# **Committee on Energy and Commerce** U.S. House of Representatives Witness Disclosure Requirement - "Truth in Testimony"

Required by House Rule XI, Clause 2(g)(5)

1.	Your Name:				
	Dr. John W. Holaday, Ph.D.				
2.	Your Title:				
	CEO & Chairman				
3.	The Entity(ies) You are Representing:				
	DisposeRx, Inc.	n			
4.	Are you testifying on behalf of the Federal, or a State or local	Yes	No		
	government entity?		Х		
5.	Please list any Federal grants or contracts, or contracts or payments or				
	a foreign government, that you or the entity(ies) you represent have received on or				
	after January 1, 2015. Only grants, contracts, or payments related to the subject matter of the hearing must be listed.				
6	Diago attach your aurriculum vites to your completed disclosure form				
U.	6. Please attach your curriculum vitae to your completed disclosure form.				

Signature: Jow Hor

Date: March 17<sup>th</sup> 2018



March 19, 2018 Dr. John W. Holaday, Ph.D.

John W. Holaday, Ph.D. (Chairman & Co-founder) is a seasoned entrepreneur and scientist with decades of experience in neuroscience, oncology and immunology. John was the former CEO of QRxPharma Limited (QRX-ASX); co-founder of Medicis (MRX-NYSE); EntreMed (ENMD-NASDAQ) CEO. He is Co-founder and Executive Chairman of ExoCyte Therapeutics, and Director of Pixspan, CytImmune Sciences and Accelovance. Dr. Holaday obtained a BS and MS from the University of Alabama, and PhD with honors from the University of California, San Francisco School of Medicine. He is a Fellow in the American College of NeuropsychoPharmacology (FACNP) and a Fellow in Critical Care Medicine (FCCM). He served at the Walter Reed Army Institute of Research (WRAIR) as Captain, US Army, and as a Presidential Appointee, Chair Neuropharmacology Branch at WRAIR. Dr. Holaday was Professor of Anesthesiology and Critical Care Medicine at the Johns Hopkins University School of Medicine, and remains as Adj. Professor of Psychiatry, Uniformed Services Univ. of Health Sciences. He raised over \$500M for his companies with exits or market capitalizations of over \$3 billion. Dr. Holaday was inducted into the E&Y Entrepreneur of the Year 2006 Hall of Fame and served on the advisory board for E&Y for several years. He has received numerous honors and awards, including the Algernon Sydney Sullivan Award as outstanding Alumnus, University of Alabama. John holds over 90 patents and has published over 230 scientific articles and five books.

# JOHN W. HOLADAY, PhD, FACNP, FCCM

6502 Hillmead Rd. Bethesda, MD 20817 johnholaday@mac.com

#### **EDUCATION**

University of California San Francisco, CA

US Army Medical Field Service School Ft. Sam Houston, TX

University of Alabama Tuscaloosa, AL

University of Alabama Tuscaloosa, AL

#### Ph.D. (1977) honors Pharmacology

Honor Graduate (1968)

M.S. (1969) Molecular Biology

B.S. (1966) Biology & Chemistry

#### **EXECUTIVE EXPERIENCE**

<b>DisposeRx</b> Co-founder, Chairman and CEO	July, 2015 - present
<b>ExoCyte Therapeutics</b> Co-founder & Executive Chairman	April 2014 - present
<b>QRxPharma</b> Managing Director, President and CEO Founding Director	April 2007 to August 2014
MaxCyte, Inc. Co-founder and Chairman	Mar 1998 to January 2003
<b>EntreMed, Inc.</b> Co-founder Chairman & Chief Executive Officer	Nov 1992 to January 2003
Medicis Pharmaceutical Corporation Senior Vice President for Research & Development, Scientific Director & Co-founder	May 1989-Aug 1992

