, C.R. and **Hollenberg M.D.**, Proteinase-Activated Receptor-2 (PAR2): Release of an endothelium-derived hyperpolarizing factor distinct

- from that released by acetylcholine. In: EDHF 2002. Ed. PM Vanhoutte, Taylor & Francis, London, England. pp. 47-54, 2003.
66. Triggle C.R., **Hollenberg M.**, Anderson T.J., Ding H., Jiang Y., Wiehler W.B., Ng E.S.M., Ellis A., Andrews K., McGuire J.J. and Pannirselvam M. The endothelium in health and disease – a target for therapeutic intervention. *Journal of Smooth Muscle Research* **39**, No.6: 249-267, 2003.
 67. Hansen K. and **Hollenberg M.D.** Proteinase-Activated Receptors. *Encyc Biol Pharm* **3**:543-8, 2004.
 68. Ramachandran, R., El-Daly, M. Saifeddine, **Hollenberg M.D.** Thrombin: to PAR or not to PAR, and the regulations of inflammation. In “Thrombin: Physiology and Disease.” Muichael E. Maragoudakis and Nikos E. Tsopanoglou. Springer, New York, 2009
 69. **Hollenberg, M.D.**, Hansen, K.K., Mihara, K. and Ramachandran, R.: Proteolytic enzymes and cell signaling: pharmacological lessons. In Vergnolle, N. and Chignard, M. eds., *Proteases and their receptors in Inflammation, Progress in Inflammation Research* Birkhäuser Verlag AG, Basel, 2011.
 70. **Hollenberg, M.D.**, Hooper, J.D., Darmoul, D. and Oikonomopoulou, K. Kalikrein-related peptidases (KLKs), proteinase-mediated signaling and proteinase-activated receptors (PARs). In: Magdolen, V., Sommerhoff, CP, Fritz, H and Scmitt, M (Eds.) *Kallikrein-Related Peptidases, Vol. 1*, pp. 373-398. De Gruyter, Berlin, 2012.

1. Frankland, B.T.B., **Hollenberg, M.D.**, Hope, D.B. and Schacter, B.A. Dissociation of oxytocin and vasopressin from their carrier protein by chromatography on Sephadex G-25. *Br. J. Pharmacol.*, 26, 502-510, 1966.
2. Hope, D.B., and **Hollenberg, M.D.** Isolation of a new hormone-binding protein from the posterior lobes of bovine pituitary glands. *Biochem. J.*, 99, 5P-6P, 1966.
3. Dean, C.R., **Hollenberg, M.D.** and Hope, D.B. The relationship between neurophysin and the soluble proteins of pituitary neurosecretory granules. *Biochem. J.*, 104, 8C, 1967.
4. **Hollenberg, M.D.** and Hope, D.B. Fractionation of neurophysin by molecular-sieve and ion-exchange chromatography. *Biochem. J.*, 104, 122-127, 1967.
5. **Hollenberg, M.D.** and Hope, D.B. The composition of crystalline complexes of neurophysin-M with (8-arginine)-vasopressin and oxytocin. *Biochem. J.*, 105, 921-926, 1967.
6. **Hollenberg, M.D.** Proteins and peptides of the bovine neurohypophysis. Doctoral thesis, Oxford University, Oxford, England, June 1967.
7. **Hollenberg, M.D.** and Hope, D.B. The isolation of the native hormone- binding proteins from bovine pituitary posterior lobes. *Biochem. J.*, 106, 557-564, 1968.
8. Hope, D.B. and **Hollenberg, M.D.** Crystallization of complexes of neurophysins with vasopressin and oxytocin. *Proc. Roy. Soc. (Biol.)*, 170, 37-47, 1968.
9. Rauch, R., **Hollenberg, M.D.** and Hope, D.B. Isolation of a third bovine neurophysin. *Biochem. J.*, 115, 473-479, 1969.
10. **Hollenberg, M.D.**, Kaback, M.M. and Kazazian, H.H. The production of hemoglobin-A by human fetal reticulocytes. *Science*, 174, 698-702, 1971.
11. Krug, U., **Hollenberg, M.D.** and Cuatrecasas, P. Changes in the binding of concanavalin A and wheat germ agglutinin to human lymphocytes during in vitro transformation. *Biochem. Biophys. Res. Commun.*, 52, 305-312, 1973.
12. Cuatrecasas, P., Parikh, I. and **Hollenberg, M.D.** Affinity chromatography of vibrio cholerae enterotoxin: Ganglioside-agarose and the biological effects of ganglioside-containing soluble polymers. *Biochemistry*, 12, 4253-4263, 1973.
13. **Hollenberg, M.D.** and Cuatrecasas, P. Epidermal growth factor: Receptors in human fibroblasts and modulation of action by cholera toxin. *Proc. Natl. Acad. Sci. USA*, 70, 2964-2968, 1973.
14. Harik, S., **Hollenberg, M.D.** and Snyder, S. Ornithine decarboxylase: Turnover slowed by α -hydrazinoornithine. *Molec. Pharmacol.*, 10, 41-47, 1974.
15. Harik, S., **Hollenberg, M.D.** and Snyder, S. Polyamines: Blockade of putrescine synthesis by α -hydrazinoornithine does not affect net RNA and DNA synthesis. *Nature (London)*, 249, 250-251, 1974.
16. O'Keefe, E., **Hollenberg, M.D.** and Cuatrecasas, P. Epidermal growth factor: Characteristics of specific binding in membranes from liver, placenta and other target tissues. *Arch. Biochem. Biophys.*, 164, 526, 1974.

17. **Hollenberg, M.D.**, Fishman, P.F., Bennett, G.V. and Cuatrecasas, P. Cholera toxin and cell growth: Role of membrane gangliosides. *Proc. Natl. Acad. Sci. USA*, 71, 4224-4228, 1974.
18. Cuatrecasas, P., **Hollenberg, M.D.**, Chang, K.J. and Bennett, V. Hormone receptor complexes and their modulation of membrane function. *Recent Prog. Horm. Res.*, 31, 37-94, 1975.
19. **Hollenberg, M.D.** and Cuatrecasas, P. Insulin: Interaction with membrane receptors and relationship to cyclic purine nucleotides and cell growth. *Fed. Proc.* 34, 1556-1563, 1975.
20. **Hollenberg, M.D.** and Cuatrecasas, P. Insulin and epidermal growth factor: Human fibroblast receptors related to DNA synthesis and amino acid transport. *J. Biol. Chem.*, 250, 3845-3853, 1975.
21. Cuatrecasas, P. and **Hollenberg, M.D.** Binding of insulin and other hormones to non-receptor materials: Saturability, specificity and apparent "negative" cooperativity. *Biochem. Biophys. Res. Commun.*, 62, 31-41, 1975.
22. **Hollenberg, M.D.** Receptors for insulin and epidermal growth factor: Relation to synthesis of DNA in cultured rabbit lens epithelium. *Arch. Biochem. Biophys.*, 171, 371-377, 1975.
23. **Hollenberg, M.D.** Action of insulin analogues on cultured human fibroblasts reflects biological potency. *Life Sciences*, 18, 521-528, 1976.
24. Bennett, V., Craig, S., **Hollenberg, M.D.**, O'Keefe, E., Sayhoun, N. and Cuatrecasas, P. Structure and function of cholera toxin receptors. *Proceedings ICN-UCLA Winter Conference on Molecular and Cellular Biology. J. Supramolecular Structure*, 4, 99-120, 1976.
25. **Hollenberg, M.D.** Epidermal growth factor: A polypeptide acquiring hormonal status. *PAABS Revista*, 5, 265-271, 1976.
26. Charness, M.E., Bylund, D.B., Beckman, B.S., **Hollenberg, M.D.** and Snyder, S.H. Independent variation of α -adrenergic receptor binding and catecholamine-stimulated adenylate cyclase activity in rat erythrocytes. *Life Sciences*, 19, 243-249, 1976.
27. Vengris, V.E., Reynolds, F.H., Jr., **Hollenberg, M.D.** and Pitha, P.M. Interferon action: Role of membrane gangliosides. *Virology*, 72, 486-493, 1976.
28. **Hollenberg, M.D.** Steroid stimulated amino acid uptake in cultured human fibroblasts reflects glucocorticoid and anti-inflammatory potency. *Molec. Pharmacol.*, 13, 150-160, 1977.
29. **Hollenberg, M.D.** and Gregory, H. Human urogastrone and mouse epidermal growth factor share a common receptor site in cultured human fibroblasts. *Life Sciences*, 20, 267-274, 1977.
30. Sahyoun, N., **Hollenberg, M.D.**, Bennett, V. and Cuatrecasas, P. Topographic separation of adenylate cyclase and hormone receptors in the plasma membrane of toad erythrocyte ghosts. *Proc. Natl. Acad. Sci. USA*, 74, 2860-2864, 1977.
31. Pellefigue, F., Butler, J., Spielberg, S.P., **Hollenberg, M.D.**, Goodman, S.I. and Schulman, J.D. Goodman, S.I. and Schulman, J.D. Normal amino acid uptake by cultured human fibroblasts does not require gamma-glutamyl transpeptidase. *Biochem. Biophys. Res. Commun.*, 73, 997-1002, 1976.
32. Bylund, D.B., Tellez-Inon, M.R. and **Hollenberg, M.D.** Age related parallel decline in beta-adrenergic receptors, adenylate cyclase and phosphodiesterase activity in rat erythrocyte membranes. *Life Sci.*, 21, 403-409, 1977.

33. **Hollenberg, M.D.** and Fryklund, L. Insulin and somatomedins A and B: Comparison of biological activities in cultured human skin-derived fibroblasts. *Life Sci.*, 21, 943-950, 1977.
34. Spivak, J.L., Small, D. and **Hollenberg, M.D.** Erythropoietin: Isolation by affinity chromatography with lectin-agarose derivatives. *Proc. Natl. Acad. Sci. USA*, 74, 4633-4635, 1977.
35. Sahyoun, N., Hock, R.A. and **Hollenberg, M.D.** Insulin and epidermal growth factor-urogastrone: Affinity crosslinking to specific binding sites in rat liver membranes. *Proc. Natl. Acad. Sci. USA*, 75, 1675-1679, 1978.
36. Maturo, J.M. III and **Hollenberg, M.D.** Insulin receptor: Interaction with non-receptor glycoprotein from liver cell membranes. *Proc. Natl. Acad. Sci. USA*, 75, 3070-3074, 1978.
37. **Hollenberg, M.D.** and Cuatrecasas, P. Membrane receptors and hormone action: Recent developments. *Progress in Neuropsychopharmacology*, 2, 287-302, 1978.
38. Spivak, J., Small, D., Shaper, J.H. and **Hollenberg, M.D.** Use of immobilized lectins and other ligands for the partial purification of erythropoietin. *Blood*, 52, 1178-1188, 1978.
39. Maturo, J.M. III, Shackelford, W.H. and **Hollenberg, M.D.** Characteristics of the solubilized insulin receptor of human placenta. *Life Sci.*, 23, 2063-2072, 1978.
40. Beckman, B.S. and **Hollenberg, M.D.** Beta-adrenergic receptors and adenylate cyclase activity in rat reticulocytes and mature erythrocytes. *Biochem. Pharmacol.*, 28, 239-248, 1979.
41. **Hollenberg, M.D.** Hormone receptor interactions at the cell membrane. *Pharmacol. Reviews*, 30, 393-410, 1979.
42. Hock, R.A., Nexø, E. and **Hollenberg, M.D.** Isolation of the human placenta receptor for epidermal growth factor-urogastrone. *Nature*, 277, 403-405, 1979.
43. Maturo, J.M. III and **Hollenberg, M.D.** Insulin receptors in transformed fibroblasts and in adipocytes: A comparative study. *Canad. J. Biochem.*, 57, 497-506, 1979.
44. **Hollenberg, M.D.** and Schneider, E.L. Receptors for insulin and epidermal growth factor-urogastrone in adult human fibroblasts do not change with donor age. *Mech. Ageing and Development*, 11, 37-43, 1979.
45. Nexø, E., Hock, R.A. and **Hollenberg, M.D.** Lectin agarose immobilization: A new method for detecting soluble membrane receptors. *J. Biol. Chem.*, 254, 8740-8743, 1979.
46. **Hollenberg, M.D.**, Barrett, J.C., Ts'o, P.O.P. and Berhanu, P. Selective reduction in receptors for epidermal growth factor- urogastrone in chemically transformed tumorigenic Syrian hamster embryo fibroblasts. *Cancer Res.*, 39, 4166-4169, 1979.
47. **Hollenberg, M.D.** Epidermal growth factor-urogastrone: A polypeptide acquiring hormonal status. *Vitamins and Hormones*, 37, 69-110, 1979.
48. Nexø, E., **Hollenberg, M.D.** and Olesen, H. Solubilization and characterization of the Transcobalamin-II acceptor from human placenta and rabbit liver. In *Vitamin B12* (Zagalak, B. and Friedrich, W., eds.), Walter de Gruyter and Co., N.Y., pp. 843-850, 1979.

49. **Hollenberg, M.D.** and Gregory, H. EGF-urogastrone: Receptor binding and activity of derivatives. *Molec. Pharmacol.*, 17, 314-320, 1980.
50. Nexø, E. and **Hollenberg, M.D.** Characterization of the particulate and soluble acceptor for transcobalamin II from human placenta and rabbit liver. *Biochem. Biophys. Acta.*, 628, 190-200, 1980.
51. Nexø, E., **Hollenberg, M.D.**, Figueroa, A. and Pratt, R.M. Detection of epidermal growth factor-urogastrone and its receptor during fetal mouse development. *Proc. Natl. Acad. Sci. USA*, 77, 2782-2785, 1980.
52. Lin, S., Ts'o, P.O.P. and **Hollenberg, M.D.** The effects of interferon in epidermal growth factor action. *Biochem. Biophys. Res. Commun.*, 96, 168-174, 1980.
53. Berhanu, P. and **Hollenberg, M.D.** Epidermal growth factor-urogastrone receptor: Selective alteration in simian virus 40 transformed mouse fibroblasts. *Arch. Biochem. Biophys.*, 203 (1), 134-144, 1980.
54. Nexø, E., **Hollenberg, M.D.** and Bing, J. Aggressive behaviour in mice provokes a marked increase in both plasma epidermal growth factor and renin. *Acta Physiol. Scand.*, 111, 367-371, 1981.
55. Hock, R.A. and **Hollenberg, M.D.** Characterization of the receptor for epidermal growth factor urogastrone in human placenta membranes. *J. Biol. Chem.*, 255, 10731-10736, 1980.
56. Hock, R.A., Nexø, E. and **Hollenberg, M.D.** Solubilization and isolation of the human placenta receptor for epidermal growth factor- urogastrone. *J. Biol. Chem.*, 255, 10737-10743, 1980.
57. **Hollenberg, M.D.**, Nexø, E., Berhanu, P. and Hock, R.A. Phorbol ester and the selective modulation of receptors for epidermal growth factor-urogastrone. In *Receptor-mediated binding and internalization of toxins and hormones* (Middlebrook, J.L. and Kohn, L.D., eds.), Academic Press, New York, pp. 181-195, 1981.
58. Goren, H.J., Geonzon, R.M., **Hollenberg, M.D.**, Lederis, K. and Morgan, D. D. Oxytocin action: Lack of correlation between receptor number and tissue responsiveness. *J. Supramolecular Structure*, 14, 129-138, 1980.
59. **Hollenberg, M.D.**, Maturo, J.M. III and Bhaumick, B. Insulin receptor in target and non-target tissues: Characteristics and comparison with receptors for insulin-like growth factors. In *Current Views on Insulin Receptors* (Andreani, D., DePirro, R., Lauro, R., Olefsky, J. and Roth, J., eds.), Academic Press, N.Y., pp. 61-73, 1981.
60. **Hollenberg, M.D.**, Geonzon, R.M., Hanif, K., Goren, H.J., Pickering, B.T., Swann, R.W. and Lederis, K. Secretion, clearance and tissue responsiveness to oxytocin in the Brattleboro rat. In *Neurosecretion: Molecules, Cells, Systems* (Lederis, K. and Farner, D.S., eds.), Plenum Press, pp. 475-476, 1981.
61. Nexø, E. and **Hollenberg, M.D.** Lectins and the receptor for epidermal growth factor. In *Proc. 3rd International Meeting on Lectins*, Copenhagen, Denmark, June, 1980 (Bog-Hansen, T.C., ed.), Walter de Gruyter and Co., N.Y., pp. 355-361, 1981.
62. Nexø, E., Lamberg, S.I. and **Hollenberg, M.D.** Comparison of a receptor binding assay with a radioimmunoassay for measuring human epidermal growth factor-urogastrone in urine. *Scand. J. Clin. Lab. Invest.*, 41, 577-582, 1981.

63. Barrack, E.R. and **Hollenberg, M.D.** Mitogenesis in normal human fibroblasts by polyionosinic-polycytidylic acid and other acidic polymers: Enhancement of action by glucocorticoids. *J. Cell Physiol.*, 108, 445-454, 1981.
64. **Hollenberg, M.D.** Membrane Receptors and Hormone Action I: New trends related to receptor structure and receptor regulation. *Trends in Pharmacol. Sci.*, 2, 320-323, 1981.
65. Borg, H., Lundgren, E., **Hollenberg, M.D.**, Veale, W.L., Tan, Y.H. and McPherson, A. Human interferon for clinical trials: Removal of pyrogen by a simple two-step procedure. *Can. J. Physiol. Pharmacol.*, 59, 890-892, 1981.
66. **Hollenberg, M.D.**, Hayden, L.J. and Atkison, P. Growth factors, transforming factors and their receptors: Implications for tumors of the gastrointestinal tract. In *Proc. Falk Symp. on Colon Carcinogenesis* (Malt, R.A. and Williamson, R.C.N., eds.), Titisee, May 1981, MTP Press, Lancaster, England, pp. 327-335, 1982.
67. Bhaumick, B., Bala, R.M. and **Hollenberg, M.D.** Somatomedin receptor of human placenta: Solubilization, photolabeling, partial purification, and comparison with insulin receptor. *Proc. Natl. Acad. Sci. USA*, 78, 4279-4283, 1981.
68. Goren, H.J., Hanif, K., **Hollenberg, M.D.** and Lederis, K. Oxytocin action in isolated adipocytes from Brattleboro rats. *Ann. N.Y. Acad. Sci.*, 394, 625-629, 1982.
69. Goren, H.J., Hanif, K., **Hollenberg, M.D.** and Lederis, K. Mechanism for loss of oxytocin response in the congenital diabetes insipidus (Brattleboro) rat. *Proc. Western Pharmacology Society*, 25, 177-179, 1982.
70. Hanif, K., Goren, H.J., **Hollenberg, M.D.** and Lederis, K. Oxytocin Action: Mechanisms of insulin-like activity in isolated rat adipocytes. *Molecular Pharmacology*, 22, 381-388, 1982.
71. Hanif, K., Lederis, K., **Hollenberg, M.D.** and Goren, H.J. Inability of oxytocin to activate pyruvate dehydrogenase in the Brattleboro rat. *Science*, 216, 1010-1012, 1982.
72. Hanif, K., Goren, H.J., **Hollenberg, M.D.** and Lederis, K. Oxytocin Action: Lipid metabolism in adipocytes from homozygous diabetes insipidus rats (Brattleboro strain). *Can. J. Physiol. Pharmacol.*, 60, 993-997, 1982.
73. **Hollenberg, M.D.** Membrane Receptors and Hormone Action II: New perspectives for receptor-modulated cell function. *Trends in Pharmacological Sciences* 3, 25-28, 1982.
74. Bhaumick, B., Armstrong, G.D., **Hollenberg, M.D.** and Bala, R.M. Characterization of the human placental receptor for basic somatomedin. *Can. J. Biochem.*, 60, 923-932, 1982.
75. **Hollenberg, M.D.** Receptor mediated phosphorylation reactions. *Trends in Pharmacol. Sci.*, 3, 271-273, 1982.
76. Lin, S., Ts'o, P.O.P. and **Hollenberg, M.D.** Epidermal growth factor- urogastrone action: Induction of 2'5'oligoadenylate synthetase activity and enhancement of the mitogenic effect by anti-interferon antibody. *Life Sciences*, 32, 1479-1488, 1983.
77. Armstrong, G.D., **Hollenberg, M.D.**, Bhaumick, B., Bala, R.M. and Maturo, J.M. III. Receptors for insulin and basic somatomedin: Immunological and affinity-chromatographic crossreactivity. *Can. J. Biochem. Cell Biol.*, 61, 650-656, 1983.

78. Armstrong, G.D., **Hollenberg, M.D.**, Bhaumick, B. and Bala, R.M. Comparative studies on human placental insulin and basic somatomedin receptors. *J. Cell. Biochem.*, 20, 283-292, 1983.
79. Maturo, J.M. III, **Hollenberg, M.D.** and Aglio, L.S. Insulin receptor: Insulin-modulated interconversion between distinct molecular forms involving disulfide-sulfhydryl exchange. *Biochemistry*, 22, 2579-2586, 1983.
80. O'Connor-McCourt, M. and **Hollenberg, M.D.** Receptors, Acceptors and the Action of Polypeptide Hormones: Illustrative studies with epidermal growth factor-urogastrone. *Can. J. Biochem. Cell Biol.*, 61, 670-682, 1983.
81. **Hollenberg, M.D.** Growth Factors, in Log Phase (Book Review). *Trends in Pharmacol. Sci.*, 4, 183, 1983.
82. **Hollenberg, M.D.**, Goren, H.J., Hanif, K. and Lederis, K. Oxytocin, its Receptor and Its Insulin-Like Activity. *Trends in Pharmacol. Sci.*, 4, 310-312, 1983.
83. Hanif, K., Goren, H.J., Geonzon, M., Lederis, K. and **Hollenberg, M.D.** Oxytocin resistance in Brattleboro rat adipocytes and comparative studies on insulin or oxytocin responsiveness in normal rat adipocytes. *Can. J. Physiol. Pharmacol.*, 61, 1418-1425, 1983.
84. Gordon, M.A., **Hollenberg, M.D.** and Castor, C.W. Connective Tissue Activation. XXVIII. A Connective Tissue Activating Peptide from Human Urine (CTAP-U). *Arthritis and Rheumatism*, 27, 780-788, 1984.
85. Mably, E.R., **Hollenberg, M.D.**, St. Pierre, S. and Moore, G.J. Development of a radioimmunoassay for urogastrone in human urine using a synthetic fragment as antigen. *Proc. Western Pharmacol. Soc.*, 27, 273-276, 1984.
86. Goren, H.J., Okabe, T., Lederis, K., and **Hollenberg, M.D.** Oxytocin stimulates glucose oxidation in rat thymocytes. *Proc. Western Pharmacol. Soc.*, 27, 461-463, 1984.
87. Walsh, M.P., Valentine, K.A., Ngai, P.K., Carruthers, C.A. and **Hollenberg, M.D.** Calcium-dependent hydrophobic interaction chromatography: Isolation of a novel calcium-binding protein and protein kinase C from bovine brain. *Biochem. J.*, 224, 117-127, 1984.
88. Atkison, P.R., Bala, R.M. and **Hollenberg, M.D.** Somatomedin-like activity from cultured embryo-derived cells: Partial characterization and stimulation of production by epidermal growth factor (urogastrone). *Can. J. Biochem. Cell Biol.*, 62, 1335-1342, 1984.
89. Atkison, P.R., Hayden, L.J., Bala, R.M. and **Hollenberg, M.D.** Production of somatomedin-like activity by human adult tumor-derived, transformed and normal cell cultures and by cultured rat hepatocytes: Effects of culture conditions and of epidermal growth factor (urogastrone). *Can. J. Biochem. Cell Biol.*, 62, 1343-1350, 1984.
90. Okabe, T., Goren, H.J., Lederis, K. and **Hollenberg, M.D.** Oxytocin and glucose oxidation in the rat uterus. *Regulatory Peptides*, 10, 269-279, 1985.
91. Aglio, L.S., Maturo, J.M. III and **Hollenberg, M.D.** Receptors for insulin and epidermal growth factor: Interaction with organomercurial-agarose. *J. Cell. Biochem.*, 28, 143-157, 1985.