# **BOARD CHAIR OR MEMBERSHIP**

Pixspan, Inc Director	November 2010 to Present			
<b>CytImmune Sciences, Inc.</b> Director	May 1997 to Present			
Accelovance, Inc. Director	January 2005 to Present			
<b>Neuren Pharmaceuticals Limited</b> Director	November 2009 to 2013			
HarVest Bank of Maryland Founding Chairman, member of Board	Dec 2003 to Dec 2012			
VOLUNTARY ORGANIZATIONS				
Maryland Higher Education Commission Commissioner, Appointed by Gov. Hogan to oversee all academic institutions in the state	July 2015 - Present			
Carnegie Institute of Science Board Math for America, DC	April 2009 - Present			
John F. Kennedy Center for the Performing Arts Circles Board	February, 2015 - Present			
<b>Chairman, BioScience Alliance</b> Technology Council of Maryland	April 2001 – April 2004			
University of Alabama, College of Arts & Sciences Leadership Board	January 1998 - Present			
University of Maryland Biotechnology Institute Board of Visitors	January 2001 – January 2009			

# ACADEMIC/GOVERNMENT APPOINTMENTS

Uniformed Services University of the Health Sciences

Adjunct Professor Psychiatry and Pharmacology	June 1979 - Present
<b>The Johns Hopkins University School of Medicine</b> Adjunct Associate Professor of Anesthesiology and Critical Care Medicine	July 1990- July 1996
University of Connecticut Health Center School of Medicine Department of Surgery Clinical Assistant Professor of Surgery	December, 1991 - 1996
University of California San Francisco School of Medicine Graduate Assistant Department of Pharmacology	Sept 1975-Jan 1976
Walter Reed Army Institute of Research Founder & Chief, Neuropharmacology Branch (GM-16) Research Pharmacologist (GS-14) Department of Medical Neurosciences Division of Neuropsychiatry	Sept 1981-Apr 1989 Sept 1976-Sept 1981
Walter Reed Army Institute of Research Research Chemist (GM-12) Chief Biochemist, Captain (MSC) Departments of Psychiatry Microwave Research	May 1972-Sept 1974 June 1969-Apr 1972
University of Alabama Graduate Assistant in Human Physiology Graduate Laboratory Instructor in Zoology Department of Biology	June 1967-Aug 1967 Academic Years - 1966/67, 1967/68

# SELECTED HONORS AND ORGANIZATIONS

- Fellow, American College of Neuropsychopharmacology (1988)
- Fellow, American College of Critical Care Medicine (1992
- Member, Executive Committee, BIO 2003
- National Institute on Drug Abuse Public Advisory Committee (1988) (Member)
- U.S. Army Research and Development Achievement Award with Bronze Medallion (1984)
- International Advisory Board, Fondazione Giovanni Lorenzini Foundation, Pharmacological Basis of Anesthesiology (1982)
- U.S. Army Science Conference Award with Bronze Medallion for Outstanding Scientific Achievement (1980)
- U.S. Army Research and Development Achievement Award with Bronze Medallion (1980)
- University of Missouri Distinguished Visiting Scholar School of Medicine, University of Missouri, Columbia, MO (Summer 1979)
- Dean N. Calvert Award for Scholarship and Research in Pharmacology (1977)
- Outstanding Graduate Research Award, University of California, San Francisco (1976)
- Department of Defense Training Fellowship (1974)

Algernon Sydney Sullivan Award, Outstanding Alumnus, The University of Alabama ٠ (2008)

## GRANT AND CONTRACT REVIEWS

- Department of the Army •
- •
- Medical Research Council (United Kingdom) National Institute for Drug Abuse ad hoc peer review (1980-1996)
- National Institute for Neurological Disorders and Stroke
- National Osteopathic Foundation
- National Science Foundation
- Veteran's Administration

#### **GRADUATE STUDENTS, POST-DOCS AND FELLOWS**

- Graduate Advisor and Committee Member for five Ph.D. Candidates
- Trained three post-doctoral students
- Trained six M.D. Fellows