92. Turley, E.A., **Hollenberg, M.D.** and Pratt, R.M. Effect of epidermal growth factor-urogastrone on glycosaminoglycan synthesis and accumulation in vitro in the developing mouse palate. *Differentiation*, 28, 279-285, 1985.
93. **Hollenberg, M.D.** Receptor Regulation I: Examples of homospecific and heterospecific receptor regulation. *Trends in Pharmacol. Sci.*, 6, 242-245, 1985.
94. **Hollenberg, M.D.** Receptor Regulation II: Biochemical mechanisms. *Trends in Pharmacol. Sci.*, 6, 299-302, 1985.
95. **Hollenberg, M.D.** Receptor Regulation III: Pathophysiological and therapeutic implications of receptor regulation. *Trends in Pharmacol. Sci.*, 6, 334-337, 1985.
96. Muramatsu, I., **Hollenberg, M.D.** and Lederis, K. Vascular actions of epidermal growth factor-urogastrone: Possible relationships to prostaglandin production. *Can. J. Physiol. Pharmacol.*, 63, 994-999, 1985.
97. Goren, H.J., Northup, J.K. and **Hollenberg, M.D.** Action of insulin modulated by pertussis toxin in rat adipocytes. *Can. J. Physiol. Pharmacol.*, 63, 1017-1022, 1985.
98. Mauro, J.M. III and **Hollenberg, M.D.** Distinct hydrodynamic forms of the insulin receptor: Electrophoretic analysis of the RI and RII species. *Can. J. Physiol. Pharmacol.*, 63, 987-993, 1985.
99. Pallen, C.J., Valentine, K.A., Wang, J.H. and **Hollenberg, M.D.** Calcineurin-mediated dephosphorylation of the human placental membrane receptor for epidermal growth factor-urogastrone. *Biochemistry*, 24, 4727-4730, 1985.
100. O'Loughlin, E.V., Chung, M., Hollenberg, M., Hayden, J. and Gall, D.G. Effect of epidermal growth factor (EGF) on ontogeny of the gastrointestinal tract. *Amer. J. Physiol. (G.I. and Liver Physiol.)*, 249, G674-G678, 1986.
101. **Hollenberg, M.D.** First Insulin Binds... and Then Something Happens. (Book Review) *Cell*, 43, 391, 1985.
102. Valentine-Braun, K.A., Northup, J.A. and **Hollenberg, M.D.** Epidermal growth factor (urogastrone)-mediated phosphorylation of a 35 kilodalton substrate in human placental membranes: Relationship to the α -subunit of the guanine nucleotide regulatory complex. *Proc. Natl. Acad. Sci. USA*, 83, 236-240, 1986.
103. O'Connor-McCourt, M., Soley, M., Hayden, L.J. and **Hollenberg, M.D.** Receptors for epidermal growth factor-urogastrone and insulin in primary cultures of rat hepatocytes maintained in serum-free medium. *Biochem. Cell Biol.*, 64, 803-810, 1986.
104. **Hollenberg, M.D.** Peptide hormones, biomembranes and cell growth (Book Review). *Quart. J. Med.*, 61, 90, 1986.
105. **Hollenberg, M.D.** Acute radiation illness: Pathology, pathophysiology and treatment. *Medifacts*, Vol. XVI, No. 1, Audiocassette Side B., No. 2, January 20, 1986.
106. **Hollenberg, M.D.** Epidermal growth factor-urogastrone: New targets for the ligand and for its receptor. *Proc. Western Pharmacol. Soc.*, 29, 479-482, 1986.

107. Gan, B.S., Bolt, G.R., **Hollenberg, M.D.** and MacCannell, K.L. Species variation in the vascular effects of epidermal growth factor-urogastrone. *Proc. Western Pharmacol. Soc.*, 29 483-484, 1986.
108. Hayden, L.J., O'Connor-McCourt, M.D., Goghari, M., Moore, G.J., and **Hollenberg, M.D.** Use of synthetic peptides to generate polyclonal antibodies directed at specific domains of the receptor for epidermal growth factor-(urogastrone). *Proc. Western Pharmacol. Soc.*, 29, 459-461, 1986.
109. **Hollenberg, M.D.** Mechanisms of receptor-mediated transmembrane signalling. *Experientia* 42, 718-727, 1986 and in *Development of Hormone Receptors*, *Experientia Suppl.* 53 (G. Csaba, ed.), Birkhauser Verlag, Basel/Boston, pp. 15-30, 1987.
110. **Hollenberg, M.D.** Receptors for insulin and other growth factors: Rationale for common and distinct mechanisms of cell activation. *Clin. Invest. Med.*, 10, 475-479, 1987.
111. Goren, H.J., Hanif, K., Dudley, R., **Hollenberg, M.D.**, and Lederis, K. Adenosine modulation of fat cell responsiveness to insulin and oxytocin. *Regulatory Peptides*, 16, 125-134, 1986.
112. Muramatsu, I., **Hollenberg, M.D.** and Lederis, K. Modulation by epidermal growth factor-urogastrone of contraction in isolated canine helical mesenteric arterial strips. *Can. J. Physiol. Pharmacol.*, 64, 1561-1565, 1986.
113. Truchan, B., Taylor, P., Goren, H.J., Lederis, K., **Hollenberg, M.D.** and Okabe, T. and Okabe, T. Basal oxytocin- and insulin-stimulated glucose oxidation in human endometrium. *Can. J. Physiol. Pharmacol.*, 65, 323-327, 1987.
114. Wilson, E.J. and **Hollenberg, M.D.** Effects of oxytocin and vasopressin on the preadipocyte 3T3-F442A cell line. *Biochemistry and Cell Biology*, 65, 211-218, 1987.
115. Soley, M. and **Hollenberg, M.D.** Epidermal growth factor (urogastrone)-stimulated gluconeogenesis in isolated mouse hepatocytes. *Arch. Biochem. Biophys.* 255, 136-146, 1987.
116. **Hollenberg, M.D.** Structure-activity relationships: The receptor side of the coin. *Trends in Pharmacol. Sci.*, 8, 197-199, 1987.
117. Gan, B.S., **Hollenberg, M.D.**, MacCannell, K.L., Lederis, K., Winkler, M.E. and Derynck, R. Distinct vascular actions of epidermal growth factor-urogastrone and transforming growth factor- α . *J. Pharmacol. Exp. Ther.*, 242, 331-337, 1987.
118. Gan, B.S., MacCannell, K.L. and **Hollenberg, M.D.** Epidermal growth factor-urogastrone causes vasodilatation in the anesthetized dog. *J. Clin. Invest.* 80, 199-206, 1987.
119. Opleta, K., O'Loughlin, E.V., Shaffer, E.A., Hayden, J., **Hollenberg, M.D.** and Gall, D.G. Effect of epidermal growth factor on growth and postnatal development of the rabbit liver. *Am. J. Physiol. (G.I. Liver Physiol.)*, 16, G622-G626, 1987.
120. Valentine-Braun, K.A., **Hollenberg, M.D.**, Fraser, E. and Northup, J.K. Isolation of a major human placental substrate for the epidermal growth factor (urogastrone) receptor kinase: Immunological cross-reactivity with transducin and sequence homology with lipocortin. *Arch. Biochem. Biophys.* 259, 262-282, 1987.
121. **Hollenberg, M.D.**, Valentine-Braun, K.A. and Northup, J.K. Protein-tyrosine kinase substrates: Are these Rosetta stones or simply structural elements. *Trends in Pharmacol. Sci.*, 9, 63-66, 1988.

122. Muramatsu, I., Itoh, H., Lederis, K. and **Hollenberg, M.D.** Distinctive actions of epidermal growth factor-urogastrone in isolated smooth muscle preparations from guinea pig stomach: Differential inhibition by indomethacin. *J. Pharmacol. Exp. Ther.*, 245, 625-631, 1988.
123. Northup, J.K., Valentine-Braun, K.A., Johnson, L.K., Severson, D.L., and **Hollenberg, M.D.** Evaluation of antiinflammatory and phospholipase-inhibitory activity of calpactin II/Lipocortin I. *J. Clin. Invest.* 82, 1347-1352, 1988.
124. Itoh, H., Muramatsu, I., Patel, P., Lederis, K and **Hollenberg, M.D.** Inhibition by anti-inflammatory agents of contraction induced by epidermal growth factor-urogastrone in isolated longitudinal smooth muscle strips from guinea pig stomach. *Brit. J. Pharmacol.*, 95, 821-829, 1988.
125. **Hollenberg, M.D.**, Muramatsu, I., Itoh, H., Patel, P., Yang, S.-G., and Lederis, K. Contractile actions of epidermal growth factor- urogastrone in isolated smooth muscle preparations from guinea pig stomach: Structure-activity relationships and comparison with the effects of human transforming growth factor-alpha. *J. Pharmacol. Exp. Ther.*, 248, 384-390, 1989.
126. Patel, P., Itoh, H., Lederis, K., and **Hollenberg, M.D.** Contraction of guinea pig trachea by epidermal growth factor-urogastrone. *Can. J. Physiol. Pharmacol.*, 66, 1308-1312, 1988.
127. Boehmer, F.D., Mieth, M., Reichmann, G., Taube, C., Grosse, R., and **Hollenberg, M.D.** A polypeptide growth inhibitor isolated from lactating bovine mammary gland (MDGI) is a lipid carrying protein. *J. Cell. Biochem.* 58, 199-204, 1988.
128. **Hollenberg, M.D.** Growth factors, their receptors and development. *Amer. J. Med. Genetics*, 34, 35-42, 1989.
129. Blay, J. and **Hollenberg, M.D.** Heterologous regulation of EGF receptor function in cultured aortic smooth muscle cells. *Eur. J. Pharmacol. Mol. Pharmacol.*, 172, 1-7, 1989.
130. Blay, J. and **Hollenberg, M.D.** Epidermal growth factor stimulation of prostacyclin production by cultured aortic smooth muscle cells: Requirement for increased cellular calcium levels. *J. Cell Physiol.*, 139, 524-530, 1989.
131. Blay, J., Valentine-Braun, K.A., Northup, J.K. and **Hollenberg, M.D.** Epidermal-growth-factor-stimulated phosphorylation of calpactin II in membrane vesicles shed from cultured A-431 cells. *Biochem. J.*, 259, 577-583, 1989.
132. Gan, B.S., **Hollenberg, M.D.** and Lederis, K. Epidermal growth factor- urogastrone (EGF-URO) causes contraction of porcine coronary arterial strips: Inhibition by indomethacin. *Proc. West. Pharm. Soc.*, 32, 269-271, 1989.
133. Moreno, F., Pastor-Anglada, M., **Hollenberg, M.D.**, and Soley, M. Effects of epidermal growth factor (urogastrone) on gluconeogenesis, glucose oxidation and glycogen synthesis in isolated rat hepatocytes. *Biochem. Cell Biol.*, 67, 724-729, 1989.
134. Gan, B.S. and **Hollenberg, M.D.** Autoradiographic localization of binding sites for epidermal growth factor-urogastrone (EGF-URO) in coronary arteries. *Eur. J. Pharm.*, 167, 407-410, 1989.
135. Blay, J. and **Hollenberg, M.D.** The nature and function of polypeptide growth factor receptors in the human placenta. *J. Develop. Physiol.*, 12, 237-248, 1989.

136. Gan, B.S. and **Hollenberg, M.D.** Distinct coronary artery receptor systems for epidermal growth factor-urogastrone. *J. Pharmacol. Exp. Ther.*, 252, 1277-1282, 1990.
137. **Hollenberg, M.D.** Receptor triggering and receptor regulation: Structure-activity relationships from the receptor's point of view. *J. Medicinal Chem.*, 33, 1275-1281, 1990.
138. Yang, S.-G., Winkler, M.E., and **Hollenberg, M.D.** Contribution of the C-terminal dipeptide of transforming growth factor alpha to its activity: Biochemical and pharmacologic profiles. *Eur. J. Pharmacol. - Molec. Pharmacol. Section*, 188, 289-300, 1990.
139. Yang, S.-G., Hogan, A., Schultz, G.A. and **Hollenberg, M.D.** Design of oligonucleotide probes for the reverse transcriptase-polymerase chain reaction detection of epidermal growth factor-urogastrone receptor mRNA in guinea pig smooth muscle cell cultures. *Proc. West. Pharmacol. Soc.*, 33, 95-98, 1990.
140. Barnes, J.A. and **Hollenberg, M.D.** Phosphorylation of human placenta calpactins with bovine brain kinase C. *Biochem. Soc. Trans.*, 18, 586-587, 1990.
141. Wallukat, G., Boehmer, F.-D., Engstroem, U., Langen, P., **Hollenberg, M.D.**, Behlke, J., Kuehn, W. and Grosse, R. Mammary-derived growth inhibitor (MDGI) blocks induction of supersensitivity for beta-adrenergic stimulation in neonatal rat heart muscle cells. (Dissociation from lipid-binding activity of MDGI). *Molec. and Cell. Biochem.*, 102, 49-60, 1991.
142. Yamaguchi, K., Lederis, K. and **Hollenberg, M.D.** Contraction of porcine ocular ciliary muscle by epidermal growth factor-urogastrone. *Eur. J. Pharmacol.*, 191, 245-251, 1990.
143. **Hollenberg, M.D.** Structure-activity relationships for transmembrane signalling: The receptor's turn. *Faseb J.*, 5, 178-186, 1991.
144. Barnes, J.A., Michiel, D. and **Hollenberg, M.D.** Simultaneous phosphorylation of three human calpactins by kinase C. *Can. J. Biochem. Cell. Biol.*, 69, 163-169, 1991.
145. Yang, S.-G., and **Hollenberg, M.D.** Distinct receptors for epidermal growth factor-urogastrone in cultured gastric smooth muscle cells. *Amer. J. Physiol.*, 260, G827-G834, 1991.
146. Zhao, D., **Hollenberg, M.D.** and Severson, D.L. Calmodulin inhibits the protein kinase C-catalyzed phosphorylation of an endogenous protein in A10 smooth muscle cells. *Biochem J.*, 277, 445-450, 1991.
147. Zhao, D., Dell, K.R., **Hollenberg, M.D.** and Severson, D.L. Phosphorylation of aortic plasma membranes by protein kinase C. *Molec. & Cell Biochem.*, 106, 171-180, 1991.
148. Yang, S.-G., Saifeddine, M., Chuang, M., Severson, D.L. and **Hollenberg, M.D.** Diacylglycerol lipase and the contractile action of epidermal growth factor-urogastrone: evidence for distinct signal pathways in a single strip of gastric smooth muscle. *Eur. J. Pharmacol. Molec. Pharmacol.*, 207, 225-230, 1991.
149. Higgy, N.A., Davidoff, A.W., Grothman, G., **Hollenberg, M.D.**, Benediktsson, H., Paul, L.C. Expression of platelet derived growth factor-receptor expression in rat heart allografts. *J. Heart & Lung Transplantation*, 10, 1012-1022, 1991.

150. Yang, S.-G., Saifeddine, M. and **Hollenberg, M.D.** Tyrosine kinase inhibitors and the contractile action of epidermal growth factor-urogastrone and other agonists in gastric smooth muscle. *Can. J. Physiol. Pharmacol.*, 70, 85-93, 1992.
151. Saifeddine, M., Laniyonu, A., Yang, S.-G., and **Hollenberg, M.D.** Tyrosine kinase inhibitors and the contractile action of angiotensin-II in vascular tissue. *Pharmacol. Commun.*, 1, 177-184, 1992.
152. Muramatsu, I., Laniyonu, A.A., Moore, G.J. and **Hollenberg, M.D.** Vascular actions of thrombin receptor peptide. *Can. J. Physiol. Pharmacol.*, 70, 996-1003, 1992.
153. **Hollenberg, M.D.**, Yang, S.-G., Laniyonu, A.A. Moore, G.J. and Saifeddine, M. Action of thrombin receptor polypeptide in gastric smooth muscle: Identification of a core pentapeptide retaining full thrombin-mimetic intrinsic activity. *Mol. Pharmacol.*, 42, 186-191, 1992.
154. Mokashi, S. Severson, D.L. and **Hollenberg, M.D.** Synergistic actions of epidermal growth factor-urogastrone and vasopressin in cultured aortic A-10 smooth muscle cells. *J. Cell. Physiol.*, 152, 372-381, 1992.
155. Yang, S.-G., Laniyonu, A. Saifeddine, M., Moore, G.J. and **Hollenberg, M.D.** Actions of thrombin and thrombin receptor peptide analogues in gastric and aortic smooth muscle: Development of bioassays for structure-activity studies. *Life Sci.*, 51, 1325-1332, 1992.
156. Zhao, D., **Hollenberg, M.D.** and Severson, D.L. Comparison of an endogenous protein kinase C substrate in rat aorta with rat brain MARCKS. *Mol. Cell. Biochem.*, 118, 163-169, 1992.
157. Yang, S.-G., Saifeddine, M., Laniyonu, A.A. and **Hollenberg, M.D.** Distinct signal transduction pathways for angiotensin-II in guinea pig gastric smooth muscle: Differential blockade by indomethacin and tyrosine kinase inhibitors. *J. Pharmacol. Exp. Ther.*, 264, 958-966, 1993.
158. Muramatsu, I. and **Hollenberg, M.D.** Potentiation of sensory tachykininergic and parasympathetic cholinergic transmission by epidermal growth factor. *Regulatory Peptides*, 46, 269-271, 1993.
159. **Hollenberg, M.D.**, Laniyonu, A.A., Saifeddine, M. and Moore, G.J. Role of the Amino- and Carboxyl-terminal domains of thrombin receptor-derived polypeptides in biological activity in vascular endothelium and gastric smooth muscle: Evidence for receptor subtypes. *Molec. Pharmacol.*, 43, 921-930, 1993.
160. **Hollenberg, M.D.** The acute actions of growth factors in smooth muscle systems. *Life Sci.*, 54, 223-235, 1994.
161. **Hollenberg, M.D.** Tyrosine kinase pathways and the regulation of smooth muscle contractility. *Trends in Pharmacol. Sci.*, 15, 108-114, 1994.
162. Shimomura, A., Itoh, H., Niki, Y., Suga, T., Fujioka, H., Ito, M., Konishi, T., **Hollenberg, M.D.** and Nakano, T. Contractile actions of endothelins in rat gastric body: evidence for receptor subtypes and involvement of prostaglandin E₂. *Eur. J. Pharmacol.*, 252, 81-86, 1994.
163. Saifeddine, M., Laniyonu, A., Ahmad, S. and **Hollenberg, M.D.** Bi-directional control of smooth muscle tension: regulation by tyrosine kinase and tyrosine phosphatase. *Proc. West. Pharmacol. Soc.* 37, 21-24, 1994.
164. Laniyonu, A., Saifeddine, M., Ahmad, S. and **Hollenberg, M.D.** Regulation of vascular and gastric smooth muscle contractility by pervanadate. *Brit. J. Pharmacol.*, 113, 403-410, 1994.

165. Yang, S.-G., Ahmad, S., Wong, N.C. and **Hollenberg, M.D.** Ligand binding characterization and molecular analysis of distinct epidermal growth factor-urogastrone receptors in cultured smooth muscle and epithelial cells from guinea pig intestine. *Molec. Pharmacol.*, 46, 256-265, 1994.
166. Wolbring, G., **Hollenberg, M.D.** and Schnetkamp, P.P.M. Inhibition of GTP-utilizing enzymes by tyrphostins. *J. Biol. Chem.*, 269, 22470-22472, 1994.
167. Laniyonu, A.A., Saifeddine, M., Yang, S.-G. and **Hollenberg, M.D.** Tyrosine kinase inhibitors and the contractile action of G-protein-linked vascular agonists. *Can. J. Physiol. Pharmacol.*, 72, 1075-1085, 1994.
168. Chao, D., Severson, D.L., Zwiwers, H. and **Hollenberg, M.D.** Radiolabelling of bovine myristoylated alanine-rich protein kinase C substrate (MARCKS) in an ADP-ribosylation reaction. *Biochem. Cell Biol.*, 72, 391-396, 1994.
169. Laniyonu, A.A. and **Hollenberg, M.D.** Vascular actions of thrombin receptor-derived polypeptides: structure-activity profiles for contractile and relaxant effects in rat aorta. *Brit. J. Pharmacol.*, 114, 1680-1686, 1995.
170. **Hollenberg, M.D.** Tyrosine kinase-mediated signal transduction pathways and the actions of polypeptide growth factors and G-protein-coupled agonists in smooth muscle. *Molec. Cell. Biochem.*, 149/150, 77-85, 1995.
171. Tay-Uyboco, J., Poon, M.-C., Ahmad, S. and **Hollenberg, M.D.** Contractile actions of thrombin receptor-derived polypeptides in human umbilical and placental vasculature: evidence for distinct receptor systems. *Brit. J. Pharmacol.*, 115, 569-578, 1995.
172. Mandhane, P., Saifeddine, M., Green, F.H.Y. and **Hollenberg, M.D.** Contractile actions of thrombin receptor-derived polypeptides in rat and guinea pig lung parenchymal smooth muscle. *Proc. West. Pharmacol. Soc.*, 38, 93-96, 1995.
173. Laniyonu, A., Eto, S., Wang J.H., **Hollenberg, M.D.** Detection of sarcoma virus-family tyrosine kinase activity in coronary arterial tissue. *Can. J. Physiol. Pharmacol.*, 73, 1552-1560, 1995.
174. Al-Ani, B., Saifeddine, M. and **Hollenberg, M.D.** Detection of functional receptors for the proteinase-activated receptor-2-activating polypeptide, SLIGRL-NH₂ in rat vascular and gastric smooth muscle. *Can. J. Physiol. Pharmacol.*, 73, 1203-1207, 1995.
175. Pati, D., Balshaw, K., Grinwich, D.L., **Hollenberg, M.D.** and Habibi, H. Epidermal growth factor receptor binding and biological activity in the ovary of goldfish, *Carassius Auratus*. *Amer. J. Physiol.*, 270, R1065-R1072, 1996.
176. **Hollenberg, M.D.**, Saifeddine, M. and Al-Ani, B. Proteinase-activated receptor-2 in rat aorta: structural requirements for agonist activity of receptor-activating peptides. *Mol. Pharmacol.*, 49, 229-233, 1996.
177. **Hollenberg, M.D.** Protease-mediated signalling: new paradigms for cell regulation and drug development. *Trends in Pharmacol. Sci.*, 17, 3-6, 1996.
178. Panagiotopoulos, D., Matsoukas, J.M., Alexopoulos, K., Zebeki, A., Mavromoustakos, T., Saifeddine, M. and **Hollenberg, M.D.** Synthesis and activities of cyclic thrombin receptor derived peptide analogues of the Ser₄₂-Phe-Leu-Leu-Arg₄₆ motif sequence containing D-Phe and/or D-Arg. *Letters in Peptide Sci.*, 3, 233-240, 1996.

179. Saifeddine, M., Al-Ani, B., Cheng, C.-H., Wang, L. and **Hollenberg, M.D.** Rat proteinase-activated receptor-2 (PAR-2): cDNA sequence and activity of receptor-derived peptides in gastric and vascular tissue. *Brit. J. Pharmacol.*, 118, 521-530, 1996.
180. Matsoukas, J.M., Panagiotopoulos, D., Keramida, M., Mavromoustakos, T., Yamdagni, R., Wu, Q., Moore, G.J., Saifeddine, M. and **Hollenberg, M.D.** Novel synthesis and biological activities of cyclic thrombin receptor-derived peptide analogues of the S₄₂FLLR₄₆ motif: importance of Phe and Arg residues for activity. *J. Med. Chem.*, 39, 3585-3591, 1996.
181. Shivji, F., Cheng, H., Zwiers, H., **Hollenberg, M.D.** and Hanley, D.A. Identification of classical, novel and atypical protein kinase C isoenzymes in the bovine parathyroid. *Endocrinology*, 137, 3777-3783, 1996.
182. **Hollenberg, M.D.**, Mokashi, S., Leblond, L. and DiMaio, J. Synergistic actions of a thrombin-derived synthetic peptide and a thrombin receptor-activating peptide in stimulating fibroblast mitogenesis. *J. Cell. Physiol.*, 169, 491-496, 1996.
183. Zheng, X.-L. and **Hollenberg, M.D.** Tyrosine kinase inhibitor-sensitive contractile action of ethanol in gastric smooth muscle: comparison with the action of epidermal growth factor. *Proc. Assoc. Amer. Physicians*, 109, 78-83 1997.
184. Zheng, X.-L. and **Hollenberg, M.D.** Dependence of thrombin receptor-mediated contraction of guinea pig gastric smooth muscle on growth factor signaling pathways: comparison with EGF and implication of a role for Src-family kinases. *Proc. Western Pharm. Soc.*, 40, 45-48, 1997.
185. Kawabata, A., Saifeddine, M., Al-Ani, B. and **Hollenberg, M.D.** Protease-activated receptors: development of agonists selective for receptors triggered by either thrombin (PAR₁) or trypsin (PAR₂). *Proc. Western Pharm. Soc.*, 40, 49-51, 1997.
186. Roy, S., Saifeddine, M., Triggle, C.R., Loutzenhiser, R. and **Hollenberg, M.D.** Endothelium-dependent contractile effect of trypsin-activated receptor (PAR₂) stimulation in rat vascular tissue. *Proc. Western Pharm. Soc.*, 40, 53-55, 1997.
187. **Hollenberg, M.D.**, Saifeddine, M., Al-Ani, B and Kawabata, A. Proteinase-activated receptors: structural requirements for activity, receptor cross-reactivity and receptor selectivity of receptor-activating peptides. *Can. J. Phys. Pharmacol.*, 75, 832-841, 1997.
188. Zheng, X.-L., Mokashi, S. and **Hollenberg, M.D.** Contractile action of ethanol in guinea pig gastric smooth muscle: inhibition by tyrosine kinase inhibitors and comparison with the contractile action of epidermal growth factor-urogastrone. *J. Pharmacol. Exp. Ther.*, 282, 485-495, 1997.
189. Matsoukas, J., **Hollenberg, M.D.**, Mavromoustakos, T., Panagiotopoulos, D., Alexopoulos, K., Yamdagni, R., Wu, Q. and Moore, G.J. Conformational analysis of the thrombin receptor agonist peptides SFLLR and SFLLR-NH₂ by NMR: evidence for a cyclic bioactive conformation. *J. Prot. Chem.*, 16, 113-131, 1997.
190. Kong, W., McConalogue, K., Khitin, L.M., **Hollenberg, M.D.**, Payan, D.G., Böhm, S.K. and Bunnnett, N.W. Luminal trypsin may regulate enterocytes through proteinase-activated receptor 2. *Proc. Natl. Acad. Sci. USA* 94, 8884-8889, 1997.
191. Zheng, X.-L., Sharkey, K.A. and **Hollenberg, M.D.** Induction of nitric oxide synthase in rat gastric smooth muscle preparations. *Amer. J. Physiol.* 273, G1101-G1107, 1997.

192. Zheng, X.-L., Renaux, B. and **Hollenberg, M.D.** Parallel contractile signal transduction pathways activated by receptors for thrombin (PAR₁) and EGF-urogastrone in guinea pig gastric smooth muscle: blockade by inhibitors of mitogen-activated protein kinase-kinase (MEK) and phosphatidyl inositol 3-kinase. *J. Pharmacol. Exp. Ther.*, 285, 325-334, 1998.
193. Roy, S.S., Saifeddine, M., Loutzenhiser, R., Triggle, C.R. and **Hollenberg, M.D.** Dual endothelium-dependent vascular activities of proteinase-activated receptor-2 activating peptides: evidence for receptor heterogeneity. *Brit. J. Pharmacol.*, 123, 1434-1440, 1998.
194. Vergnolle, N., MacNaughton, W.K., Al-Ani, B., Saifeddine, M., Wallace, J.L., and **Hollenberg, M.D.** Proteinase-activated receptor-2-activating peptides: identification of a receptor distinct from PAR₂ that regulates intestinal transport. *Proc. Natl. Acad. Sci. USA*, 95, 7766-7771, 1998.
195. Saifeddine, M., Roy, S., Al-Ani, B., Triggle, C.R. and **Hollenberg, M.D.** Endothelium-dependent contractile actions of Proteinase-activated receptor-2-activating peptides in human umbilical vein: release of a contracting factor via a novel receptor. *Brit. J. Pharmacol.*, 125, 1445-1454, 1998.
196. Kawabata, A., Saifeddine, M., Al-Ani, B., Leblond, L. and **Hollenberg, M.D.** Evaluation of proteinase-activated receptor -1 (PAR₁) Agonists and Antagonists using a cultured cell receptor desensitization assay: Activation of PAR₂ by PAR₁ targeted ligands. *J. Pharmacol. Exp. Ther.*, 288, 358-370, 1999.
197. Alexopoulos, K., Fatseas, P., Melissari, E., Vlahakos, D., Smith, J., Mavromoustakos, T., Saifeddine, M. Moore, G., **Hollenberg, M.**, and Matsoukas, J. Design and synthesis of thrombin receptor-derived nonpeptide mimetics utilizing a piperazine scaffold. *Bioorg. & Med. Chem.*, 7, 1-9, 1999.
198. Vergnolle, N., **Hollenberg, M.D.** and Wallace, J.L. Pro-and Anti-Inflammatory Actions of Thrombin: A Distinct Role for Proteinase-Activated Receptor-1 (Par₁). *Brit J. Pharmacol.*, 126, 1262-1268, 1999.
199. Corvera, C.U., Déry, O., McConalogue, K., Al-Ani, B., Caughey, G.H., **Hollenberg, M.D.**, and Bunnett, N.W. Thrombin and Mast Cell Tryptase Regulate Myenteric Neurons Through Proteinase-Activated Receptors-1 and 2. *J. Physiol.*, 517(Pt 3), 741-756, 1999.
200. Zheng, X.-L., Gui, Y., Sharkey, K.A., and **Hollenberg, M.D.** Differential induction of nitric oxide synthase (iNOS) in rat gastric and vascular smooth muscle tissue: distinct tissue distribution and distinctive signalling pathways. *J. Pharmacol Exp. Ther.*, 289, 632-640, 1999.
201. **Hollenberg, M. D.** Proteinase-activated receptors: PAR₄ and counting - how long is the course? *Trends in Pharmacol. Sci.*, 20, 271-273, 1999.
202. Vergnolle, N., **Hollenberg, M.D.**, Sharkey, K.A., and Wallace, J.L. Characterization of the inflammatory response to proteinase-activated receptor-2 (PAR₂) – activating peptides in the rat paw. *Brit. J. Pharmacol.*, 127, 1083-1090, 1999.
203. Al-Ani, B., Saifeddine, M., Kawabata, A., Renaux, B., Mokashi, S. and **Hollenberg, M.D.** Proteinase-activated receptor 2 (PAR₂): Development of a ligand-binding assay correlating with activation of PAR₂ by PAR₁- and PAR₂-derived peptide ligands. *J. Pharmacol. Exp. Ther.*, 290, 753-760, 1999.
204. Oda, Y., Renaux, B., Bjorge, J., Saifeddine, M., Fujita, D.J and **Hollenberg, M.D.** cSrc is a major cytosolic tyrosine kinase in vascular tissue. *Can. J. Physiol. Pharmacol.*, 77, 606-617, 1999.

205. **Hollenberg, M.D.**, Saifeddine, M., Al-Ani, B., and Gui, Y. Proteinase-activated receptor 4 (PAR₄): action of PAR₄-activating peptides in vascular and gastric tissue and lack of cross-reactivity with PAR₁ and PAR₂. *Can. J. Physiol. Pharmacol.*, 77, 458-464, 1999.
206. Fernandez-Patron, C., Zhang, Y., Radomski, M.W., **Hollenberg, M.D.**, Davidge, S.T. Rapid release of matrix metalloproteinase (MMP)-2 by thrombin in the rat aorta: modulation by protein tyrosine kinase/phosphatase. *Thrombosis and Haemostasis*, 82, 1353-1357, 1999.
207. Hirasawa, K., Jun, H.S., Han, H.S., Zhang, M.L., **Hollenberg, M.D.** and Yoon, J.W. Prevention of encephalomyocarditis virus-induced diabetes in mice by inhibition of tyrosine kinase signalling pathway, and subsequent of nitric oxide production in macrophages. *Journal of Virology*, 73, 8541-8548, 1999.
208. Al-Ani, B., Saifeddine, M., Kawabata, A. and **Hollenberg, M.D.** Proteinase activated receptor 2: role of extracellular loop 2 for ligand-mediated activation. *Brit. J. Pharmacol.*, 128, 1105-1113, 1999.
209. Sun R, Gimbel H.V., Liu S., Guo D., and **Hollenberg M.D.** Effect of diclofenac sodium and dexamethasone on cultured human Tenon's capsule fibroblasts. *Ophthalmic Surg Lasers*, 30, 382-388, 1999.
210. **Hollenberg, M.D.**, Saifeddine, M. and Zwiers, H. Proteinase-activated receptors (PARs): Activation of PAR₁ and PAR₂ by a proteolytic fragment of the neuronal growth-associated protein, B-50/GAP-43. *Can. J. Physiol. Pharmacol.*, 78, 81-85, 2000.
211. Steinhoff, N., Vergnolle, S.H., Young, M.T., Tognetto, M., Ennes, H.S., Trevisani, M., **Hollenberg, M.D.**, Wallace, J.L., Caughey, G.H., Mitchell, S.E., Williams, L.M., Geppetti, P., Mayers, E.A. and Bunnett, N.W. Agonists of proteinase-activated receptor 2 induce inflammation by a neurogenic mechanism. *Nature Medicine*, 6, 151-158, 2000.
212. Akers, I.A., Parsons, M., **Hollenberg, M.D.**, Sanjar, S., Laurent, G.J. and McAnulty, R.J. Mast cell tryptase stimulates human lung fibroblast proliferation via activation of Protease-activated Receptor-2. *Amer. J. Physiol. Lung Cell Mol. Physiol.*, 278, L193-L201, 2000.
213. Kawabata, A., Nishikawa, H., Kuroda, R., Kawai, K., and **Hollenberg, M.D.** Proteinase-activated receptor-2 (PAR-2): regulation of salivary and pancreatic exocrine secretion in vivo in rats and mice. *Brit. J. Pharmacol.*, 129, 1808-1814, 2000.
214. Zheng, X-L., Matsubara, S., Diao, C., **Hollenberg, M.D.**, and Wong, N.C.W. Activation of apolipoprotein AI gene expression by protein kinase A and kinase C through transcription factor, Sp1. *J. Biol. Chem.*, 275, 31747-31754, 2000.
215. Vliagoftis, H., Schingshackl, A., Milne, C., Duszyk, M., **Hollenberg, M.D.**, Wallace, J.L., Befus, A.D., Moqbel, R. Proteinase activated receptor-2 mediated matrix metalloproteinase-9 release from airway epithelial cells. *J. Allergy and Clin Immunol.*, 106, 537-545, 2000.
216. Gui, Y, Zheng, X-L, **Hollenberg, M.D.** Interleukin-1 β , Src- and non-Src tyrosine kinases, and nitric oxide synthase induction in rat aorta in vitro. *Am. J. Physiol. Heart Circ.Physiol.*, 279, -H576, 2000.
217. Compton, S.J., Cairns, J.A., Palmer, K.-J., Al-Ani, B., **Hollenberg, M.D.** and Walls, A.F. A polymorphic protease activated receptor 2 (PAR2) displaying reduced sensitivity to trypsin and differential responses to PAR agonists. *J. Biol. Chem.* 275, 39207-39212, 2000.

218. **Hollenberg, M.D.** Receptor binding and agonist efficacy: New insights from mutants of the thrombin protease-activated receptor-1. *Molec. Pharm.* 58, 1175-1177, 2000.
219. Saifeddine M, Al-Ani B, Sandhu S, Wijesuriya S, and **Hollenberg MD**. Contractile actions of proteinase-activated receptor-derived polypeptides in guinea pig gastric and lung parenchymal strips: evidence for distinct receptor systems. *Brit. J. Pharmacol.* 132: 556-566, 2001.
220. Vliagoftis H, Befus AD, **Hollenberg MD**, and Moqbel R. Airway epithelial cells release eosinophil survival promoting factors (GM-CSF) following stimulation of proteinase-activated receptor-2 (PAR-2). *J. Allergy Clin. Immunol.* 107:679-85, 2001.
221. Vergnolle N, Wallace JL, Bunnett NW, and **Hollenberg MD**. Protease-activated receptors (PARs) in inflammation, neuronal signaling and pain. *Trends in Pharmacol. Sci.* 22: 146-152, 2001.
222. Zheng X-L, Matsubara S, Diao C, **Hollenberg MD**, and Wong WNC. Epidermal growth factor induction of apolipoprotein AI is mediated by the Ras-MAP kinase cascade and Sp1. *J. Biol. Chem.* 276: 13822-13829, 2001.
223. **Hollenberg MD** and Saifeddine M. Proteinase-activated receptor 4 (PAR4): activation and inhibition of rat platelet aggregation by PAR4-derived peptides. *Can. J. Physiol. Pharmacol.* 79 439-442, 2001.
224. Lafleur MA, **Hollenberg MD**, Atkinson SJ, Knäuper V, Murphy G, and Edwards DR. Activation of pro-MMP-2 by thrombin is MT-MMP-dependent in human umbilical vein endothelial cells and generates a distinct 63kDa active species. *Biochem. J.* 357 (Pt 1):107-15, 2001.
225. Buresi MC, Schleihau E, Vergnolle N, Buret A, Wallace JL, **Hollenberg MD**, and MacNughton WK. Activation of protease-activated receptor-1 stimulates calcium-dependent chloride secretion in human intestinal epithelial cells. *Amer. J. Physiol. . Gastrointes. Liver Physiol.* 281(2):G323-32, 2001
226. Vergnolle N, Bunnett NW, Sharkey KA, Brussee V, Compton SJ, Grady EF, Cirino G, Gerard N, Basbaum AI, Andrade-Gordon P, **Hollenberg MD**, and Wallace JL. Proteinase-activated receptor-2 and hyperalgesia: a novel pain pathway. *Nature Medicine* 7 (7):821-6, 2001.
227. de Garavilla L, Vergnolle N, Young SH, Ennes H, Steinhoff M, Ossovskaya VS, Andrea MRD, Mayer EA, Wallace JL, **Hollenberg MD**, Andrade-Gordon P, and Bunnett NW. Agonists of protease-activated receptor 1 induce inflammation by a neurogenic mechanism. *Brit. J. Pharmacol.* 133: 975-987, 2001.
228. Compton SJ, Renaux B, Wijesuriya SJ, and **Hollenberg MD**. Glycosylation and the activation of proteinase-activated receptor 2 (PAR2) by human mast cell tryptase. *Brit. J. Pharm.* 134:705-718, 2001.
229. Fiorucci S, Mencarelli A, Vergnolle N, Palazzetti B, Distrutti E, **Hollenberg M**, Wallace JL, Andrade-Gordon P, Morelli A, and Cirino G. Proteinase activated receptor (PAR)-2 acts as an anti-inflammatory signal for colonic lamina propria lymphocytes in a mouse model of colitis. *Proc. Natl. Acad. Sci. USA* 98: 13936-13941, 2001.
230. Taniguchi T, Azuma H, Okada Y, Naiki H, **Hollenberg MD**, and Muramatsu I. Endothelin-1-endothelin receptor type A mediates closure of rat ductus arteriosus at birth. *J. Physiol.* 537 (pt.2): 579-585, 2001.
231. Ma L, **Hollenberg MD**, and Wallace JL. Thrombin-induced platelet endostatin release is blocked by a proteinase activated receptor-4 (PAR4) antagonist. *Brit. J. Pharm.* 134:701-704, 2001.

232. iotto D, **Hollenberg MD**, Bunnett NW, Papi A, Braccioni F, Boschetto P, Rea F, Zuin A, Geppetti P, Saetta M, Maestrelli P, Fabbri LM, and Mapp CE. Expression of protease activated receptor-2 (PAR-2) in central airways of smokers and non-smokers. *Thorax*. 57(2):146-151, 2002.
233. Al-Ani B, Saifeddine M, Wijesuriya SJ, and **Hollenberg MD**. Modified proteinase-activated receptor-1 and 2 derived peptides inhibit proteinase-activated receptor-2 activation by trypsin. *J. Pharmacol. Exp. Ther.* 300(2):702-8, 2002.
234. McGuire JJ, **Hollenberg MD**, Andrade-Gordon P, and Triggle CR. Multiple mechanisms of vascular smooth muscle relaxation by the activation of proteinase-activated receptor 2 in mouse mesenteric arterioles. *Brit. J. Pharmacol.* 135(1):155-169, 2002.
235. Trottier G, **Hollenberg M**, Wang X, Gui Y, Loutzenhiser C, and Loutzenhiser R. PAR-2 elicits afferent arteriolar vasodilation by NO-dependent and NO-independent actions. *Amer. J. Physiol.* 282(5): F891-7, 2002.
236. Tibbles LA, Spurrell JCL, Bowen GP, Liu Q Lam M, Zaiss AK, Robbins SM, **Hollenberg MD**, Wickham TJ, and Muruve DA. Activation of p38 and ERK signaling during adenovirus vector cell entry leads to the expression of the C-X-C chemokine IP-10. *J. Virol.* 76 (4) 1559-1568, 2002.
237. Chung AWY, Jurasz P, **Hollenberg MD**, and Radomski MW. Mechanisms of action of proteinase-activated receptor agonists on human platelets. *Brit. J. Pharmacol.* 135(5):1123-1132, 2002.
238. Kawao N, Sakaguchi Y, Tagome A, Kuroda R, Nishida S, Irimajiri K, Nishikawa H, Kawai K, **Hollenberg MD**, and Kawabata A. Protease-activated receptor-2 (PAR-2) in the rat gastric mucosa: immunolocalization and facilitation of pepsin/pepsinogen secretion. *Brit. J. Pharmacol.* 135(5): 1292-1296, 2002.
239. Pasha MK, Dimmock JR, **Hollenberg MD**, and Sharma RK. Enhanced activity of human N-myristoyltransferase by dimethyl sulfoxide and related solvents in the presence of serine/threonine containing peptide substrates. *Biochem. Pharmacol.* 64(10):1461-1467, 2002.
240. Nishikawa H, Kawai K, Nishimura S, Tanaka S, Araki H, Al-Ani B, **Hollenberg MD**, Kuroda R, and Kawabata A. Suppression by protease-activated receptor-2 of gastric acid secretion in rats. *Eur. J. Pharmacol.* 447(1):87-90, 2002.
241. **Hollenberg MD** and Compton SJ. International Union of Pharmacology. XXVIII. Proteinase-activated receptors. *Pharmacol. Rev.* 54(2):203-217, 2002.
242. Cenac N, Coelho A, Nguyen C, Compton S, Andrade-Gordon P, MacNaughton WK, Wallace JL, **Hollenberg MD**, Bunnett NW, Garcia-Villar R, Bueno L, and Vergnolle N. Induction of intestinal inflammation in mouse by activation of proteinase-activated receptor-2. *Amer. J. Pathology*, 161(5):1903-1915, 2002.
243. Al-Ani B, Wijesuriya SJ, and **Hollenberg MD**. Proteinase-activated receptor 2: differential activation of the receptor by tethered ligand and soluble peptide analogs. *J. Pharmacol Exp Ther* 302(3):1046-10454, 2002.
244. Compton SJ, Sandhu S, Wijesuriya SJ, and **Hollenberg MD**. Glycosylation of human proteinase-activated receptor-2 (PAR-2): Role in cell surface expression and signaling. *Biochem J* 368:495-505, August, 2002.

245. Stenton GR, Nohara O, Dery RE, Vliagoftis H, Gilchrist M, Johri A, Wallace JL, **Hollenberg MD**, Moqbel R, and Befus AD. Proteinase-activated receptor (PAR)-1 and -2 agonists induce mediator release from mast cells by pathways distinct from PAR-1 and PAR-2. *J Pharmacol Exp Ther* 302(2):466-474, 2002.
246. Compton SJ, McGuire JJ, Saifeddine M, and **Hollenberg MD**. Restricted ability of human mast cell tryptase to activate proteinase-activated receptor-2 (PAR2) in rat aorta. *Cdn. J. Physiol. and Pharm., Can. J. Physiol. Pharmacol.* 80: 987-992, 2002.
247. Buresi MC, Buret AG, **Hollenberg MD**, and MacNaughton W. Activation of proteinase-activated receptor-1 stimulates epithelial chloride secretion through a unique MAPkinase and cyclooxygenase-dependent pathway. *FASEB* 16(12):1515-1525, 2002
248. McGuire JJ, Dai J, Andrade-Gordon P, Triggle CR, and **Hollenberg MD**. Proteinase-activated receptor-2 (PAR2): Vascular effects of a PAR2-derived activating peptide via a receptor different than PAR2. *J. Pharmacol. Exp. Ther.* 303(3):985-992, 2002.
249. **Hollenberg MD**. PARs in the stars: proteinase-activated receptors and astrocyte function. Focus on "Thrombin (PAR-1)-induced proliferation in astrocytes via MAPK involves multiple signaling pathways." *Am. J. Physiol. Cell Physiol.* 283:C1347-C1350, 2002.
250. Al-Ani B and **Hollenberg MD**. Selective tryptic cleavage at the tethered ligand site of the amino terminal domain of proteinase-activated receptor-2 in intact cells. *J Pharmacol Exp Ther* 304(3):1120-1128, 2002.
251. Klarenbach SW, Chipiuk A, Nelson RC, and **Hollenberg MD**, Murray AG. Differential actions of PAR2 and PAR1 in stimulating human endothelial cell exocytosis and permeability: the role of Rho-GTPases. *Circ Res* 92(3):272-278, 2003.
252. Gui Y, Loutzenhiser R, and **Hollenberg MD**. Bi-directional Regulation of Renal Hemodynamics by Activation of Proteinase-Activated Receptors (PAR) 1 and 2 in the Isolated Perfused Rat Kidney. *Am J Physiol Renal Physiol.* 285(1):95-104, 2003.
253. Boven LA, Vergnolle N, Henry SD, Silva C, Imai Y, Holden J, Warren K, **Hollenberg MD**, and Power C. Up-regulation of proteinase-activated receptor 1 expression in astrocytes during HIV encephalitis. *J Immunol* 170(5):2638-2646, 2003.
254. Dulon S, Cande C, Bunnett NW, **Hollenberg MD**, Chignard M, and Pidard D. Proteinase-activated receptor-2 and human lung epithelial cells: disarming by neutrophil serine proteinases. *Am J Respir Cell Mol Biol* 28(3):339-346, 2003.
255. Seymour ML, Zaidi NF, **Hollenberg MD**, and MacNaughton WK. PAR1-dependent and independent increases in COX-2 and PGE2 in human colonic myofibroblasts stimulated by thrombin. *Am J Physiol Cell Physiol* 284(5):C1185-1192, 2003.
256. Ge L, Ly Y, **Hollenberg MD**, and DeFea K. A β -arrestin-dependent scaffold is associated with prolonged MAPK activation in pseudopodia during Protease-Activated Receptor-2 induced chemotaxis. *J Biol Chem* 278(36):34418-34426, 2003.
257. Nguyen C, Coelho AM, Grady E, Wallace JL, **Hollenberg MD**, Cenac N, Garcia-Villar R, Bueno L, Steinhof M, Bunnett NW, and Vergnolle N. Colitis induced proteinase-activated receptor 2 agonists is mediated by a neurogenic mechanism. *Can J Physiol Pharmacol* 81(9):920-927, 2003.

258. Wang J, Zheng H, **Hollenberg MD**, Wijesuriya SJ, Ou XM, and Hauer-Jensen M. Upregulation and Activation of Proteinase-Activated Receptor-2 (PAR-2) in Early and Delayed Radiation Injury in the Rat Intestine: Influence of Biological PAR-2 Activators. *Radiat Res* 160(5):524-535, 2003.
259. Chin AC, Vergnolle N, MacNaughton WK, Wallace JL, **Hollenberg MD**, Buret AG. Proteinase-activated receptor 1 activation induces epithelial apoptosis and increases intestinal permeability. *Proc Natl Acad Sci U S A*. 100(19):11104-11109, 2003.
260. **Hollenberg MD**. King Edward Discussion Group. Medical scientist trainees and the mentorship maze. *Clin Invest Med*. 26(3):110-112, 2003.
261. **Hollenberg MD**. Proteinase-mediated signaling: proteinase-activated receptors (PARs) and much more. *Life Sci* 74 (2-3):237-246, 2003.
262. Muramatsu I, **Hollenberg MD**, Yamamura HI. 4th International Symposium on Receptor Mechanisms, Signal Transduction and Drug Effects: Preface. *Life Sciences* 74:133-4, 2003.
263. Noorbakhsh F, Vergnolle N, **Hollenberg MD**, Power C. Review. Proteinase-activated Receptors in the Nervous System. *Nat Rev Neurosci* 4(12):981-990, 2003.
264. Seatter MJ, Drummond R, Kanke T, Macfarlane SR, **Hollenberg MD**, and Plevin R. The role of the C-terminal tail in protease-activated receptor-2-mediated Ca(2+) signalling, proline-rich tyrosine kinase-2 activation, and mitogen-activated protein kinase activity. *Cell Signal*. 16(1):21-29, 2004.
265. He S, Aslam A, Gaca MD, He Y, Buckley M, **Hollenberg MD**, and Walls AF. Inhibitors of Trypsinase as Mast Cell Stabilising Agents in the Human Airways. Effects of Trypsinase and Other Agonists of PAR2 on Histamine Release. *J Pharmacol Exp Ther*. 309(1):119-126, 2004.
266. Al-Ani B, Hansen KK, and **Hollenberg MD**. Proteinase-activated receptor-2: key role of amino-terminal dipeptide residues of the tethered ligand for receptor activation. *Mol Pharmacol* 65(1):149-156, 2004
267. Napoli C, de Nigris F, Wallace JL, **Hollenberg MD**, Tajana G, De Rosa G, Sica V, and Cirino G. Evidence that protease-activated receptor-2 expression is enhanced in human coronary atherosclerotic lesions. *J Clinical Pathology* 57(5):513-516, 2004
268. McGuire JJ, Saifeddine M, Triggle CR, Sun K, and **Hollenberg MD**. 2-Furoyl-LIGRLO-amide: A potent and selective proteinase-activated receptor 2 agonist. *J Pharmacol Exp Ther* 309(3):1124-1131, 2004
269. Shpacovitch VM, Varga G, Strey A, Gunzer M, Mooren F, Buddenkotte J, Vergnolle N, Sommerhoff CP, Grabbe S, Gerke V, Homey B, **Hollenberg MD**, Luger TA, and Steinhoff M. Agonists of Proteinase-activated Receptor-2 Modulate Human Neutrophil Cytokine Secretion, Expression of Cell Adhesion Molecules and Migration Within 3-D collagen lattices. *J Leukoc Biol* 76:388-398, 2004
270. Hansen KK, Saifeddine M, and **Hollenberg MD**. Tethered ligand-derived peptides of proteinase-activated receptor 3 (PAR₃) activate PAR₁ and PAR₂ in Jurkat T-cells. *Immunology* 112(2):183-190, 2004
271. Kawabata A, Kubo S, Ishiki T, Kawao N, Sekiguchi F, Kuroda R, **Hollenberg MD**, Kanke T, and Saito N. Proteinase-activated receptor-2-mediated relaxation in mouse tracheal and bronchial smooth muscle: Signal transduction mechanisms and distinct agonist sensitivity. *J Pharmacol Exp Ther* 311(1):402-410, 2004.

272. Alshurafa HN, Stenton GR, Wallace JL, **Hollenberg MD**, Befus AD, and Vliagoftis H. A protease activated receptor-2 (PAR-2) activating peptide, tc-LIGRLO-NH₂, induces protease release from mast cells: role in TNF degradation. *BMC Pharmacol* 4(1):12, 2004.
273. **Hollenberg MD**, Saifeddine M, Sandhu S, Houle S, and Vergnolle N. Proteinase-activated receptor-4: evaluation of tethered ligand-derived peptides as probes for receptor function and as inflammatory agonists in vivo. *Br J Pharmacol* 143(4):443-454, 2004.
274. Vergnolle N, Cellars L, Mencarelli A., Rizzo G, Swaminathan S, Beck P, Steinhoff M, Andrade-Gordon P, Bunnett NW, **Hollenberg MD**, Wallace JL, Cirino G, and Fiorucci S. A role for proteinase-activated receptor-1 in inflammatory bowel diseases. *J Clin Invest* 114(10):1444-1456, 2004.
275. Chan AK, Vergnolle N, **Hollenberg MD**, and von der Weid PY. Proteinase-activated receptor-2 activation modulates guinea-pig mesenteric lymphatic vessel pacemaker potential and contractile activity. *J Physiol* 560(Pt 2):563-576, 2004.
276. von der Weid PY, **Hollenberg MD**, Fiorucci S, Wallace JL. Aspirin-triggered, cyclooxygenase-2-dependent lipoxin synthesis modulates vascular tone. *Circulation* 110(10):1320-1325, 2004.
277. McGuire JJ, **Hollenberg MD**, Bennett BM, and Triggle CR. Hyperpolarization of murine small caliber mesenteric arteries by activation of endothelial proteinase-activated receptor 2. *Can J Physiol Pharmacol* 82(12):1103-1112, 2004.
278. Wang X, **Hollenberg MD**, and Loutzenhiser R. Redundant signaling mechanisms contribute to the vasodilatory response of the afferent arteriole to proteinase-activated receptor-2. *Am J Physiol Renal Physiol*. 288(1):F65-75, 2005.
279. Buresi MC, Vergnolle N, Sharkey KA, Keenan CM, Andrade-Gordon P, Cirino G, Cirillo D, **Hollenberg MD**, and MacNaughton WK. Activation of proteinase-activated redeptor-1 inhibits neurally-evoked chloride secretion in the mouse colon in vitro. *Am J Physiol Gastrointest Liver Physiol* 288(2):G337-345, 2005.
280. Ma L, Perini R, McKnight W, Dickey M, Klein A, **Hollenberg MD**, and Wallace JL. Proteinase-activated receptors-1 and -4 counter-regulate endostatin and VEGF release from human platelets. *Proc Natl Acad Sci USA* 102(1):216-220, 2005.
281. Steinhoff M, Buddenkotte J, Shpacovitch V, Rattenholl A, Moormann C, Vergnolle N, Luger TA, and **Hollenberg MD**. Proteinase-activated receptors: transducers of proteinase-mediated signaling in inflammation and immune response. *Endocr Rev* 26(1):1-43, 2005.
282. **Hollenberg MD**. Physiology and pathophysiology of proteinase-activated receptors (PARs): proteinases as hormone-like signal messengers: PARs and more. *J Pharmacol Sci* 97(1):8-13, 2005.
283. Dulon S, Leduc D, Cottrell GS, D'Alayer J, Hansen KK, Bunnett NW, **Hollenberg MD**, Pidard D, and Chignard M. Pseudomonas aeruginosa elastase disables PAR2 in respiratory epithelial cells. *Am J Respir Cell Mol Biol* 32(5):411-419, 2005.
284. Cederqvist K, Haglund C, Heikkila P, **Hollenberg MD**, Karikoski R, and Andersson S. High Expression of Pulmonary Proteinase-activated Receptor 2 in Acute and Chronic Lung Injury in Preterm Infants. *Pediatr Res* 57(6):831-6, 2005.

285. Suzuki T, Moraes TJ, Vachon E, Ginzberg HH, Huang TT, Matthay MA, **Hollenberg MD**, Marshall J, McCulloch CA, Herrera Abreu MT, Chow CW, and Downey GP. Proteinase Activated Receptor-1 Mediates Elastase-Induced Apoptosis of Human Lung Epithelial Cells. *Am J Respir Cell Mol Biol* 33(3):231-47, 2005.
286. Noorbakhsh F, Vergnolle N, McArthur JC, Silva C, Vodjgani M, Andrade-Gordon P, **Hollenberg MD**, and Power C. Proteinase-activated receptor-2 induction by neuroinflammation prevents neuronal death during HIV infection. *J Immunol* 174(11):7320-9, 2005.
287. Hansen KK, Sherman PM, Cellars L, Andrade-Gordon P, Pan Z, Baruch A, Wallace JL, **Hollenberg MD**, and Vergnolle N. A major role for proteolytic activity and proteinase-activated receptor-2 in the pathogenesis of infectious colitis. *Proc Natl Acad Sci USA* 102(3):8363-8, 2005.
288. Ebeling C, Forsythe P, Ng J, Gordon JR, **Hollenberg M**, and Vliagoftis H. Proteinase-activated receptor 2 activation in the airways enhances antigen-mediated airway inflammation and airway hyperresponsiveness through different pathways. *J Allergy Clin Immunol* 115(3):623-30, 2005.
289. Massi D, Naldini A, Ardinghi C, Carraro F, Franchi A, Paglierani M, Tarantini F, Ketabchi S, Cirino G, **Hollenberg MD**, Geppetti P, and Santucci M. Expression of protease-activated receptors 1 and 2 in melanocytic nevi and malignant melanoma. *Hum Pathol* 36(6):676-85, 2005.
290. Seymour ML, Binion DG, Compton SJ, **Hollenberg MD**, and MacNaughton WK. Expression of proteinase-activated receptor 2 on human primary gastrointestinal myofibroblasts and stimulation of prostaglandin synthesis. *Can J Physiol Pharmacol* 83(7):605-16, 2005.
291. Houle S, Papez MD, Ferazzini M, **Hollenberg MD**, and Vergnolle N. Neutrophils and the kallikrein-kinin system in proteinase-activated receptor 4-mediated inflammation in rodents. *Br J Pharmacol* 146(5):670-8, 2005.
292. Cenac N, Cellars L, Steinhoff M, Andrade-Gordon P, **Hollenberg MD**, Wallace JL, Fiorucci S, and Vergnolle N. Proteinase-activated Receptor-1 is an Anti-inflammatory Signal for Colitis Mediated by a Type 2 Immune Response. *Inflamm Bowel Dis* 11(9):792-798, 2005.
293. Kawao N, Nagataki M, Nagasawa K, Kubo S, Cushing K, Wada T, Sekiguchi F, Ichida S, **Hollenberg MD**, MacNaughton WK, Nishikawa H, and Kawabata A. Signal Transduction for Proteinase-Activated Receptor-2-Triggered Prostaglandin E2 Formation in Human Lung Epithelial Cells. *J Pharmacol Exp Ther* 315(2):576-89, 2005.
294. **Hollenberg MD** and Houle S. Proteinases as hormone-like signal messengers. *Swiss Med Wkly* 135(29-30):425-32, 2005. Review.
295. **Hollenberg MD** and Vergnolle N. Pharmacotherapy and gastrointestinal disease: where have we been, where are we, and where are we going? *Curr Opin Pharmacol* 5(6):557-8, 2005.
296. Kelso EB, Lockhart JC, Hembrough T, Dunning L, Plevin R, **Hollenberg MD**, Sommerhoff CP, McLean JS, and Ferrell WR. Therapeutic promise of PAR2 antagonism in joint inflammation. *J Pharmacol Exp Ther* 316(3):1017-24, 2006.
297. Adam E, Hansen KK, Astudillo Fernandez O, Coulon L, Bex F, Duhant X, Jaumotte E, **Hollenberg MD**, and Jacquet A. The house dust mite allergen DER P 1, unlike DER P 3, stimulates the expression of IL-8 in human airway epithelial cells via a proteinase-activated receptor -2 (PAR2) independent mechanism. *J Biol Chem* 281(11):6910-23, 2006.

298. Koetzler R, Saifeddine M, Yu Z, Schurch FS, **Hollenberg MD**, and Green FH. Surfactant as an airway smooth muscle relaxant. *Am J Respir Cell Mol Biol* 34(5):609-15, 2006.
299. Brown JK, **Hollenberg MD**, and Jones CA. Tryptase activates phosphatidylinositol 3-kinases proteolytically independent from proteinase activated receptor-2 in cultured dog airway smooth muscle cells. *Am J Physiol Lung Cell Mol Physiol* 290(2):L259-69, 2006.
300. Noorbakhsh F, Tsutsui S, Vergnolle N, Leonie A, Boven LA, Shariat N, Vodjgani M, Warren K, Andrade-Gordon P, **Hollenberg MD**, and Power C. Proteinase-activated receptor-2 modulates neuroinflammation in experimental autoimmune encephalomyelitis and multiple sclerosis. *J Exp Med* 203(2):425-35, 2006.
301. Bergmann S, Junker K, Henklein P, **Hollenberg MD**, Settmacher U, and Kaufmann R. PAR-type Thrombin receptors in renal carcinoma cells: PAR1-mediated EGFR activation promotes cell migration. *Oncol Rep* 15(4):889-93, 2006.
302. Oikonomopoulou K, Hansen KK, Saifeddine M, Vergnolle N, Tea I, Diamandis EP, and **Hollenberg MD**. Proteinase-mediated cell signalling: targeting proteinase-activated receptors (PARs) by kallikreins and more. *Biol Chem* 387(6):677-85, 2006.
303. Oikonomopoulou K, Hansen KK, Saifeddine M, Vergnolle N, Tea I, Blaber M, Blaber SI, Scarisbrick I, Diamandis EP, and **Hollenberg MD**. Kallikrein-mediated cell signalling: targeting proteinase-activated receptors (PARs). *Biol Chem* 387(6):817-24, 2006.
304. Vergnolle N, Cellars L, Mencarelli A, Rizzo G, Swaminathan S, Beck P, Steinhoff M, Andrade-Gordon P, Bunnett NW, **Hollenberg MD**, Wallace JL, Cirino G, and Fiorucci S. A role for Proteinase-activated receptor-1 in inflammatory bowel diseases. *J Clin Invest* 116(7):2056, 2006.
305. Oikonomopoulou K, Hansen KK, Saifeddine M, Tea I, Blaber M, Blaber SI, Scarisbrick I, Andrade-Gordon P, Cottrell GS, Bunnett NW, Diamandis EP, and **Hollenberg MD**. Proteinase-activated receptors (PARs), Targets for Kallikrein Signaling. *J Biol Chem* 281: 32095-32112, 2006.
306. Xue M, **Hollenberg MD**, and Yong VW. Combination of Thrombin and Matrix Metalloproteinase-9 Exacerbates Neurotoxicity in Cell Culture and Intracerebral Hemorrhage in Mice. *J Neurosci* 26(40):10281-91, 2006.
307. Vergote D, Butler GS, Ooms M, Cox JH, Silva C, **Hollenberg MD**, Jhamandas JH, Overall CM, and Power C. Proteolytic processing of SDF-1 {alpha} reveals a change in receptor specificity mediating HIV-associated neurodegeneration. *Proc Natl Acad Sci USA* 103(50):19182-19187, 2006.
308. Ng ES, Cheng ZJ, Ellis A, Ding H, Jiang Y, Li Y, **Hollenberg MD**, and Triggle CR. Nitrosothiol stores in vascular tissue: Modulation by ultraviolet light, acetylcholine and ionomycin. *Eur J Pharmacol* 560(2-3):183-192, 2007.
309. Kaufmann R, Rahn S, Pollrich K, Hertel J, Dittmar Y, Hommann M, Henklein P, Biskup C, Westermann M, **Hollenberg MD**, and Settmacher U. Thrombin-mediated hepatocellular carcinoma cell migration: Cooperative action via proteinase-activated receptors 1 and 4. *J Cell Physiol* 211(3):699-707, 2007.
310. Ebeling C, Lam T, Gordon JR, **Hollenberg MD**, and Vliagoiftis H. Proteinase-Activated Receptor-2 Promotes Allergic Sensitization to an Inhaled Antigen through a TNF-Mediated Pathway. *J Immunol* 179(5):2910-2917, 2007.

311. Knecht W, Cottrell GS, Amadesi S, Mohlin J, Skåregårde A, Gedda K, Peterson A, Chapman K, **Hollenberg MD**, Vergnolle N, Bunnett NW. Trypsin IV or mesotrypsin and p23 cleave protease-activated receptors 1 and 2 to induce inflammation and hyperalgesia. *J Biol Chem.* 7282(36):26089-26100, 2007.
312. Shpacovitch VM, Seeliger S, Huber-Lang M, Balkow S, Feld M, **Hollenberg MD**, Sarma VJ, Ward PA, Strey A, Gerke V, Sommerhoff CP, Vergnolle N, Steinhoff M. Agonists of proteinase-activated receptor-2 affect transendothelial migration and apoptosis of human neutrophils. *Exp Dermatol* 16(10):799-806, 2007.
313. Afkhami-Goli A, Noorbakhsh F, Keller AJ, Vergnolle N, Westaway D, Jhamandas JH, Andrade-Gordon P, **Hollenberg MD**, Arab H, Dyck RH, Power C. Proteinase-activated receptor-2 exerts protective and pathogenic cell type-specific effects in Alzheimer's disease. *J Immunol.* 179(8):5493-5503, 2007.
314. Saifeddine M, Seymour ML, Xiao YP, Compton SJ, Houle S, Ramachandran R, Macnaughton WK, Simonet S, Vayssettes-Courchay C, Verbeuren TJ, **Hollenberg MD**. Proteinase-activated receptor-2 activating peptides: distinct canine coronary artery receptor systems. *Am J Physiol Heart Circ Physiol.* 293(6):H3279-3289, 2007.
315. K. Oikonomopoulou, K. Hansen, K. Chapman, N. Vergnolle, E.P. Siamandis, **M.D. Hollenberg**. Kallikrein-mediated activation of PARs in inflammation and nociception. *Inflamm. Res.* 56, Supplement 3 S1-S4, 2008.
316. Wang H, Wen S, Bunnett NW, Leduc R, **Hollenberg MD**, Macnaughton WK. Proteinase-activated Receptor-2 Induces Cyclooxygenase-2 Expression through β -Catenin and Cyclic AMP-response Element-binding Protein. *J Biol Chem.* 283(2):809-815, 2008.
317. Ramachandran R, **Hollenberg MD**. Proteinases and signalling: pathophysiological and therapeutic implications via PARs and more. *Br J Pharmacol.* 153 Suppl 1:S263-282, 2008.
318. Van der Merwe JQ, **Hollenberg MD**, Macnaughton WK. EGF Receptor Transactivation, and MAP Kinase Mediate Proteinase-Activated Receptor-2-Induced Chloride Secretion in Intestinal Epithelial Cells. *Am J Physiol Gastrointest Liver Physiol.* 294(2):G441-451, 2008.
319. Feld M, Shpacovitch VM, Ehrhardt C, Kerkhoff C, **Hollenberg MD**, Vergnolle N, Ludwig S, Steinhoff M. Agonists of proteinase-activated receptor-2 enhance IFN-gamma-inducible effects on human monocytes: role in influenza A infection. *J Immunol* 180(10):6903-6910, 2008.
320. Yamada S, Elhlert FJ, **Hollenberg MD**. Analysis. *Naunyn Schmiedebergs Arch Pharmacol.* 377(4-6):267-268, 2008
321. Hansen KK, Oikonomopoulou K, Li Y, **Hollenberg MD**. Proteinases, proteinase-activated receptors (PARs) and the pathophysiology of cancer and diseases of the cardiovascular, musculoskeletal, nervous and gastrointestinal systems. *Naunyn Schmiedebergs Arch Pharmacol.* 377(4-6):377-392, 2008.
322. Shpacovitch V, Feld M, **Hollenberg MD**, Luger TA, Steinhoff M. Role of protease-activated receptors in inflammatory responses, innate and adaptive immunity. *J Leukoc Biol*(6):1309-1322, 2008.
323. **Hollenberg MD**, Renaux B, Hyun E, Houle S, Vergnolle N, Saifeddine M, Ramachandran R. Derivatized 2-furoyl-LIGRLO-amide, a versatile and selective probe for proteinase-activated receptor 2: binding and visualization. *J Pharmacol Exp Ther.* 326 (2):453-462, 2008.

324. **Hollenberg MD**, Oikonomopoulou K, Hansen KK, Saifeddine M, Ramachandran R, Diamandis EP. Kallikreins and proteinase-mediated signaling: proteinase-activated receptors (PARs) and the pathophysiology of inflammatory diseases and cancer. *Biol Chem.* 389(6):643-651, 2008.
325. Oikonomopoulou K, Hansen KK, Baruch A, **Hollenberg MD**, Diamandis EP. Immunofluorometric activity-based probe analysis of active KLK6 in biological fluids. *Biol Chem.* 389(6):747-756, 2008
326. Rallabhandi P, Nhu QM, Toshchakov VY, Piao W, Medvedev AE, **Hollenberg MD**, Fasano A, Vogel SN. Analysis of PAR2 and TLR4 signal transduction: A novel paradigm for receptor cooperativity. *J Biol Chem.* 283(36):24314-24325, 2008.
327. Sharma N, Oikonomopoulou K, Ito K, Renaux B, Diamandis EP, **Hollenberg MD**, Rancourt DE. Substrate specificity determination of mouse implantation serine proteinase and human kallikrein-related peptidase 6 by phage display. *Biol Chem.* 389(8):1097-1105, 2008
328. Hansen KK, Oikonomopoulou K, Baruch A, Ramachandran R, Beck P, Diamandis EP, **Hollenberg MD**. Proteinases as hormones: targets and mechanisms for proteolytic signaling. *Biol Chem.* 389(8):971-982, 2008
329. Ellis A, Cheng ZJ, Li Y, Jiang YF, Yang J, Pannirselvam M, Ding H, **Hollenberg MD**, Triggle CR. Effects of a Western diet versus high glucose on endothelium-dependent relaxation in murine micro- and macro-vasculature. *Eur J Pharmacol.* 601(1-3):111-117, 2008
330. Wilson BJ, Harada R, Leduy L, **Hollenberg MD**, Nepveu A. CUX1 transcription factor is a downstream effector of the proteinase activated receptor 2 (PAR2). *J Biol Chem.* 284(1):36-45, 2009.
331. Xue M, **Hollenberg MD**, Demchuk A, Yong VW. Relative importance of proteinase-activated receptor-1 versus matrix metalloproteinases in intracerebral hemorrhage-mediated neurotoxicity in mice. *Stroke.* 40(6):2199-204, 2009
332. Zhu Y, Vergote D, Pardo C, Noorbakhsh F, McArthur JC, **Hollenberg MD**, Overall CM, Power C. CXCR3 activation by lentivirus infection suppresses neuronal autophagy: neuroprotective effects of antiretroviral therapy. *FASEB J.*(9):2928-41, 2009
333. Pittman QJ, **Hollenberg MD**. Urotensin I-CRF-Urocortins: a mermaid's tail. *Gen Comp Endocrinol.* 164(1):7-14, 2009
334. **Hollenberg MD**. Professor Karl Lederis (1920-2007): always fishing for new ideas. *Gen Comp Endocrinol.* 164(1):4-5, 2009
335. Swystun VA, Renaux B, Moreau F, Wen S, Peplowski MA, **Hollenberg MD**, MacNaughton WK. Serine proteases decrease intestinal epithelial ion permeability by activation of protein kinase C ζ . *Am J Physiol Gastrointest Liver Physiol.* 297(1):G60-70, 2009
336. Ramachandran R, Mihara K, Mathur M, Rochdi MD, Bouvier M, Defea K, **Hollenberg MD**. Agonist-biased signaling via proteinase activated receptor-2: differential activation of calcium and mitogen-activated protein kinase pathways. *Mol Pharmacol.* 76(4):791-801, 2009
337. Androutsou ME, Saifeddine M, **Hollenberg MD**, Matsoukas J, Agelis G. Design, synthesis and biological evaluation of non-peptide PAR1 thrombin receptor antagonists based on small bifunctional templates: arginine and phenylalanine side chain groups are keys for receptor activity. *Amino Acids.*; 38(4):985-90, 2009

338. Kaufmann R, Oettel C, Horn A, Halbhuber KJ, Eitner A, Krieg R, Katenkamp K, Henklein P, Westermann M, Böhmer FD, Ramachandran R, Saifeddine M, **Hollenberg MD**, Settmacher U. Met receptor tyrosine kinase transactivation is involved in proteinase-activated receptor-2-mediated hepatocellular carcinoma cell invasion. *Carcinogenesis*. 30(9):1487-96, 2009
339. Al-Ani B, Hewett PW, Cudmore MJ, Fujisawa T, Saifeddine M, Williams H, Ramma W, Sissaoui S, Jayaraman PS, Ohba M, Ahmad S, **Hollenberg MD**, Ahmed A. Activation of proteinase-activated receptor 2 stimulates soluble vascular endothelial growth factor receptor 1 release via epidermal growth factor receptor transactivation in endothelial cells. *Hypertension*. 55(3):689-97, 2010
340. Hyun E, Ramachandran R, Cenac N, Houle S, Rousset P, Saxena A, Liblau RS, **Hollenberg MD**, Vergnolle N. Insulin modulates protease-activated receptor 2 signaling: implications for the innate immune response. *J Immunol*. 1; 184(5):2702-9, 2010
341. Georgy SR, Pagel CN, Wong DM, Sivagurunathan S, Loh LH, Myers DE, **Hollenberg MD**, Pike RN, Mackie EJ. Proteinase-activated receptor-2 (PAR2) and mouse osteoblasts: Regulation of cell function and lack of specificity of PAR2-activating peptides. *Clin Exp Pharmacol Physiol*. 37(3):328-36, 2010
342. **Hollenberg MD**. Getting the message across: pathophysiology and signaling via receptors for polypeptide hormones and proteinases. *Clin Invest Med*.1; 33(2):E133, 2010
343. Oikonomopoulou K, Batruch I, Smith CR, Soosaipillai A, Diamandis EP, **Hollenberg MD**. Functional proteomics of kallikrein-related peptidases in ovarian cancer ascites fluid. *Biol Chem*. 391(4):381-90, 2010
344. Oikonomopoulou K, Diamandis EP, **Hollenberg MD**. Kallikrein-related peptidases: proteolysis and signaling in cancer, the new frontier. *Biol Chem*.391(4):299-310, 2010
345. Blanco I, Bérizte N, Argüelles M, Cárcaba V, Fernández F, Janciauskiene S, Oikonomopoulou K, de Serres FJ, Fernández-Bustillo E, **Hollenberg MD**. Abnormal overexpression of mastocytes in skin biopsies of fibromyalgia patients. *Clin Rheumatol*. 2010 Apr 30. [Epub ahead of print]
346. Csorba TR, Lyon AW, **Hollenberg MD**. Autoimmunity and the pathogenesis of type 1 diabetes. *Crit Rev Clin Lab Sci*. 47(2):51-71, 2010
347. Noorbakhsh F, Ramachandran R, Barsby N, Ellestad KK, LeBlanc A, Dickie P, Baker G, **Hollenberg MD**, Cohen EA, Power C. MicroRNA profiling reveals new aspects of HIV neurodegeneration: caspase-6 regulates astrocyte survival. *FASEB J*.24(6):1799-812, 2010
348. Wang J, Boerma M, Kulkarni A, **Hollenberg MD**, Hauer-Jensen M. Activation of protease activated receptor 2 by exogenous agonist exacerbates early radiation injury in rat intestine. *Int J Radiat Oncol Biol Phys*.77(4):1206-12. 2010
349. Kim M, Hansen KK, Davis L, van Marle G, Gill MJ, Fox JD, **Hollenberg MD**, Rancourt DE, Lee PW, Yun CO, Johnston RN. Z-FA-FMK as a novel potent inhibitor of reovirus pathogenesis and oncolysis in vivo. *Antivir Ther*.15(6):897-905, 2010
350. Goldblum SE, Rai U, Tripathi A, Thakar M, De Leo L, Di Toro N, Not T, Ramachandran R, Puche AC, **Hollenberg MD**, Fasano A. The active Zot domain (aa 288-293) increases ZO-1 and myosin 1C serine/threonine phosphorylation, alters interaction between ZO-1 and its binding partners, and induces tight junction disassembly through proteinase activated receptor 2 activation. *FASEB J*. 25(1):144-58, 2011

351. Adams MN, Ramachandran R, Yau MK, Suen JY, Fairlie DP, **Hollenberg MD**, Hooper JD. Structure, function and pathophysiology of protease activated receptors. *Pharmacol Ther.* 130(3):248-282, 2011.
352. Arizmendi NG, Abel M, Mihara K, Davidson C, Polley D, Nadeem A, El Mays T, Gilmore BF, Walker B, Gordon JR, **Hollenberg MD**, Vliagoftis H. Mucosal allergic sensitization to cockroach allergens is dependent on proteinase activity and proteinase- activated Receptor-2 activation. *J Immunol.* 2011.
353. Shpacovitch VM, Feld M, Holzinger D, Kido M, **Hollenberg MD**, Levi-Schaffer F, Vergnolle N, Ludwig S, Roth J, Luger T, Steinhoff M. Role of proteinase-activated receptor-2 in anti-bacterial and immunomodulatory effects of interferon- γ on human neutrophils and monocytes. *Immunology.* 133(3):329-339, 2011.
354. Ramachandran R, Mihara K, Chung H, Renaux B, Lau CS, Defea KA, Bouvier M, **Hollenberg MD**. Neutrophil elastase acts as a biased agonist for proteinase activated receptor-2 (PAR2). *J Biol Chem.* 286(28):24638-24648, 2011.
355. Li Y, Mihara K, Saifeddine M, Krawetz A, Lau DC, Li H, Ding H, Triggle CR, **Hollenberg MD**. Perivascular adipose tissue-derived relaxing factors: release by peptide agonists via proteinase-activated receptor-2 (PAR(2)) and non-PAR(2) mechanisms. *Br J Pharmacol.* 164(8):1990-2002. 2011
356. Carson L, Cathcart GR, Scott CJ, **Hollenberg MD**, Walker B, Ceri H, Gilmore BF. Comprehensive inhibitor profiling of the *Proteus mirabilis* metalloprotease virulence factor ZapA (mirabilysin). *Biochimie.* 293(10):1824-1827, 2011.
357. El Mays TY, Saifeddine M, Choudhury P, **Hollenberg MD**, Green FH. Carbon dioxide enhances substance P-induced epithelium-dependent bronchial smooth muscle relaxation in Sprague-Dawley rats. *Can J Physiol Pharmacol.* 89(7):513-520. 2011
358. Hyun E, Ramachandran R, **Hollenberg MD**, Vergnolle N. Mechanisms behind the anti-inflammatory actions of insulin. *Crit Rev Immunol.*;31(4):307-340. 2011
359. Gratio V, Loriot C, Virca GD, Oikonomopoulou K, Walker F, Diamandis EP, **Hollenberg MD**, Darmoul D. Kallikrein-related peptidase 14 acts on proteinase-activated receptor 2 to induce signaling pathway in colon cancer cells. *Am J Pathol.*, 179(5):2625-2636, 2011.
360. Acharjee S, Zhu Y, Maingat F, Pardo C, Ballanyi K, **Hollenberg MD**, Power C. Proteinase-activated receptor-1 mediates dorsal root ganglion neuronal degeneration in HIV/AIDS. *Brain.* 134(Pt 11):3209-2321, 2011
361. Sharma N, Kumar R, Renaux B, Saifeddine M, Nishikawa S, Mihara K, Ramachandran R, **Hollenberg MD**, Rancourt DE. Implantation serine proteinase 1 exhibits mixed substrate specificity that silences signaling via proteinase-activated receptors. *PLoS One.*;6(11):e27888, 2011
362. Chung H, Hamza M, Oikonomopoulou K, Gratio V, Saifeddine M, Virca GD, Diamandis EP, **Hollenberg MD**, Darmoul D. Kallikrein-related peptidase signaling in colon carcinoma cells: targeting proteinase-activated receptors. *Biol Chem.* 2012 Apr 1;393(5):413-420, 2012.
363. Takei-Taniguchi R, Imai Y, Ishikawa C, Sakaguchi Y, Nakagawa N, Tsuda T, **Hollenberg MD**, Yamanishi K. Interleukin-17- and protease-activated receptor 2-mediated production of CXCL1 and CXCL8 modulated by cyclosporine A, vitamin D(3) and glucocorticoids in human keratinocytes. *J Dermatol.* 39:625-631, 2012.

364. **Hollenberg MD**. Novel insights into the delayed vasospasm following subarachnoid haemorrhage: Importance of proteinase signalling. *Br J Pharmacol.* 165(1):103-105. 2012
365. Ramachandran R, Noorbakhsh F, Defea K, **Hollenberg MD**. Targeting proteinase-activated receptors: therapeutic potential and challenges. *Nat Rev Drug Discov.* 3;11(1):69-86. 2012
366. Kaufmann R, **Hollenberg MD**. Proteinase-Activated Receptors (PARs) and Calcium Signaling in Cancer. *Adv Exp Med Biol.* 740:979-1000, 2012.
367. Ramachandran R, Eissa A, Mihara K, Oikonomopoulou K, Saifeddine M, Renaux B, Diamandis E, **Hollenberg MD**. Proteinase-activated receptors (PARs): differential signalling by kallikrein-related peptidases KLK8 and KLK14. *Biol Chem.* 393:421-427, 2012.
368. Chung H, Hamza M, Oikonomopoulou K, Gratio V, Saifeddine M, Virca GD, Diamandis EP, **Hollenberg MD**, Darmoul D. Kallikrein-related peptidase signaling in colon carcinoma cells: targeting proteinase-activated receptors. *Biol Chem.* Apr 1;393(5):413-420, 2012.
369. Hirota CL, Moreau F, Iablokov V, Dickey M, Renaux B, **Hollenberg MD**, MacNaughton WK. Epidermal growth factor receptor transactivation is required for proteinase-activated receptor-2-induced COX-2 expression in intestinal epithelial cells. *Am J Physiol Gastrointest Liver Physiol.* 303:G111-G119, 2012.
370. Jijon HB, Buret A, Hirota CL, **Hollenberg MD**, Beck PL. The EGF Receptor and HER2 Participate in TNF- α -Dependent MAPK Activation and IL-8 Secretion in Intestinal Epithelial Cells. *Mediators Inflamm.* 2012:207398, 2012.
371. Russell FA, Schuelert N, Veldhoen VE, **Hollenberg MD**, McDougall JJ. Proteinase-activated receptor-2 (PAR(2)) activation sensitises primary afferents and causes leukocyte rolling and adherence in the rat knee joint. *Br J Pharmacol.* 167:1665-78, 2012.
372. Nichols HL, Saifeddine M, Theriot BS, Hegde A, Polley D, El-Mays T, Vliagoftis H, **Hollenberg MD**, Wilson EH, Walker JK, DeFea KA. β -Arrestin-2 mediates the proinflammatory effects of proteinase-activated receptor-2 in the airway. *Proc Natl Acad Sci U S A.* 109:16660-16665, 2012.
373. **Hollenberg MD**. CSCI/RCPSC Henry Friesen Lecture. Mentors and the Butterfly Effect: Triggers for Discovering Signalling by Proteinases via Proteinase-Activated Receptors (PARs) and More. *Clin Invest Med.* 35(6):E378-91, 2012.
374. Fernandez-Blanco JA, **Hollenberg MD**, Martinez V, Vergara P. PAR-2-Mediated Control of Barrier Function and Motility Differs Between Early and Late Phases of Postinfectious Gut Dysfunction in the Rat. *Am J Physiol Gastrointest Liver Physiol.* 304: G-390-400, 2013
375. Ramachandran R, Hyun E, Zhao L, Lapointe TK, Chapman K, Hirota CL, Ghosh S, McKemy DD, Vergnolle N, Beck PL, Altier C, **Hollenberg MD**. TRPM8 activation attenuates inflammatory responses in mouse models of colitis. *Proc Natl Acad Sci U S A.* 110:7476-7481, 2013.
376. Oikonomopoulou K, DeAngelis RA, Chen H, Diamandis EP, **Hollenberg MD**, Ricklin D, Lambris JD. Induction of complement C3a receptor responses by kallikrein-related peptidase 14. *J Immunol.* 191:3858-866, 2013.
377. Mihara K, Ramachandran R, Renaux B, Saifeddine M, **Hollenberg MD**. Neutrophil Elastase and Proteinase-3 Trigger G Protein-biased Signaling through Proteinase-activated Receptor-1 (PAR1). *J Biol Chem.* 288:32979-32990, 2013.

378. Davidson CE, Asaduzzaman M, Arizmendi NG, Polley D, Wu Y, Gordon JR, **Hollenberg MD**, Cameron L, Vliagoftis H. Proteinase-activated receptor-2 activation participates in allergic sensitization to house dust mite allergens in a murine model. *Clin Exp Allergy*. 43:1274-1285, 2013.
379. Gieseler F, Ungefroren H, Settmacher U, Hollenberg MD, Kaufmann R. Proteinase-activated receptors (PARs) -- focus on receptor-receptor-interactions and their physiological and pathophysiological impact. *Cell Commun Signal*. 11:86, PMID: 24215724, 2013.
380. Sharma N, Fahr J, Renaux B, Saifeddine M, Kumar R, Nishikawa S, Mihara K, Ramachandran R, **Hollenberg MD**, Rancourt DE. Implantation serine proteinase 2 is a monomeric enzyme with mixed serine proteolytic activity and can silence signalling via proteinase activated receptors. *Biochem Cell Biol*. 91:487-497, 2013.
381. Chung H, Ramachandran R, **Hollenberg MD**, Muruve DA. Proteinase-activated Receptor-2 Transactivation of Epidermal Growth Factor Receptor and Transforming Growth Factor- β Receptor Signaling Pathways Contributes to Renal Fibrosis. *J Biol Chem*. 2013 Dec 27;288:37319-37331, 2013.
382. Alexander SP, Benson HE, **Hollenberg MD** et al. The Concise Guide to Pharmacology 2013/14: overview. *Br J Pharmacol*. 170(8):1449-1458, 2013.
383. Stanton MM, Nelson LK, Benediktsson H, **Hollenberg MD**, Buret AG, Ceri H. Proteinase-activated receptor-1 and immunomodulatory effects of a PAR1-activating peptide in a mouse model of prostatitis. *Mediators Inflamm*. 2013:748395, 2013.
384. **Hollenberg MD**, Mihara K, Polley D, Suen JY, Han A, Fairlie DP, Ramachandran R. Biased Signalling and Proteinase-Activated Receptors (PARs): Targeting Inflammatory Disease. *Br J Pharmacol*. 171(5):1180-194, 2014.
385. **Hollenberg MD**. Hypothetical structure of prostate-specific antigen. *Clin Chem*. 60(4):702, 2014.
386. El-Daly M, Saifeddine M, Mihara K, Ramachandran R, Triggle CR, **Hollenberg MD**. Proteinase-Activated Receptors 1 & 2 and the Regulation of Porcine Coronary Artery Contractility: Role for Distinct Tyrosine Kinase Pathways. *Br J Pharmacol*. 171(9):2413-25, 2014.
387. Fischer CD, Duquette SC, Renaux BS, Feener TD, Morck DW, **Hollenberg MD**, Lucas MJ, Buret AG. Tulathromycin exerts proresolving effects in bovine neutrophils by inhibiting phospholipases and altering leukotriene b4, prostaglandin e2, and lipoxin a4 production. *Antimicrob Agents Chemother*. 58(8):4298-4307, 2014.
388. Haerteis S, Krappitz A, Krappitz M, Murphy JE, Bertog M, Krueger B, Nacken R, Chung H, **Hollenberg MD**, Knecht W, Bunnett NW, Korbmacher C. Proteolytic Activation of the Human Epithelial Sodium Channel by Trypsin IV and Trypsin I Involves Distinct Cleavage Sites. *J Biol Chem*. 289(27):19067-19078, 2014.
389. **Hollenberg MD**. KLKs and their hormone-like signaling actions: a new life for the PSA-KLK family. *Biol Chem*. 395(9):915-929, 2014.
390. Iablokov V, Hirota CL, Peplowski MA, Ramachandran R, Mihara K, **Hollenberg MD**, MacNaughton WK. Proteinase-activated receptor 2 (PAR2) decreases apoptosis in colonic epithelial cells. *J Biol Chem*. 289(49):34366-34377, 2014
391. Joyal JS, Nim S, Zhu T, Sitaras N, Rivera JC, Shao Z, Sapielha P, Hamel D, Sanchez M, Zaniolo K, St-Louis M, Ouellette J, Montoya-Zavala M, Zabeida A, Picard E, Hardy P, Bhosle V, Varma DR, Gobeil

- F Jr, Beauséjour C, Boileau C, Klein W, **Hollenberg M**, Ribeiro-da-Silva A, Andelfinger G, Chemtob S. Subcellular localization of coagulation factor II receptor-like 1 in neurons governs angiogenesis. *Nat Med.* 20(10):1165-1173, 2014.
392. **Hollenberg MD**. Proteinases, their receptors and inflammatory signalling: the Oxford South Parks Road connection. *Br J Pharmacol.* 172(13):3196-3211, 2015
393. Saifeddine M, El-Daly M, Mihara K, Bunnett NW, McIntyre P, Altier C, **Hollenberg MD**, Ramachandran R. GPCR-mediated EGF receptor transactivation regulates TRPV4 action in the vasculature. *Br J Pharmacol.* 172(10):2493-2506, 2015
394. Mann MC, **Hollenberg MD**, Hanley DA, Ahmed SB. Vitamin D, the autonomic nervous system, and cardiovascular risk. *Physiol Rep.* 3(4). pii: e12349, 2015.
395. Kim W, Zekas E, Lodge R, Susan-Resiga D, Marcinkiewicz E, Essalmani R, Mihara K, Ramachandran R, Asahchop E, Gelman B, Cohen ÉA, Power C, **Hollenberg MD**, Seidah NG. Neuroinflammation-Induced Interactions between Protease-Activated Receptor 1 and Proprotein Convertases in HIV-Associated Neurocognitive Disorder. *Mol Cell Biol.* 35(21):3684-3700, 2015.
396. Asaduzzaman M, Nadeem A, Arizmendi N, Davidson C, Nichols HL, Abel M, Ionescu LI, Puttagunta L, Thebaud B, Gordon J, DeFea K, **Hollenberg MD**, Vliagoftis H. Functional inhibition of PAR2 alleviates allergen-induced airway hyperresponsiveness and inflammation. *Clin Exp Allergy.* 45(12):1844-1855, 2015.
397. Kamato D, Thach L, Getachew R, Burch M, **Hollenberg MD**, Zheng W, Little PJ, Osman N. Protease activated receptor-1 mediated dual kinase receptor transactivation stimulates the expression of glycosaminoglycan synthesizing genes. *Cell Signal.* 28(1):110-119, 2016.
398. Little PJ, **Hollenberg MD**, Kamato D, Thomas W, Chen J, Wang T, Zheng W, Osman N. Integrating the GPCR transactivation-dependent and biased signalling paradigms in the context of PAR-1 signalling. *Br J Pharmacol.* 173(20):2992-3000, 2016.
399. Roberts JI, Beatty JK, Peplowski MA, Keough MB, Yipp BG, **Hollenberg MD**, Beck PL. Highlights from the 6th Annual University of Calgary Leaders in Medicine Research Symposium and the Keynote Address by Dr. Danuta Skowronski. *Clin Invest Med.* 38(6):E314-E17, 2015.
400. Roberts JI, Beatty JK, Peplowski MA, Keough MB, Yipp BG, **Hollenberg MD**, Beck PL. Proceedings from the 6th Annual University of Calgary Leaders in Medicine Research Symposium. *Clin Invest Med.* 38(6):E318-E350, 2015.
401. Lewinson RT, Keough MB, Beck PL, **Hollenberg MD**, Yipp BG. Lost: Young Canadian physician-scientists need a map. *Sci Transl Med.* 8(329):329fs6, 2016.
402. Mihara K, Ramachandran R, Saifeddine M, Hansen KK, Renaux B, Polley D, Gibson S, Vanderboor C, **Hollenberg MD**. Thrombin-Mediated Direct Activation of Proteinase-Activated Receptor-2: Another Target for Thrombin Signaling. *Mol Pharmacol* 89:606–614, 2016.
403. Zeeh F, Witte D, Gädeken T, Rauch BH, Grage-Griebenow E, Leinung N, Fromm SJ, Stölting S, Mihara K, Kaufmann R, Settmacher U, Lehnert H, **Hollenberg MD**, Ungefroren H. Proteinase-activated receptor 2 promote TGF- β -dependent cell motility in pancreatic cancer cells by sustaining expression of the TGF- β type I receptor ALK5. *Oncotarget* 7(27):41095-41109, 2016.

404. Gillrie MR, Renaux B, Russell-Goldman E, Avril M, Brazier AJ, Mihara K, Di Cera E, Milner DA Jr, **Hollenberg MD**, Smith JD, Ho M. Thrombin Cleavage of Plasmodium falciparum Erythrocyte Membrane Protein 1 Inhibits Cytoadherence. *MBio*. 13;7(5), 2016.
405. Ramachandran R, Altier C, Oikonomopoulou K, **Hollenberg MD**. Proteinases, Their Extracellular Targets, and Inflammatory Signalling. *Pharmacol Rev*. 68(4): 1110-1142, 2016.
406. Ramachandran R, Mihara K, Thibeault P, Vanderboor CM, Petri B, Saifeddine M, Bouvier M, **Hollenberg MD**. Targeting a PAR carboxyl terminal motif to regulate platelet function. *Mol Pharmacol*. 2017, [Epub 2017].
407. Chaplin R, Thach L, **Hollenberg MD**, Cao Y, Little PJ, Kamato D. Insights into cellular signaling by G protein coupled receptor transactivation of cell surface protein kinase receptors. *J Cell Commun Signal*. 11(2):117-125. 2017, [Epub 2017].
408. Polley DJ, Mihara K, Ramachandran R, Vliagoftis H, Renaux B, Saifeddine M, Daines MO, Boitano S, **Hollenberg MD**. Cockroach allergen serine proteinases: Isolation, sequencing and signaling via proteinase-activated receptor-2 (PAR-2). *Clin Exp Allergy*, (7):946-960, 2017, [Epub 2017].
409. Bau JT, Frolkis AD, Nathoo N, Yipp BG, **Hollenberg MD**, Beck PL. Career and research outcomes of the physician-scientist training program at the University of Calgary: a retrospective cohort study. *CMAJ Open*. 5(2):E395-E401, 2017, [Epub 2017].
410. Mewhort HEM, Svystonyuk DA, Turnbull JD, Teng G, Belke DD, Guzzardi DG, Park DS, King S, **Hollenberg MD**, Fedak PWM. Bioactive Extracellular Matrix Scaffold Promotes Adaptive Cardiac Remodeling and Repair. *JACC Basic Transl Sci*. 2(4):450-464, 2017, [eCollection 2017 Aug].
411. Ungefroren H, Witte D, Mihara K, Rauch BH, Henklein P, Johren O, Bonni S, Settmacher U, Lehnert H, **Hollenberg MD**, Kaufmann R, Gieseler F. TGF- β 1/ALK5-mediated cell migration is dependent on the protein PAR2 but not on PAR2-stimulated Gq-calcium signaling. *Mol. Pharmacol*. 11(8), 2017, [Epub 2017].
412. Basso L, Lapointe TK, Iftinca M, Marsters C, **Hollenberg MD**, Kurrasch DM, Altier C. Granulocyte-colony-stimulating factor (G-CSF) signaling in spinal microglia drives visceral sensitization following colitis. *Proc Natl Acad Sci U S A*. 114(42):11235-11240, 2017, [Epub 2017].
413. Peplowski MA, Vegso AJ, Iablokov V, Dicay M, Zaheer RS, Renaux B, Proud D, **Hollenberg MD**, Beck PL, MacNaughton, WK. Tumor necrosis factor α decreases aquaporin 3 expression in intestinal epithelial cells through inhibition of constitutive transcription. *Physiol Rep*. 5(19), 2017, [Epub 2017].
414. van den Boogard FE, Brandis X, Duitman J, de Stoppelaar SF, Borensztain KS, Roelofs JJ, **Hollenberg MD**, Spek CA, Schultz MJ, Van't Veer C and van der Poll T. Protease-Activated Receptor 2 Facilitates Bacterial Dissemination in Pneumococcal Pneumonia. *J Infect Dis*. 217(9):1462-1471, 2018.
415. Oikonomopoulou K, Diamandis EP, **Hollenberg MD**, Chandran V. Proteinases and their receptors in inflammatory arthritis: an overview. *Nat Rev Rheumatol*. 14(3):170-180, 2018, [Epub 2018].
416. Venu VKP, Saifeddine M, Mihara K, El-Daly M, Belke D, Dean JLE, O'Brien ER, Hirota SA, **Hollenberg MD**. Heat-shock protei-27 and sex-selective regulation of muscarinic and PAR2 receptor-mediated vasodilation: Differential sensitivity to eNOS inhibition. *Br J Pharmacol*. 2018, [Epub 2018].

417. Moges R, Desmots de Lamache D, Sajedy S, Renaux BS, **Hollenberg MD**, Muench G, Abbott EM, and Buret AG. Anti-Inflammatory Benefits of Antibiotics: Tylvalosin Induces Apoptosis of Porcine Neutrophils and Macrophages, Promotes Efferocytosis, and Inhibits Pro-Inflammatory CXCL-8, IL1 α , and LTB $_4$ Production, While Inducing the Release of Pro-Resolving Lipoxin A $_4$ and Resolvin D1. *Front Vet Sci.* 5:57, 2018, [eCollection 2018].
418. van den Boogaard FE, Brands X, Duitman J, de Stoppelaar SF, Borensztajn KS, Roelofs JJTH, **Hollenberg MD**, Spek CA, Schultz MJ, van 't Veer C, van der Poll T. Protease-Activated Receptor-2 Facilitates Bacterial Dissemination in Pneumococcal Pneumonia. *J Infect Dis.* 217(9):1462-1471, 2018.
419. Darby WG, Potocnik S, Ramachandran R, **Hollenberg MD**, Woodman OL, McIntyre P. Shear stress sensitizes TRPV4 in endothelium-dependent vasodilatation. *Pharmacol Res.* 133:152-159, 2018, [Epub 2018].
420. Denadai-Souza A, Bonnart C, Tapias NS, Marcellin M, Gilmore B, Alric L, Bonnet D, Burlet-Schiltz O, **Hollenberg MD**, Vergnolle N, Deraison C. Functional proteomic profiling of secreted serine proteases in health and Inflammatory Bowel Disease. *Sci Rep.* 8(1):7834, 2018.
421. Carr BJ, Mihara K, Ramachandran R, Saifeddine M, Nathanson NM, Stell WK, **Hollenberg MD**. Myopia-inhibiting concentrations of Muscarinic Receptor Antagonists block activation of Alpha2A-Adrenoceptors in vitro. *Invest Ophthalmol Vis Sci.* 59(7):2778-2791, 2018.
422. El-Daly M, Pulakazhi Venu VK, Saifeddine M, Mihara K, Kang S, Fedak PWM, Alston LA, Hirota SA, Ding H, Triggle CR, **Hollenberg MD**. Hyperglycaemic impairment of PAR-2-mediated vasodilation: Prevention by inhibition of aortic endothelial sodium-glucose-co-Transporter-2 and minimizing oxidative stress. *Vascul Pharmacol.* 109:56-71, 2018..
423. Peplowski MA, Dicay M, Baggio CH, Wysokinski F, Renaux B, **Hollenberg MD**, Proud D, MacNaughton WK. Interferon gamma decreases intestinal epithelial aquaporin 3 expression through downregulation of constitutive transcription. *J Mol Med (Berl).* 96(10):1081-109, 2018.
424. Eftekhari R, Lima SG, Liu Y, Mihara K, Saifeddine M, Noorbakhsh F, Scarisbrick IA, **Hollenberg MD**. Microenvironment proteinases, proteinase-activated receptor regulation, cancer and inflammation. *Biol Chem.* 399(9):1023-1039, 2018.
425. Barton KI, Capozzi LC, Aker G, Yipp BG, **Hollenberg MD**, Rabi DM, Beck PL. The Need for an Executive Leadership Curriculum in Scientist-Clinician Training Programs. *Clin Invest Med.* 41(3):E144-E147, 2018.
426. Yee MC, Nichols HL, Polley D, Saifeddine M, Pal K, Lee K, Wilson EH, Daines MO, **Hollenberg MD**, DeFea KA. Protease-activated Receptor-2 Signaling through β -Arrestin-2 Mediates Alternaria Alkaline Serine Protease-induced Airway Inflammation. *Am J Physiol Lung Cell Mol Physiol.* (6):L1042-L1057, 2018, [Epub 2018].
427. Melo H, Basso L, Iftinca M, MacNaughton WK, **Hollenberg MD**, McKay DM, Altier C. Itch induced by peripheral mu opioid receptors is dependent on TRPV1-expressing neurons and alleviated by channel activation. *Sci rep.* 8(1):15551, 2018.

428. Sachan V, Lodge R, Mihara K, Hamelin J, Power C, Gelman BB, **Hollenberg MD**, Cohen ÉA, Seidah NG. HIV-induced neuroinflammation: impact of PAR1 and PAR2 processing by Furin. *Cell Death Differ.* 26(10):1942-1954. 2019.
429. Logan LM, Jensen SK, Singh N, Peplowski MA, Rabi D, Yipp BG, **Hollenberg MD**, Beck PL. Proceedings from the 8th Annual University of Calgary Leaders In Medicine Research Symposium. *Clin Invest Med.* 41(4):E165-E185, 2019.
430. Basso L, Aboushousha R, Fan CY, Iftinca M, Melo H, Flynn R, Agosti F, **Hollenberg MD**, TRPV1 promotes opioid analgesia during inflammation. *Sci Signal.* 12(575), pii: eaav0711. 2019.
431. Pulakazhi Venu VK, El-Daly M, Saifeddine M, Hirota SA, Ding H, Triggle CR, **Hollenberg MD**. Minimizing hyperglycemia-induced vascular endothelial dysfunction by inhibiting endothelial sodium-glucose cotransporter 2 and attenuating oxidative stress; implications for treating individuals with type-2 diabetes. *Can J Diabetes.* 43(7):510-514. 2019,
432. Rayees S, Joshi JC, Tauseef M, Anwar M, Baweja S, Rochford I, Joshi B, **Hollenberg MD**, Reddy SP, Mehta D. PAR2-mediated cAMP generation suppresses TRPV4-dependent Ca²⁺ signaling in Alveolar macrophages to resolve TLR4-induced inflammation. *Cell Rep.* 27(3):793-805.e4, 2019.
433. Ungefroren H, Otterbein H, Fiedler C, Mihara K, **Hollenberg MD**, Gieseler F, Lehnert H, Witte D. RAC1B suppresses TGF-β1-dependent cell migration in pancreatic carcinoma cells through inhibition of the TGF-β Type 1 receptor ALK5. *Cancers (Basel).* 11(5). pii: E691, 2019.
434. Ward R, Delaloye N, Logan L, Jenkins S, **Hollenberg MD**, Rabi DM. Proceedings from the 9th Annual University of Calgary Leaders in Medicine Research Symposium. *Clin Invest Med.* 42(2):E1-E18, 2019.
435. Zhou G, **Hollenberg MD**, Vliagoftis H, Kane KP. Protease-activated receptor 2 agonist as adjuvant: Augmenting development of protective memory CD8 T Cell responses induced by influenza virosomes. *J Immunol.* 203(2):441-452, 2019, [Epub 2019].
436. Motta JP, Denadai-Souza A, Sagnat D, Guiraud L, Edir A, Bonnard C, Sebbag M, Rousset P, Lapeyre A, Seguy C, Mathurine-Thomas N, Galipeau HJ, Bonnet D, Alric L, Buret AG, Wallace JL, Dufour A, Verdu EF, **Hollenberg MD**, Oswald E, Serino M, Deraison C, Vergnolle N. Active thrombin produced by the intestinal epithelium controls mucosal biofilms. *Nat Commun.* 10(1):3224, 2019.
437. Pulakazhi Venu VK, Saifeddine M, Mihara K, Tsai YC, Nieves K, Alston L, Mani S, McCoy KD, **Hollenberg MD**, Hirota SA. The pregnane X receptor and its microbiota-derived ligand indole 3-propionic acid regulate endothelium-dependent vasodilation. *Am J Physiol Endocrinol Metab.* 317(2):E350-E361, 2019.
438. Otterbein H, Mihara K, **Hollenberg MD**, Lehnert H, Witte D, Ungefroren H. RAC1B suppresses TGF-β-dependent chemokinesis and growth inhibition through an autoregulatory feed-forward loop involving PAR2 and ALK5. *Cancers (Basel).* 11(8) pii: E1211, 2019.
439. Alexander SPH, Christopoulos A, Davenport AP, Kelly E, Mathie A, Peters JA, Veale EL, Armstrong JF, Faccenda E, Harding SD, Pawson AJ, Sharman JL, Southan C, Davies JA; CGTP Collaborators. THE CONCISE GUIDE TO PHARMACOLOGY 2019/20: G protein-coupled receptors. *Br J Pharmacol.* 176 Suppl 1:S21-S141, 2019

440. Triggler CR, Ding H, Marei I, Anderson TJ, **Hollenberg MD**. Why the endothelium? The endothelium is a target to reduce diabetes-associated vascular disease. *Can J Physiol Pharmacol*. 98(7):415-430, 2020 [Epub 2020 Mar 9].
441. **Hollenberg MD**. Can a virtual on-line nation-wide mentorship-matching process meet the need? *Clin Invest Med*. 43(1):E39-E40, 2020.
442. Holani R, Babbar A, Blyth GAD, Lopes F, Jijon H, McKay DM, **Hollenberg MD**, Cobo ER. Cathelicidin-mediated lipopolysaccharide signaling via intracellular TLR4 in colonic epithelial cells evokes CXCL8 production. *Gut Microbes*. 12(1):1785802, 2020.
443. Tu NH, Jensen DD, Anderson BM, Chen E, Jimenez-Vargas NN, Scheff NN, Inoue K, Tran HD, Dolan JC, Meek TA, **Hollenberg MD**, Liu CZ, Vanner SJ, Janal MN, Bunnnett NW, Edgington-Mitchell LE, Schmidt BL. Legumain induces oral cancer pain by biased agonism of protease-activated receptor-2. *J Neurosci*. 41(1):193-210, 2021.
444. Abji F, Rasti M, Gomez-Aristizabal A, Muytjens C, Saiffeddine M, Mihara K, Mothhari M, Gandhi R, Viswanathan S, **Hollenberg MD**, Oikonomopoulou K, Chandran V. Proteinase-mediated macrophage signaling in psoriatic arthritis. *Front Immunol*. 11:629726, 2021.
445. Motta JP, Palese S, Giorgio C, Chapman K, Denadai-Souza A, Rousset P, Sagnat D, Guiraud L, Edir A, Seguy C, Alric L, Bonnet D, Bournet B, Buscail L, Gilletta C, Buret AG, Wallace JL, **Hollenberg MD**, Oswald E, Barocelli E, LE Grand S, LE Grand B, Deraison C, Vergnolle N.J Crohns Colitis. Increased mucosal thrombin is associated with Crohn's disease and causes inflammatory damage through protease-activated receptors activation. 2020. [Online ahead of print.]
446. Jenkins DJA, Jayalath VH, Choo VL, Viguiouk E, Kendall CWC, Srichaikul K, Mirrahimi A, Bernstein CN, Chang TMS, Gold P, Haynes RB, **Hollenberg MD**, Lozano AM, Posner BI, Ronald AR, Vranic M, Wang YT, Chiavaroli L, de Souza RJ, Nishi S, Pichika SC, Gillett C, Tsirakis T, Sievenpiper JL. Does conventional early life academic excellent predict later life scientific discovery? An assessment of the lives of great medical innovators. *QJM*. 2020. [Online ahead of print].
447. Lane BS, Heller B, **Hollenberg MD**, Wells CD. The RGS-RhoGEFs control the amplitude of YAP1 activation by serum. *Sci Rep*. 11(1):2348, 2021.
448. Schubert CL, Tjong J, Ewanchuk BW, Moore RT, **Hollenberg MD**, Rabi DM. Proceedings from the 11th Annual University of Calgary Leaders in Medicine Research Symposium. *Clin Invest Med*. 44(1):E42-57, 2021.
449. **Hollenberg MD**. Oxytocin: much more than childbirth and milk letdown. *Clin Sci (Lond)*. 135(17):2121-2126, 2021.
450. Mohammed I, **Hollenberg MD**, Ding H, Triggler CR. A critical review of the evidence that Metformin is a putative anti-aging drug that enhances healthspan and extends lifespan. *Front Endocrinol (Lausanne)*. 12:718942, 2021.
451. Rabinovitch E, Mihara K, Sananes A, Zaretsky M, Heyne M, Shifman J, Aharoni A, **Hollenberg MD**, Papo N. A KLK4 proteinase substrate capture approach to antagonize PAR1. *Sci Rep*. 11(1):2348, 2021.
452. **Hollenberg MD**, Bezuhly MB. Physician scientists of yesterday, today and tomorrow. *Clin Invest Med*. 44(3):E80-81, 2021.

453. Alexander SP, Christopoulos A, Davenport AP, Kelly E, Mathie A, Peters JA, Veale EL, Armstrong JF, Faccenda E, Harding SD, Pawson AJ, Southan C, Davies JA, Abbracchio MP, Alexander W, Al-Hosaini K, Bäck M, Barnes NM, Bathgate R, Beaulieu JM, Bernstein KE, Bettler B, Birdsall NJM, Blaho V, Boulay F, Bousquet C, Bräuner-Osborne H, Burnstock G, Caló G, Castaño JP, Catt KJ, Ceruti S, Chazot P, Chiang N, Chini B, Chun J, Cianciulli A, Civelli O, Clapp LH, Couture R, Csaba Z, Dahlgren C, Dent G, Singh KD, Douglas SD, Dournaud P, Eguchi S, Escher E, Filardo EJ, Fong T, Fumagalli M, Gainetdinov RR, Gasparo M, Gerard C, Gershengorn M, Gobeil F, Goodfriend TL, Goudet C, Gregory KJ, Gundlach AL, Hamann J, Hanson J, Hauger RL, Hay DL, Heinemann A, **Hollenberg MD**, Holliday ND, Horiuchi M, Hoyer D, Hunyady L, Husain A, IJzerman AP, Inagami T, Jacobson KA, Jensen RT, Jockers R, Jonnalagadda D, Karnik S, Kaupmann K, Kemp J, Kennedy C, Kihara Y, Kitazawa T, Kozielowicz P, Kreienkamp HJ, Kukkonen JP, Langenhan T, Leach K, Lecca D, Lee JD, Leeman SE, Leprince J, Li XX, Williams TL, Lolait SJ, Lupp A, Macrae R, Maguire J, Mazella J, McArdle CA, Melmed S, Michel MC, Miller LJ, Mitolo V, Mouillac B, Müller CE, Murphy P, Nahon JL, Ngo T, Norel X, Nyimanu D, O'Carroll AM, Offermanns S, Panaro MA, Parmentier M, Pertwee RG, Pin JP, Prossnitz ER, Quinn M, Ramachandran R, Ray M, Reinscheid RK, Rondard P, Rovati GE, Ruzza C, Sanger GJ, Schöneberg T, Schulte G, Schulz S, Segaloff DL, Serhan CN, Stoddart LA, Sugimoto Y, Summers R, Tan VP, Thal D, Thomas WW, Timmermans PBMWM, Tirupula K, Tulipano G, Unal H, Unger T, Valant C, Vanderheyden P, Vaudry D, Vaudry H, Vilaradaga JP, Walker CS, Wang JM, Ward DT, Wester HJ, Willars GB, Woodruff TM, Yao C, Ye RD. The concise guide to Pharmacology 2021/22: G protein-coupled receptors. *Br J Pharmacol.* 178 Suppl 1:S27-S156, 2021.
454. Abji F, Rasti M, Gómez-Aristizábal A, Muytjens C, Saifeddine M, Mihara K, Motahhari M, Gandhi R, Viswanathan S, **Hollenberg MD**, Oikonomopoulou K, Chandran V. Corrigendum: Proteinase-mediated macrophage signaling in psoriatic arthritis. *Front Immunol.* 12:814072, 2021.
455. Venu VKP, Saifeddine M, Mihara K, Faiza M, Gorobets E, Flewelling AJ, Derksen DJ, Hirota SA, Marei I, Al-Majid D, Motahary M, Ding H, Triggle CR, **Hollenberg MD**. Metformin prevents hyperglycemia-associated, oxidative stress-induced vascular endothelial dysfunction: Essential role for the orphan nuclear receptor human nuclear receptor 4A1 (Nur77). *Mol Pharmacol.* 100(5):428-455, 2021.
456. Kim SJ, Carestia A, McDonald B, Zucoloto AZ, Grosjean H, Davis RP, Turk M, Naumenko V, Antoniak S, Mackman N, Abdul-Cader MS, Abdul-Careem MF, Hollenberg MD, Jenne CN. Platelet-Mediated NET Release Amplifies Coagulopathy and Drives Lung Pathology During Severe Influenza Infection. *Front Immunol.* 12:772859, 2021.
457. Williams D, Mahmoud M, Liu R, Andueza A, Kumar S, Kang DW, Zhang J, Tamargo I, Villa-Roel N, Baek KI, Lee H, An Y, Zhang L, Tate EW, Bagchi P, Pohl J, Mosnier LO, Diamandis EP, Mihara K, Hollenberg MD, Dai Z, Jo H. Stable flow-induced expression of KLK10 inhibits endothelial inflammation and atherosclerosis. *Elife.* 11:e72579, 2022
458. Fekete E, Allain T, Amat CB, Mihara K, Saifeddine M, Hollenberg MD, Chadee K, Buret AG. *Giardia duodenalis* cysteine proteases cleave proteinase-activated receptor-2 to regulate intestinal goblet cell mucin gene expression. *Int J Parasitol.* 52(5):285-292, 2022.
459. Hollenberg MD, Epstein M. The innate immune response, microenvironment proteinases, and the COVID-19 pandemic: pathophysiologic mechanisms and emerging therapeutic targets. *Kidney Int Suppl (2011).* 12(1):48-62, 2022

1. **Hollenberg MD** and Hope DB. Crystallization of a purified protein fraction from posterior lobes of pituitary glands in the presence of vasopressin and oxytocin. *J. Physiol. (London)* 185, 51-52P, 1966.
2. Rauch R, **Hollenberg MD** and Hope DB. Isolation of a third neurophysin from bovine pituitary and posterior lobes. *Biochem. J.* 110, 38P, 1968.
3. **Hollenberg MD** and Cuatrecasas P. Insulin and epidermal growth factor: Human fibroblast receptors related to DNA synthesis and amino acid transport. *J. Clin. Invest.* 53, 33A, 1974.
4. **Hollenberg MD**. Epidermal growth factor: Biological activity and receptor binding of 125I-labeled peptide in cultured human fibroblasts and rabbit lens cells. *Fed. Proc.* 34, 2897, 1975.
5. **Hollenberg MD** and Sharp K. Receptors for epidermal growth factor: Relationship to growth in normal and progeroid human fibroblasts. *Clin. Pharmacol. Ther.* 17, 236, 1975.
6. **Hollenberg MD**. Steroid-stimulated amino acid uptake in cultured human fibroblasts reflects biological potency. *Clin. Res.* 23, 570A, 1975.
7. **Hollenberg MD**. Action of insulin analogues on cultured human fibroblasts reflects biological potency. *Clin. Res.* 23, 591A, 1975.
8. Kaufman SH and **Hollenberg MD**. Prenatal evaluation of hormone receptor interactions. *Clin. Res.* 24, 255A, 1976.
9. **Hollenberg MD** and Gregory H. Urogastrone and epidermal growth factor share a common receptor in cultured human fibroblasts. *Clin. Res.* 24, 286A, 1976.
10. **Hollenberg MD**, Schneider EL, and Helderman JH. Insulin and epidermal growth factor: Receptors in cultured skin fibroblasts from young and old adult males. *Clin. Res.* 24, 423A, 1976.
11. Barrack ER, **Hollenberg MD**, and Coffey DS. Acidic polymers: Stimulation of DNA synthesis in human fibroblasts and enhancement of action by glucocorticoids. *Fed. Proc.* 35, 1403, 1976.
12. Strom T, Helderman JH, **Hollenberg MD**, and Carpenter CB. Emergence of insulin receptors upon alloimmune T cells. *Clin. Res.* 24, 337A, 1976.
13. HoSam A, Horowitz SG, **Hollenberg MD**, and Makman MH. Influence of epidermal growth factor and cell density on cyclic nucleotide levels in rabbit lens epithelial cell cultures. *Fed. Proc.* 35, 1731, 1976.
14. Hock RA and **Hollenberg MD**. Receptors for epidermal growth factor-urogastrone in human amnion. *Clin. Res.* 24, 638A, 1976.
15. Beckman B and **Hollenberg MD**. Characteristics of adrenergic receptors on rat reticulocytes and mature erythrocytes. *Clin. Res.* 24, 623A, 1976.
16. **Hollenberg MD** and Gregory H. Urogastrone-EGF derivatives differential effects on acid secretion and thymidine incorporation. *Clin. Res.* 25, 312A, 1977.

17. Hock RA and **Hollenberg MD**. Characteristics of the epidermal growth factor-urogastrone receptor of human placenta. *Clin. Res.* 25, 665A, 1977.
18. Maturo JM III and **Hollenberg MD**. Purification of insulin receptor from SV40-transformed mouse fibroblasts. *Clin. Res.* 25, 395A, 1977.
19. **Hollenberg MD**, Fernie BF, and Pitha PM. Gangliosides and the action of interferon and cholera toxin. *Trans. Amer. Soc. Neurochem.* 8 (2), 199, 1977.
20. Spivak JL, Small D, and **Hollenberg MD**. Purification of erythropoietin by affinity chromatography. *Blood* 48, 990, 1976.
21. Beckman B and **Hollenberg MD**. Guanine nucleotide effects on catecholamine-sensitive adenylate cyclase in rat reticulocytes and mature erythrocytes. *Adv. Cyclic Nucl. Res.* 9, 739, 1978.
22. Nexø E, Nelson J, Lamberg SI, and **Hollenberg MD**. Radioreceptor assay of urinary epidermal growth factor-urogastrone in psoriasis. *Clin. Res.* 25, 657A, 1977.
23. Maturo JM III and **Hollenberg MD**. Isolation of human insulin receptor from placenta membranes. *Fed. Proc.* 37, 432, 1978.
24. Maturo JM III and **Hollenberg MD**. Insulin receptor: Interaction with non-receptor glycoprotein from liver and fat cell membranes. *Clin. Res.* 26, 422A, 1978.
25. Inon MTT and **Hollenberg MD**. Binding of insulin and epidermal growth factor-urogastrone to normal and tumorigenic rat prostatic tissue. *Fed. Proc.* 37, 897, 1978.
26. **Hollenberg MD** and Gregory H. Urogastrone-EGF: Receptor binding and activities of derivatives. Abstracts, p. 27, Second Pan American Association of Biochemical Societies Congress, Caracas, Venezuela, September 3-9, 1978.
27. Nexø E and **Hollenberg MD**. Transcobalamin II: Characteristics of the particulate and soluble membrane acceptors from human placenta and rabbit liver. *Clin. Res.* 26, 620A, 1978.
24. Nexø E, Hock RA, and **Hollenberg, M.D.** Epidermal growth factor-urogastrone: Characteristics of the solubilized receptor from human placenta. *Clin. Res.* 26, 631A, 1978.
25. Hock RA and **Hollenberg, M.D.** Epidermal growth factor-urogastrone: Affinity labeling and purification of the receptor. *Clin. Res.* 26, 630A, 1978.
26. Pratt RM, Figueroa AA, Nexø E, and **Hollenberg MD**. Involvement of epidermal growth factor during secondary palatal development. *J. Cell Biol.* 79, 24a, 1978.
27. Nexø E, Hock RA, and **Hollenberg MD**. Lectin-agarose immobilization: A new method for the detection of solubilized membrane receptors. *Clin. Res.* 27, 374A, 1979.
28. Hock RA, Nexø E, and **Hollenberg MD**. Epidermal growth factor-urogastrone: Isolation of the native and photoaffinity labeled receptor from human placenta. *Clin. Res.* 27, 368A, 1979.

29. Berhanu P and **Hollenberg MD**. Selective reduction of receptors for epidermal growth factor-urogastrone (EGF-URO) in DNA tumor virus (SV40) transformed fibroblasts. *Clin. Res.* 27, 381A, 1979.
30. **Hollenberg MD**, Nexø E, Hock RA, and Berhanu P. Phorbol tumor promoter causes a selective reduction of epidermal growth factor- urogastrone receptors via a separate ligand recognition site. *Clin. Res.* 27, 387A, 1979.
31. Lamberg SI, Nexø E, and **Hollenberg MD**. Epidermal growth factor in psoriasis and burns. *Clin. Res.* 27, 530A, 1979.
32. Lederis K, Geonzon RM, Goren HJ, **Hollenberg MD**, and Morgan DD. Oxytocin binding and responsiveness in the uterus of the Brattleboro rat. *J. Physiol.* 303, 52-53P, 1980.
33. Bhaumick B, **Hollenberg MD**, and Bala RM. Somatomedin receptor: Photoaffinity labeling, partial purification and comparison with insulin receptor. *Clin. Res.* 28, 516A, 1980.
34. **Hollenberg MD**. Epidermal growth factor-stimulated phosphorylation in human carcinoma cells: Major phosphorylated proteins do not correspond to the receptor. *Clin. Res.* 28, 395A, 1980.
35. **Hollenberg MD**, Lin SL, and Ts'o PO. Interferon action: Inhibition of epidermal growth factor-stimulated DNA synthesis is independent of ligand binding and receptor regulation. *Fed. Proc.* 39, 948, 1980.
36. Turley E and **Hollenberg MD**. Epidermal growth factor stimulates glycosaminoglycan synthesis during Palatogenesis. *Pharmacologist* 22, 249, 1980.
37. Atkison PR, Bala RM, and **Hollenberg MD**. Human basic somatomedin-like activity: Production by cultured tumor-derived and SV-40-transformed human cell lines and stimulation by epidermal growth factor. *Clin. Res.* 29, 547A, 1981.
38. Hayden LJ, Severson D, and **Hollenberg MD**. Characterization of epidermal growth factor binding to hepatocytes from normal and triiodothyronine treated rat. *Fed. Proc.* 40 (6), 1877, 1981.
39. English JC, Bradford LD, Wyse JPH, and **Hollenberg MD**. Removal of rat brain tissue for HPLC analysis: Catecholamines. *Proc. Can. Fed. Biol. Soc.* 24, 279, 1981.
40. Bhaumick B, Armstrong G, **Hollenberg MD**, and Bala RM. Human placenta receptor for basic somatomedin: Characterization, affinity labeling and isolation by immunoaffinity chromatography. *Proc. Can. Fed. Biol. Soc.* 24, 248, 1981.
41. Goren HJ, Hanif K, **Hollenberg MD**, and Lederis K. Oxytocin action in isolated adipocytes from Brattleboro rats. *In Proc. Intl. Symp. on the Brattleboro Rat*, 1981.
42. Hanif K, Goren HJ, **Hollenberg MD**, and Lederis K. Oxytocin modulation of insulin action in isolated adipocytes. *The Pharmacologist* 23, 118, 1981.
43. Goren HJ, Hanif K, Lederis K, and **Hollenberg MD**. Defects in insulin-like activity of oxytocin on epididymal adipocytes of diabetes insipidus (Brattleboro) rats. *Fed. Proc.* 40 (3), 742, 1981.

44. Armstrong GD, **Hollenberg MD**, Bhaumick B, and Bala RM. Characterization of human placental receptor for insulin and basic somatomedin. *J. Cell Biochem., Suppl.* 6, 167, 1982.
45. Valentine KA and **Hollenberg MD**. The EGF receptor of the BeWo choriocarcinoma cell line. *J. Cell Biochem., Suppl.* 6, 176, 1982.
46. Armstrong GD, Bhaumick B, Bala RM, and **Hollenberg MD**. Receptors for insulin and basic somatomedin: Immunologic crossreactivity. *Clin. Res.* 30, 522A, 1982.
47. Lin S, Ts'o PO, and **Hollenberg MD**. Epidermal growth factor-urogastrone action: Induction of 2'5'-oligoadenylate synthetase and antiinterferon-mediated enhancement of the mitogenic effect. *Fed. Proc.* 41, 622, 1982.
48. Hanif K, Goren HJ, **Hollenberg MD**, and Lederis K. Insulin resistance produced by a naturally occurring hormone, oxytocin. *Fed. Proc.* 41, 1088, 1982.
49. Armstrong GD and **Hollenberg MD**. Crosslink-labeling and proteolytic mapping of the human placental receptor for epidermal growth factor-urogastrone. *Can. Fed. Biol. Soc.* 25, 15, 1982.
50. Atkison PR, Hayden LJ, Bala RM, and **Hollenberg MD**. Production of somatomedin-like activity by primary cultures of rat hepatocytes and organ cultures of embryo palates. *Clin. Invest. Med.* 5 (suppl.) 9B, 1982.
51. Maturo JM III, Aglio LS, Armstrong GD, and **Hollenberg MD**. Insulin receptor of human placenta: Insulin modulated interconversion between distinct molecular forms involving disulfide-sulfhydryl exchange. *Clin. Res.* 31, 504A, 1983.
52. Armstrong GD, **Hollenberg MD**, and Lee P. Characterization of reovirus type 3 receptors on mouse L cells and human A431 and BeWo choriocarcinoma cell lines. *Fed. Proc.* 142, 2141, 1983.
53. Valentine KA and **Hollenberg MD**. Differences in methotrexate- and retinoic acid-mediated up-regulation of epidermal growth factor-urogastrone receptor in a choriocarcinoma cell line. *Fed. Proc.* 42, 1905, 1983.
54. O'Connor-McCourt MD and **Hollenberg MD**. Processing of the receptor for epidermal growth factor in BeWo choriocarcinoma cells: Effect of phorbol ester. *Fed. Proc.* 42, 1903, 1983.
55. Hayden LJ and **Hollenberg MD**. Selective elevation of epidermal growth factor-urogastrone receptors in spontaneous mouse hepatomas. *Fed. Proc.* 42, 1902, 1983.
56. Armstrong GD, **Hollenberg MD** and Lee PWK. Characterization of reovirus receptors on mouse L cells and human placenta membranes. *Proc. Can. Fed. Biol. Soc.* 25, 15, 1983.
57. Lederis K, Okabe T, Goren HJ, and **Hollenberg MD**. Oxytocin regulates glucose metabolism in the rat uterus. *Annals of the Royal College of Physicians and Surgeons* 16, 324, 1983.
58. Goren HJ, Hanif K, **Hollenberg MD**, and Lederis K. How does oxytocin stimulate glucose oxidation? *Clin. and Invest. Med.* 6, Suppl. 2, 41, 1983.

59. Goren HJ, Hanif K, Dudley R, **Hollenberg MD**, and Lederis K. Adenosine increases oxytocin's metabolic activity in isolated adipocytes. *Clin. and Invest. Med.* 6, Suppl. 2, 41, 1983.
60. O'Loughlin EV, Zahavi I, Chung M, Hayden J, **Hollenberg M**, and Gall DG. Effect of epidermal growth factor on the ontogeny of stomach, pancreas, and small intestine. *Clin. and Invest. Med.* 6, Suppl. 2, 51, 1983.
61. Bhaumick B, **Hollenberg MD**, and Bala RM. Effect of binding of basic somatomedin (BSM), insulin (INS), and epidermal growth factor (EGF) on placenta in organ culture. *Clin. and Invest. Med.* 6, Suppl. 2, 39, 1983.
62. Maturo JM III, Aglio LS, and **Hollenberg MD**. Insulin-mediated interconversion of placental insulin receptor forms: Analysis of the subunit composition of the distinct hydrodynamic receptor species. *Clin. Res.* 32, 522A, 1984.
63. Aglio LS, Maturo JM III, and **Hollenberg MD**. Isolation of EGF and insulin receptor from an organomercurial agarose gel. *J. Cell. Biochem., Suppl.* 8A, 241, 1984.
64. O'Loughlin E, Zahavi I, Chung M, Hayden J, **Hollenberg M**, and Gall G. Effect of epidermal growth factor on the developing small intestine and pancreas. *Gastroenterology* 86, 1201, 1984.
65. Cabral AR, **Hollenberg MD**, and Castor CW. Connective tissue activating peptides from human urine (CTAP-U). *Clin. Res.* 32 (4), 792A, 1984.
66. Goren HJ, Hanif K, Boland D, Elliott C, Lederis K, and **Hollenberg MD**. The similarities and dissimilarities of insulin and oxytocin in regulation of glucose metabolism in isolated rat adipocytes. Presented at the Satellite Symposium, 7th International Congress of Endocrinology, June, 1984.
67. Pallen CJ, Valentine KA, Wang JH, and **Hollenberg MD**. Calcineurin can dephosphorylate the epidermal growth factor receptor of human placental membrane. *Fed. Proc.* 43, 1896, 1984.
68. Hayden LJ and **Hollenberg MD**. Anti-insulin effect of epidermal growth factor on ¹⁴C-acetate incorporation into cultured hepatocyte total lipids. *Fed. Proc.* 43, 1863, 1984.
69. O'Connor-McCourt MD and **Hollenberg MD**. Co-inhibition of the degradation of epidermal growth factor and its receptor in BeWo choriocarcinoma cells. *Fed. Proc.* 43, 1979, 1984.
70. **Hollenberg MD** and Maturo JM III. Regulation of insulin receptor binding by phosphorylation. *Proc. Can. Fed. Biol. Soc.* 27, 153, 1984.
71. Goren HJ, Boland D, **Hollenberg MD**, Lederis K, and Beck J. Adipocyte insulin and oxytocin receptors: Differential effects of receptor probes on ligand binding. *Diabetes* 33, Suppl. 1, 143A, 1984.
72. Wilson EJ and **Hollenberg MD**. Effects of insulin and oxytocin on metabolism and adipose conversion of 3T3-F442A cells. *Fed. Proc.* 44, 1039, 1985.
73. **Hollenberg MD**, Muramatsu I, Lederis K, and MacCannell KL. Vascular actions of epidermal growth factor-urogastrone: A new role for a growth factor? *Clin. Res.* 33, 519A, 1985.

74. Valentine KA, Northup JK, and **Hollenberg MD**. Epidermal growth factor-dependent phosphorylation of the beta-subunit of guanine nucleotide binding proteins in human placental membranes. *Clin. Res.* 33, 575A, 1985.
75. **Hollenberg MD**. Receptors for polypeptide growth factors: Are there common mechanisms of cell activation? *Proc. Can. Fed. Biol. Soc.* 28, 30, 1985.
76. Truchan B, Lederis K, Taylor P, Goren HJ, and **Hollenberg MD**. Stimulation of glucose oxidation in human endometrium by oxytocin (OT) and insulin. *Clin. and Invest. Med.* 8, A82, 1985.
77. Soley M and **Hollenberg MD**. Receptors for insulin and epidermal growth factor and the control of gluconeogenesis in isolated mouse hepatocytes. *Diabetes Research and Clinical Practice*, Suppl. 1, Abst. 1372, 1985. XII Congress of the Intl. Diabetes Federation, Elsevier.
78. Maturo JM III and **Hollenberg MD**. Partial purification of a regulator of insulin binding from human placental membranes. *Clin. Res.* 34, 685A, 1986.
79. Gan BS, **Hollenberg MD**, MacCannell KL, Winkler M, and Derynck R. Distinct vascular actions of epidermal growth factor- urogastrone and \square -transforming growth factor. *Clin. Res.* 34, 629A, 1986.
80. Gan,BS, Bolt GR, MacCannell KL, **Hollenberg MD**, and Tiffany M. Epidermal growth factor (EGF) produces differential dilatation of the mesenteric circulation in the anaesthetized dog. *Gastroenterology* 90, 1789, 1986.
81. Opleta K, O'Loughlin EV, Hayden J, **Hollenberg MD**, Shaffer E, and Gall DG. The effect of epidermal growth factor on liver growth and bile formation. *Gastroenterology* 90, 1754, 1986.
82. Bowman P, Sonogo R, Turley EA, and **Hollenberg MD**. Teratogenic effect of epidermal growth factor on the developing chick heart. *Proc. Can. Fed. Biol. Soc.* 29, 85, 1986.
83. Opleta K, O'Loughlin E, Hayden J, **Hollenberg M**, Shaffer E, and Gall G. Epidermal growth factor enhances postnatal development of hepatic bile formation. *Clin. Invest. Med.*, 9, A49, 1986.
84. Michiel DF and **Hollenberg MD**. Ascites fluid containing monoclonal antibody (EGFR1) to the epidermal growth factor (EGF) receptor (EGFR) stimulates tyrosine phosphorylation in solubilized placental membranes. *Fed. Proc.* 45, 3755, 1986.
85. Opleta K, O'Loughlin E, Hayden J, **Hollenberg M**, Shaffer E, and Gall G. Epidermal growth factor enhances postnatal development of hepatic bile formation. *Proceedings of the Gastrointestinal Secretion Symposium*, July 20-23, 1986.
86. Blay J, Northup JK, and **Hollenberg MD**. A 38 kDa substrate of EGF-stimulated phosphorylation in membrane vesicles shed from A431 cells. Presented at the Cellular and Molecular Responses to Growth-Regulating Factors, 26th Harden Conference of the Biochemical Society, Wye, England, 7-12 September, 1986.
87. Gall G, Opleta K, O'Loughlin E, Hayden J, **Hollenberg MD**, and Shaffer E. Epidermal growth factor enhances postnatal development of hepatic bile formation. Presented at the 9th Intl. Bile Acid Meeting, Basel, Switzerland, October, 1986.

88. O'Connor-McCourt MD, Moore G, and **Hollenberg MD**. Characterization of antibodies against a synthetic peptide antigen homologous to the P2 phosphorylation site of the EGF (TGF- α) receptor. Proceedings of the 11th EMBO Symposium, p. 128, 1985.
89. O'Connor-McCourt MD, Valentine-Braun KA, Michiel DF, Northup JK, and **Hollenberg MD**. Isolation of three forms of the major human placental substrate for the epidermal growth factor kinase: Sequence homology with lipocortin and distinction from calpactin. *J. Cell Biochem. Suppl.* 11A, 53, 1987.
90. Blay J, O'Connor-McCourt MD, Valentine-Braun KA, Northup JK, and **Hollenberg MD**. Association of the 38 kDa substrate of epidermal growth factor-stimulated phosphorylation (lipocortin) with A-431 cell and placental membranes. *Fed. Proc.*, 46, 705, 1987.
91. **Hollenberg MD**, Northup JK, Valentine-Braun KA, Johnson L, and Severson DL. Human placental "lipocortin I": Dissociation of phospholipase-inhibitory from antiinflammatory activity. *Clin. Res.* 35, 639A, 1987.
92. **Hollenberg MD**. Transmembrane signalling mechanisms. *Proc. Can. Fed. Biol. Soc.* 30, 60, 1987.
93. **Hollenberg MD**. Insulin and other growth factors: Rationale for common and distinct mechanisms of cell activation. *Proc. Can. Fed. Biol. Soc.* 30, 66, 1987.
94. Blay J and **Hollenberg MD**. Functional receptors for epidermal growth factor in A10 rat aortic smooth muscle cells in culture. Program of the Triennial Symposium on Biology of Growth Factors, June 17-19, 1987, University of Toronto, Ontario, Canada.
95. Yang SG, Itoh H, Muramatsu I, Lederis, K, and **Hollenberg MD**. Epidermal growth factor-urogastrone and transforming growth factor- β : Structural requirements for receptor-mediated desensitization. *FASEB J.* 2, A625, 1988.
96. Michiel DF, Mooibroek MJ, Wang JH, and **Hollenberg MD**. Selective phosphorylation of the calpactins by a spleen protein tyrosine kinase. *FASEB J.* 2, A1758, 1988.
97. **Hollenberg MD**, Muramatsu I, Itoh H, Patel P, Yang SG, Winkler M, Derynck R, and Lederis K. Structure-activity relationships for the contractile action of transforming growth factor- β (TGF- β), epidermal growth factor (EGF) and EGF derivatives: Evidence for a distinct EGF receptor in smooth muscle. *Clin. Res.* 36, 558A, 1988.
98. Patel P and **Hollenberg MD**. Contraction of guinea pig trachea by epidermal growth factor. *Proc. Can. Fed. Biol. Soc.* 31, 52, 1988.
99. Blay J and **Hollenberg MD**. Heterologous regulation of epidermal growth factor receptors in cultured aortic smooth muscle cells by vasopressin and serotonin. Presented at the Fourth International Congress of Cell Biology, Montreal, Quebec, August 14-19, 1988.
100. Gan BS, **Hollenberg MD**, and Lederis K. Indomethacin blocks EGF-URO mediated contraction in porcine coronary arterial strips. *Proc. West. Pharm. Soc.*, January, 1989.
101. Gan BS and **Hollenberg MD**. Distinct coronary artery receptor systems for epidermal growth factor-urogastrone (EGF). *Clin. Res.* 37, 517A, 1989.

102. Yang SG, Winkler ME, and **Hollenberg MD**. New assays for the evaluation of growth factor analogues: A comparative study of epidermal growth factor and transforming growth factor-alpha. Proceedings of the IXth Intl. Washington Spring Symposium, Biology of Cellular Transforming Signals '89, 1989.
103. Yang SG and **Hollenberg MD**. Specific receptors for epidermal growth factor in smooth muscle-like cell cultures derived from guinea pig stomach. Proc. Can. Fed. Biol. Soc. 32, 115, 1989.
104. **Hollenberg MD**. Calpactin II/lipocortin I and the action of epidermal growth factor-urogastrone. Proc. Can. Fed. Biol. Soc. 32, 66, 1989.
105. **Hollenberg MD**. Receptor-membrane Interactions: A new focus for structure-activity relationships. Proceedings of the 7th Noordwijkerhout-Camerino Symposium on Receptor Membrane Interaction. Holland, Sept. 5-8, 1989.
106. Gan, BS and **Hollenberg MD**. Distinct coronary artery receptor systems for epidermal growth factor-urogastrone (EGF). Clin. Res. 37, 517A, 1989.
107. Yang SG, Saifeddine M, Severson DL, and **Hollenberg MD**. The role of diacylglycerol lipase in the contractile action of EGF-urogastrone (EGF) in gastric longitudinal smooth muscle. Clin. Res. 38, 424A, 1990.
108. Zhao D, **Hollenberg MD**, and Severson DL. Calmodulin inhibits the protein kinase C-catalyzed phosphorylation of an endogenous protein in A10 smooth muscle cells. FASEB J. 5, A447, 1991.
109. Mokashi S, Severson DL, and **Hollenberg MD**. Synergistic activation of phospholipase A₂ by EGF-urogastrone (EGF) and vasopressin (AVP): lack of effect of tyrosine kinase inhibitors. FASEB J. 5, A1623, 1991.
110. Yang SG, Saifeddine M, Mokashi S, and **Hollenberg MD**. Tyrosine kinase inhibitors and the action of EGF-urogastrone in smooth muscle systems. Presented at Alberta Heritage Foundation for Medical Research, Heritage Days 1990, Edmonton, Alberta.
111. Yang SG, Saifeddine M, Mokashi S, Chuang M, Severson DL and **Hollenberg MD**. Distinct signalling pathways for EGF-urogastrone in smooth muscle response systems. J. Cell. Biochem. Suppl 15B, in press, 1991.
112. Yang SG, Saifeddine M. and **Hollenberg MD**. Tyrosine kinase and the action of EGF-urogastrone and angiotensin in gastric smooth muscle systems. Clin. Research, 39, 155A, 1991.
113. Laniyonu A, Saifeddine M, Yang SG, and **Hollenberg MD**. Tyrosine kinase inhibitors and the contractile action of G-protein linked growth promoting agonists. FASEB J., 6, A1862, 1992.
114. Yang SG, Saifeddine M, and **Hollenberg MD**. Distinct signal pathways for the contractile actions of angiotensin II in isolated guinea pig gastric smooth muscle. FASEB, J., 6, A1287, 1992.

115. **Hollenberg MD**, Muramatsu I, Laniyonu AA, Saifeddine M, and Yang SG. Tyrosine kinase inhibitors and distinct signalling pathways for thrombin and its receptor peptide in vascular and non-vascular smooth muscle. *Clin. Res.* 40, 345A, 1992.
116. Muramatsu I and **Hollenberg MD**. Potentiation of sensory tachykininergic transmission by epidermal growth factor-urogastrone. International Symp. on Substrate P and related peptides, Shizuoka, Japan, November 3-6, 1992.
117. Kargacin ME, Mokashi S, Kargacin GJ, **Hollenberg MD**, and Triggle CR. Calcium oscillations in coronary artery smooth muscle cells in culture. Biophysical Society, Abstracts, February 1993.
118. Laniyonu A, Etoh S, Saifeddine M, Wang JH, and **Hollenberg MD**. Tyrosine kinase pathways and the contractile actions of the angiotensin-II and epidermal growth factor-urogastrone in coronary arterial strips. *Brit. J. Pharmacol.* 108, 66P, 1993.
119. Eto S, Laniyonu A, Saifeddine M, Wang JH, and **Hollenberg MD**. Tyrosine kinase pathways and the contractile actions of G-protein-linked agonists in coronary arterial strips. *Clin. Res.* 41, 144A, 1993.
120. Laniyonu A, Saifeddine M, Moore GJ and **Hollenberg MD**. Actions of thrombin receptor peptide analogues in vascular and gastric tissue: Evidence for receptor subtypes. *Clin. Res.* 41, 148A, 1993.
121. Mokashi S, Kargacin M, Triggle CR, Severson DL, and **Hollenberg MD**. Tyrosine kinase inhibitors and the actions of EGF, vasopressin and angiotensin-II in cultured porcine coronary artery myocytes. *The Pharmacologist*, 35, 156, 1993.
122. Panagiotopoulos D, Matsoukas JM, Keramida M, Gatos D, Moore GJ, Laniyonu AA, Saifeddine M, and **Hollenberg MD**. Novel synthesis and biological activities of cyclic thrombin receptor peptides. Presented at Biomed Workshop, 1993, 14-15 October, 1993, University of Patras, Patras, Greece.
123. Tay-Uyboco J, Saifeddine M, and **Hollenberg MD**. Contractile effects of growth promoting G-protein-linked agonists on isolated human placental arterial strips. Abstracts, Symp. on Growth Factor Interactions During Development. The Lawson Research Institute, London, Ontario, October 15-16, 1993.
124. Ahmad S, Saifeddine M, Laniyonu A, Oda Y, and **Hollenberg MD**. Tyrosine kinases (PYKs), tyrosine phosphatases (PYPs) and the actions of G-protein-coupled contractile agonists in vascular and gastric smooth muscle. *J. Cell. Biochem. Suppl.* 18B, 272, 1994.
125. Tay-Uyboco J, Poon MC, and **Hollenberg MD**. Contractile actions of thrombin receptor-derived peptides in human umbilical and placental artery: Evidence for receptor subtypes. *Clin. Res.* 42, 334A, 1994.
126. Saifeddine M, Ahmad S, Laniyonu A, and **Hollenberg MD**. Contractile actions of pervanadate in vascular and gastric smooth muscle: Evidence for bi-directional control of tension by tyrosine kinase and tyrosine phosphatase. *Clin. Res.* 42, 255A, 1994.

127. Habibi H, Pati D, Balshaw K, Grinwich DL, and **Hollenberg MD**. Epidermal growth factor receptor binding and biological activity in the ovary of goldfish. *Endocrine Society Abstracts*, 76th Annual Meeting June 15-18, p. 251, 1994.
128. Ahmad S and **Hollenberg MD**. Identification of protein tyrosine kinases (PTKs) and protein tyrosine phosphatases (PTPases) in smooth muscle. *Can. J. Physiol. Pharmacol.* 72, Suppl. 4, 43, 1994.
129. **Hollenberg MD**. Tyrosine kinase pathways and the actions of agonists in gastric and vascular smooth muscle systems. *Can. J. Physiol. Pharmacol.* 72, Suppl. 1, p. 39, 1994.
130. Shivji F, Zwiers Z, **Hollenberg MD**, and Hanley D. Phosphorylation of bovine parathyroid hormone by protein kinase C. *The Endocrine Society*, 1995.
131. **Hollenberg MD**, Mokashi S, Moore GJ, Leblond L, and DiMaio J. Synergistic actions of thrombin-derived peptide (TDP) and thrombin receptor-derived peptide (TRP) in stimulating CCL-39 fibroblast mitogenesis. *J. Invest. Med.* 43, 208A, 1995.
132. Saifeddine M, Laniyonu A, DiMaio J, and **Hollenberg MD**. Actions of a putative thrombin receptor antagonist (SFLVR-NH₂) in gastric, vas deferens and vascular contractile assays. *J. Invest. Med.* 43, 208A, 1995.
133. Zheng XL, Ahmad S, and **Hollenberg MD**. Differential induction of nitric oxide synthase (iNOS) in rat gastric and vascular smooth muscle: effects of tyrosine kinase inhibitors. *Faseb J.* 9, A28, 1995.
134. Tarazi M, Leblond L, Martin N, Siddiqui A, Saifeddine M, Laniyonu A, Winocour P, DiMaio J, and **Hollenberg MD**. Role of the amino-terminal carboxamido bond in the action of thrombin receptor activating peptides. Presentation at 14th American Peptide Symposium Columbus, OH, 19-23 June, 1995.
135. Zheng XL and **Hollenberg MD**. Tyrosine kinase inhibitor-sensitive contractile action of ethanol in gastric smooth muscle: comparison with the effects of epidermal growth factor. *J. Invest. Med.*, 44, 239A, 1996.
136. **Hollenberg MD**, Saifeddine M, Al-Ani B, Leblond L, and DiMaio J. Proteinase-activated receptors in vascular and gastric smooth muscle: comparable effects of activating thrombin receptor and proteinase-activated receptor-2. *J. Invest. Med.*, 44 245A, 1996.
137. Leblond L, Locas C, DiMaio J, and **Hollenberg MD**. A peptide derived from the thrombin B-insertion loop antagonists □-thrombin activation of rat and human platelets. *Gordon Conference*, June 1996.
138. Zwiers H, **Hollenberg MD**, McLean KN, and Philibert KP. Endogenous ADP-ribosylation of phosphoprotein B-50/GAP-43 and other neuronal substrates. Meeting on the Biological Significance of Mono-ADP-Ribosylation in animal tissues. Hamburg-Blankenese, May 1996.
139. Komas N, Potvin L, Bourget L, O'Connor M, **Hollenberg M**, and Schwartz JL. Proteinase-activated receptors (PARs) modulate Ca²⁺ signalling and signal transduction in human intestinal smooth muscle (HISM) cells. *Am. Soc. Cell Biol. Meeting*, Washington, DC December, 1997: *Molec Biol. Cell* 8, Suppl, p 27A, #155.

140. Lavalley M, Komasa N, Collins C, Bourget L, O'Connor M, and **Hollenberg M**. Functional analysis of the proteinase-activated receptors (PARs) expressed by baculovirus vector in Sf9 insect cells. Am. Soc. Cell Biol. Meeting, Washington, DC December, 1997: Molec Biol. Cell 8, Suppl, p 27A, 155.
141. Vergnolle N, McKnight W, Befus AD, **Hollenberg MD**, and Wallace JL. Induction of an inflammatory response by activation of protease-activated receptor 2 (PAR-2). XIIIth Intl Congress of Pharmacol. Meeting, München, Germany, July 26-31, 1998.
142. Gui Y, Zheng XL, and **Hollenberg MD**. Involvement of interleukin-1(IL-1) in the spontaneous induction of nitric oxide synthase (iNOS) in rat aorta tissue in vitro. 41st Annual Meeting Canadian Federation of Biological Societies, June 17-20, 1998.
143. Al-Ani B, Saifeddine M, Kawabata A, and **Hollenberg MD**. Proteinase-activated receptor-2 (PAR₂): Role of extracellular Loop 2 Acidic tripeptide for receptor activation. 41st Annual Meeting Canadian Federation of Biological Societies, June 17-20, 1998.
144. **Hollenberg MD**, Kawabata A, Saifeddine M, and Al-Ani B. Evaluation of proteinase-activated receptor (PAR) agonists and antagonists using a cultured HEK cell desensitisation assay: PAR₁ -targeted ligands can also activate PAR₂. 41st Annual Meeting Canadian Federation of Biological Societies, June 17-20, 1998.
145. Triggle CR, Ding H, Dong G, Waldron G, Roy S, Saifeddine M, **Hollenberg MD**, and Cole WC. Novel Endothelial-derived vasoactive factors: partial pharmacological characterization. Xth International Vascular Biology Meeting, Cairns, Queensland, Australia, August 23-27, 1998.
146. Kawabata A, Saifeddine M, Al-Ani B, Mokashi S, Kurodal R, and **Hollenberg MD**. Protease-activated receptors (PARs): A presumed PAR1 antagonist also acts as a PAR2 agonist. 71st meeting of the Japanese Pharmacological Society, Kyoto, Japan, March 23-26, 1998.
147. Vergnolle N, MacNaughton WK, Wallace JL, and **Hollenberg MD**. Stimulation of intestinal chloride secretion by a protease-activated receptor-2 activating peptide. Gastroenterol. 114, A429, 1998.
148. Vergnolle N, Renaux B, **Hollenberg MD**, Befus AD, MacNaughton WK, and Wallace JL. Role of rat mast cell protease-2 (RMCP-2) in intestinal transport and barrier function. Gastroenterol. 114, A429, 1998.
149. Poon MC, Williams Z, Wong K, **Hollenberg M**, and Sinclair GD. Von Willebrand factor (vWF) release from endothelial cells mediated by protease activated receptor (PAR): evidence for crosstalk between Ca⁺⁺ and cAMP intracellular signaling pathways. Blood 92 (10): Suppl. 1, 1998.
150. Trottier G, Saifeddine M, **Hollenberg MD**, and Loutzenhiser R. Proteinase-activated receptor-2 (PAR2) peptide evokes nitric-oxide dependent vasodilation in the renal microcirculation. Meeting Abstract, Amer. Soc. Nephrology, November, 1998.
151. Mapp CE, Miotto D, **Hollenberg MD**, Bertrand C, Bunnett NW, Fabbri LM, and Geppetti P. Immunohistochemical evidence for the presence of protease activated receptor-2 (PAR-2) in human central airways. Meeting Amer. Thoracic Soc., 1998.

152. Befus AD, Stenton GR, Johri A, Nohara O, Gilchrist M, Wallace JL, and **Hollenberg MD**. Mast cells express protease activated receptor (PAR) mRNA and degranulate in response to PAR peptide stimulation. Refereed Meeting Abstract, Amer. Acad. Assoc. Allerg. and Immunology, 1999.
153. Stenton GR, Nohara O, Johri A, Gilchrist M, Wallace JL, **Hollenberg MD**, and Befus AD. Proteinase activated receptor (PAR)-activating peptides induce mast cell degranulation. Meeting Abstract, Can. Soc. Immunol., Lake Louise, Alberta, Canada, March, 1999.
154. Mokashi S, Saifeddine M, Robbins SM, and **Hollenberg MD**. Differential regulation of intracellular calcium and tyrosine phosphorylation by growth factor and G-protein-coupled receptor agonists: Role of SRC-family tyrosine kinases. *FASEB J* 13(NO4, Pt.I) A468, 1999.
155. Mokashi S, Saifeddine M, Robbins SR, and **Hollenberg MD**. Differential regulation of intracellular calcium, map-kinase activation and tyrosine phosphorylation by growth factor and G-protein-coupled receptor agonists: role of SRC-family tyrosine kinases. Oncology Research Day, 1999, Department of Oncology, University of Calgary, Calgary, AB. 22 October 1999.
156. Vergnolle N, **Hollenberg MD**, and Wallace J. Activation of proteinase-activated receptor-2 (PAR₂) induces leukocyte adhesion. *FASEB J.* 13, (No.5, PtII) A668, 1999.
157. Fernandez-Patron CA, **Hollenberg MD**, and Davidge ST. Protein tyrosine kinase/phosphatase modulates basal and thrombin-induced activation of matrix metalloproteinase-2 in the isolated rat aorta. *FASEB J.* 13 (No.4, PT I) A205, 1999.
158. Kawabata A, Kuroda R, and **Hollenberg MD**. Physiology of protease-activated receptors (PARs): involvement of PARs in digestive functions. *Folia Pharmacol. Jpn.* (Nippon Yakurigaku Zasshi) 114, Suppl. 1, 173P-179P, 1999.
159. Stenton GR, Nohara O, Dery RE, Gilchrist M, Wallace JL, **Hollenberg MD**, Moqbel R, and Befus AD. Do mast cells express a novel proteinase activated receptor? Annual Meeting, American Association of Allergy, Asthma and Immunology, San Diego, CA, 2000.
160. Zheng XL, Matsubara S, **Hollenberg MD**, and Wong NCW. Differential signaling pathways regulate apolipoprotein A1 promoter in response to EGF and insulin. Presented at First Conference on Arteriosclerosis, Thrombosis, and vascular biology May 20-22, 2000.
161. McGuire JJ, Triggle CR, and **Hollenberg MD**. Effects of the PAR2 agonist SLIGRL-NH2 on femoral arteries from eNOS knockout mice. *FASEB J* 14 (8) A1403, 2000.
162. Nishikawa H, Kawao N, Sakaguchi Y, Kawai K, Nishimura S, Tanaka S, Araki H, Nishida S, Irimajiri K, Al-Ani B, **Hollenberg MD**, Kuoda R, and Kawabata A. Protease-activated receptor-2 (PAR-2) in gastric mucosa: distribution and modulation of acid output. The 74th annual meeting of The Japanese Pharmacological Society. March 23-23, 2000.
163. Alshurafa H, Stenton G, **Hollenberg MD**, Wallace J, Moqbel R and Befus AD. The protease activated receptor 2-agonist tc-ligrlo induces the release of proteases by mast cells. *FASEB J.* 15, A1020/778.15, 2001.

164. Seymour ML, Zaidi N, **Hollenberg MD**, and MacNaughton WK. The upregulation of colonic fibroblast cyclo-oxygenase (COX)-2 expression and PGE₂ production by thrombin. *FASEB J.* 15, A830/660.7, 2001.
165. Compton SJ, Renaux B, and **Hollenberg MD**. Human lung tryptase and protease activated receptor-2. *FASEB J.* 15, A582/467.14, 2001.
166. McGuire JJ, Triggle CR, and **Hollenberg MD**. Contractile activity of PAR2 receptor-activating peptides in murine femoral artery via a non-PAR2 receptor. Banff Inflammation Workshop 2001. February 1 - 4, 2001.
167. McGuire JJ, Triggle CR, and **Hollenberg MD**. Multiple Mechanisms of mouse vascular smooth muscle relaxation by the activation of protease activated receptor 2. *Pharmacol. Soc. Canada, Pharmacology Vancouver*, March 25 - 29, 2001.
168. Aslam A, Buckley MG, Howarth PH, Wilson SJ, **Hollenberg MD**, and Walls AF. Increased expression of protease activated receptor-2 (PAR-2) in the bronchial epithelium of asthmatics. *American Thoracic Society*. May, 2001, San Francisco.
169. Kawabata A, Kawao N, Kinoshita M, Kuroda R, Kakehi K, Sakaguchi Y, Nishida S, Irimajiri K, **Hollenberg MD**, and Nishikawa H. Dual role of protease-activated receptor-2 (PAR-2) in gastric mucosal exocrine secretion. The XXXIVth International Congress of Physiological Sciences, August 26 - 31, 2001, Christchurch, New Zealand.
170. Alshurafa H, Stenton GR, **Hollenberg MD**, Wallace JL, Moqbel R, and Befus AD. The profile of protease activated receptor-2 induced mediator release from peritoneal mast cells is different from that of antigen. *Canadian Society of Immunology*, Banff, Canada 2001.
171. Boven LA, Henry SD, Vergnolle N, **Hollenberg MD**, and Power C. Protease-activated receptor-1 is expressed by astrocytes during HIV encephalitis and may regulate cytokine expression in the brain. *Edinburgh Conference on Inflammation*. September 2001.
172. Murray AG, Chipiuk A, Nelson RC, **Hollenberg MD**, and Klarenbach SW. The cytoskelton and the Rho family of small GTPases are involved in exocytosis of endothelial Weibel-Palade bodies. *FASEB J.* 15, A335/273.15, 2001.
173. Buresi MC, Buret A, **Hollenberg MD**, and MacNaughton WK. Activation of protease-activated receptor-1 (PAR-1) causes cyclooxygenase (COX) and MAP kinase mediated chloride Secretion in an epithelial cell line. *FASEB J.* 15, A501/423.12, 2001.
174. McGuire JJ, Triggle CR, and **Hollenberg MD**. Non-protease activated receptor 2 mediated contraction of murine femoral arteries by PAR2 receptor-activating peptides. *FASEB J.* 15, A582/467.13, 2001.
175. Compton SJ, Cairns JA, Palmer KJ, Al-Ani B, and **Hollenberg MD**. A polymorphic protease activated receptor 2 (PAR2) displaying reduced sensitivity to trypsin and differential responses to PAR agonists. *FASEB J.* 15, A931/720.7, 2001.
176. **Hollenberg MD** and Wallace JL. Thrombin stimulates platelet endostatin release via protease activated receptor-4 (PAR4). *Inflammation Res.* 50, (Suppl. 3), S171, 2001.

177. Vergnolle N, Chapman K, Andrade-Gordon P, and **Hollenberg MD**. Protease-activated receptor-2 is involved in inflammatory pain. *Inflammation Res.* 50, (Suppl. 3), S171, 2001.
178. Buresi MC, Buret AG, **Hollenberg MD**, and MacNaughton WK. PAR-1 activation causes COX-2-dependent PGE₂- independent C1 secretion in intestinal epithelial cells. *Inflammation Res.* 50, (Suppl. 3), S171, 2001.
179. Seymour ML, Binion DG, **Hollenberg MD**, and MacNaughton WK. Expression of protease activated receptor-2 (PAR2) in primary human gastrointestinal myofibroblasts and stimulation of prostaglandin E2 synthesis. *Inflammation Res.* 50, (Suppl. 3), S171, 2001.
180. Compton SJ, Renaux B, Wijesuriya SJ, and **Hollenberg MD**. N-terminal glycosylation of protease-activated receptor-2 (PAR2) regulates activation by human mast cell tryptase. *Inflammation Res.* 50, (Suppl. 3), S212, 2001.
181. Gui Y, Loutzenhiser R, and **Hollenberg MD**. Bi-directional regulation of vascular function in intact rat kidney by proteinase-activated receptors 1 (PAR1) and 2 (PAR2). Presented at Experimental Biology, New Orleans, USA April 27, 2002.
182. McGuire J, Dai J, Triggle CR, and **Hollenberg MD**. Proteinase-activated receptor-2: vascular effects of a PAR2-derived activating peptide via a receptor different than PAR2. *The Pharmacologist* 44(2) Supplement 1:A216, 2002.
183. Kelso EB, Dunning L, Lockhart JC, Ferrell WR, **Hollenberg MD**, and Plevin R. Inhibition of PAR-2 Activation Attenuates Acute Joint Inflammation. BSR, Edinburgh, April 2003
184. Wang J, Zheng H, **Hollenberg MD**, Wijesuriya SJ, Ou X, and Hauer-Jensen M. Up-regulation and activation of proteinase-activated receptor 2 in early and delayed radiation injury in the rat intestine: influence of biological activators of proteinase-activated receptor 2. *Radiat Res.* Nov; 160(5):524-35, 2003.
185. Clemente MG, Vogel S, **Hollenberg MD**, and Fasano A. Proteinase-Activated Receptor 2 (PAR-2) Involvement in the Zot/zonulin-Mediated Regulation of Intestinal Tight Junctions. New Brunswick NJ, Nov 2003
186. Nykiforuk CL, Boothe J, Murray L, Keon R, **Hollenberg MD**, Goren J, and Moloney M. Expression and Recovery of Recombinant Human Insulin from Transgenic Plant Seed. Keystone Symposium on Diabetes, Banff, AB, March 2004.
187. Kawabata A, Kawao N, Nagataki M, Kubo S, Cushing K, Tsuyoshi I, Nagasawa K, Sekiguchi F, **Hollenberg M**, MacNaughton W, and Nishikawa H. Protease-activated Receptors (PARS) and Respiratory Functions: Cellular Signaling and Enhancement of Prostanoid Formation in the Epithelium. 17th Korea-Japan Joint Symposium on Pharmacology, Jeonju, Korea, Oct. 2004
- 188. ABSTRACT RECORDS DISCONTINUED AFTER 2004**

PATENT:

1. **Hollenberg, M.D.**, Moore, G.J, Matsoukas, J.M. (1996). Synthetic thrombin receptor Peptides. U.S. Patent No. 5,516,889. Issued May 14, 1996

**Trainees, Hollenberg Laboratory
1974-2020**

Doctoral/MSc

Barbara Beckman PhD (1974-1978)
Randy Hock, MD-PhD (1975-79)
Karen Valentine MD-PhD (1982-86)
Bing Siang Gan MD-PhD (1986-1989)
Song-Gui Yang MD-PhD (1988-92)
Xi-Long Zheng MD-PhD (1995-99)
Yu Gui MD-PhD (1998-2002)
Samir Roy PhD (Co-supervised with Dr. Chris Triggler) (1996-1999)
K. Oikonomopoulou PhD (2005-2009)
Mahmoud El-Daly PhD Co-supervised with Chris Triggler (Sept 2007 to Aug 2012)
Hyun-Jae Chung MSc. (Sept. 2009-Aug. 2012)
Danny Polley MSc. (January 2010-Aug. 2014)
Madeline Renouf MSc. (Sept. 2019-present)
Rahil Eftekhari PhD (Sept. 2016-Jan. 2020)

Post-Doctoral

Ebba Nexø (1976-78)
Paulos Berhanu (1979-81)
Maria Tellez Iñon
Maria Soley (1985-89)
Eva Turley (1980-81)
E. Jane Wilson (1985-87)
Sultan Ahmad (1993-95)
Jean Tay Uyboco (1993-95)
John McGuire (2000-2004) (co-supervised with Dr. Chris Triggler)
Denis Michiel (1986-1990)
Junor Barnes (1989-91)
Maureen O'Connor (1983-87)
Glen Armstrong (1980-83)
Jonathan Blay (1986-89)
Adebayo Lanionu (1992-95)
Bahjat Al-Ani (1995-2004)
Steve Compton (2000-2005)
Steve Houle (2004-07) (jointly supervised with Dr. Nathalie Vergnolle)
Illa Tea (2005-06) (jointly supervised with Dr. Nathalie Vergnolle)
Kristina Hansen (2004-09)
Rithwik Ramachandran (2006-2014)
Yang Li (jointly supervised with Dr. Chris Triggler: 2006-2011)
Koichiro Mihara (2007-present)
Vivek Pulakazhi Venu (2016-present)

Sabbatical/Visiting Scientists

Joe Maturo (1978-79; 1983-84)

Ikonobu Muramatsu (1985, 1988, 1989, 1992: two-months each year)

Fumi Kawabata A (1997-99)

Yasuo Oda (1998-99)

Of note, a number of individuals have gone on to positions of leadership in academia, industry or government. Thus, as an alternative to citing 'notable achievements' for the above listed individuals who have spent time with me, I am providing the information for those who are now in leadership positions, where I'm hoping they are carrying on the mentoring process for their colleagues as was done for me and as I have done for them. A list of those individuals, their current positions and areas of expertise, follows in the chronological order of their time spent with me:

Trainees: who have gone on to positions of leadership (dates spent in the Hollenberg lab in parentheses, listed chronologically)

Barbara Beckman (1974-1978)

Position: Professor and Interim Chair Department of Pharmacology Tulane University School of Medicine, New Orleans LA

Expertise: Signal transduction

Ebba Nexø (1977-79)

Position: Professor, Dep. Clin. Biochem., AS, Aarhus University Hospital
1984-91 Head of department, Centrallaboratory, Centralsygehuset, Hillerød, Denmark

Expertise: World expert in the area of vitamin B12 evaluation.

Glen Armstrong (1980-83)

Position: Head Department of Microbiology & Infectious Diseases, University of Calgary Faculty of Medicine

Expertise: Bacterial toxins; co-inventor of Synsorb, a drug used to treat E. coli toxin toxicity, during an outbreak of a particularly dangerous strain of E. coli bacteria

Maureen O'Connor McCourt (1983-87)

Position: Section Head, Receptors, Signaling & Proteomics group, NRC of Canada Biotechnology Research Institute, Montreal Canada

Expertise: Leader of the NRC Genomics and Health Initiative Cancer Program, growth factor receptors and signal transduction.

Ikonobu Muramatsu (1985, 1988, 1989, 1992: two-months each year)

Position: Professor and Head, Division of Pharmacology, Department of Biochemistry and Bioinformative Sciences, School of Medicine, University of Fukui, Japan

Expertise and international recognition: Molecular and in-vivo pharmacology of alpha-1 adrenoceptor subtypes and the discovery of the alpha-1-L phenotype in prostate tissue.

Eva Turley (1984-85)

Position: Scientist: London Regional Cancer Program, London Health Sciences Centre, London, Ontario

Professor: Department of Oncology, University of Western Ontario, London, Ontario

Cross Appointment: Department of Biochemistry

Expertise and international recognition: Hyaluronan receptors and cell function

Bing Siang Gan (1986-89)

Position: Co-director the Hand and Upper Limb Centre Cell and Molecular Biology Laboratory located in the Lawson Health Research Institute, University of Western Ontario, London ON Canada.

National position in Canada: Past president, Canadian Society for Clinical Investigation

Expertise: mechanisms of Dupuytren's contraction

Jonathan Blay (1986-1989)

Position: Professor in the Department of Pharmacology in the Medical School. He has cross-appointments in the Departments of Pathology (Faculty of Medicine) and Biology (Faculty of Science). Involved in programme planning for MD-PhD trainees, Dalhousie University Halifax NS Canada

National Position in Canada: Board of Directors of the Canadian Research Knowledge_Network

Expertise: signal transduction and cancer

Song Gui Yang (1987-1992)

Position: Associate Professor, Dept. of Pediatrics, Section of Pediatric Cardiology, Department of Pediatrics, Section of Cardiology, Tulane University, New Orleans LA.

Expertise: Clinical and basic pediatric cardiology

Junor Barnes (1989-91; now deceased)

Position: Became Head of the Biochemistry Section Basic Medical Sciences, The University of the West Indies, Jamaica, carrying on the tradition of mentorship portrayed by his student, Aldrin Gomes who has gone on to become a mentor himself as a biophysicist of note.

Expertise: Protein phosphorylation

Adebayo Laniyonu (1992-1995)

Position: Supervisory Pharmacologist, FDA Office of Drug Evaluation IV (in the Office of New Drugs), Washington DC USA.

Expertise: General pharmacology/toxicology and signal transduction

Sultan Ahmad (1993-1995)

Position: Director at astrazeneca pharma, Montreal, pain research.

Expertise: Orphan GPCR receptors signal transduction and pain

Vivek Krishna Pulakazhi Venu (2016-2022)

Expertise: Atherosclerosis, vascular pharmacology, endothelial function

Position: Research Associate

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