#### **EDITORIAL RESPONSIBILITIES**

- Alcohol and Drug Research (Editorial board until1990) •
- American Journal of Cardiology American Journal of Physiology
- Archives of Internal Medicine
- Brain Research
- Brain, Behavior, and Immunity
- Chest
- Circulation
- Circulatory Shock (Associate Editor)
- **Clinical Pharmacology and Therapeutics**
- **Convulsive** Therapy
- Critical Care Medicine (Editorial board, 1985-1991), (Editorial board, 1993)
- Drug Development Research (Editorial board)
- European Journal of Pharmacology
- Endocrinology
- **Federation Proceedings**
- Gene
- Heart and Lung: Journal of Critical Care
- Hypertension
- International Journal of Protein and Peptide Research
- Journal of Applied Physiology
- Journal of the American Medical Association
- Journal of Clinical Investigation
- Journal of Cancer Research •
- Journal of Molecular and Cellular Cardiology •
- Journal of Neuroscience
- Journal of Neuroscience Methods

- Journal of Neurotrauma (Editorial board until 1994)
- Journal of Pharmacology and Experimental Therapeutics
- Life Sciences (Editorial board until 1992)
- Medicine and Science in Sports and Exercise
- Nature
- Neuroendocrinology
- Neuropharmacology
- Pediatric Research
- Peptides (Editorial board)
- Pharmacology, Biochemistry and Behavior
- Physiology and Behavior
- Proceedings of the National Academy of Sciences
- Proceedings of the Society for Experimental Biology and Medicine
- Progress in NeuroEndocrinImmunology (Editorial Board)
- Psychiatry Research
- Psychoneuroendocrinology
- Regulatory Peptides
- Science
- Shock (Founder, Editorial Board until 1996)
- State-of-the-Art Series in Cellular Pathophysiology (Editorial Board)
- Trends in Pharmacological Sciences
- Trends in Shock Research (Series Editor)

# SOCIETY MEMBERSHIPS

- American College of Neuropsychopharmacology (Fellow)
- Society of Critical Care Medicine (Elected Fellow, 1992, Program Committee 1986-1987 & Lilly Fellowship Committee 1989)
- American Association for the Advancement of Science
- American Association for Cancer Research
- American Paralysis Association (Science Advisory Board, 1986-88)
- American Society for Pharmacology and Experimental Therapeutics (**Travel Award Committee, IUPHAR, 1986, 1990**)
- American Society for Photobiology (1990-1995)
- International Narcotics Research Conference (Executive Committee, 1987-1990; program chair, 1991)
- National Association For Biomedical Research
- Neurotrauma Society
- New York Academy of Sciences
- Shock Society (Treasurer 1984-1988; Program Chairman 1991; Secretary 1990; President 1992-1993)
- Sigma Xi
- Society for Neuroscience (1972-1998)

#### THESIS AND DISSERTATION

- 1. Holaday, J.W. An ultracentrifugational analysis of the male-inducing hormone from the M5 strain of Volvox aureus. M.S. thesis, Department of Biology, University of Alabama, **1969**.
- 2. Holaday, J.W. The pituitary-adrenal axis and opiate action. Ph.D. dissertation, Department of Pharmacology, University of California, San Francisco, **1977**.

## BOOKS

- 1. Holaday, J.W., Law, P.Y. and Herz, A. Progress in Opioid Research: Proceedings of the 17th International Narcotic Research Conference, National Institute on Drug Abuse Research Monograph Series #75 DHHS Pub. No. (ADM)87-1507. Washington DC. US Govt. Print. Off., **1986**.
- 2. Holaday, J.W., Bihari, D. Brain Failure; Series Update in Intensive Care and Emergency Medicine. Springer-Verlag, Volume 9, **1989**.
- 3. Chernow, B., Holaday, J.W., Zaloga, G. and Zaritsky, A. The Pharmacologic Approach to the Critically Ill Patient, Second Edition, Williams and Wilkins, Baltimore, MD, 1988.
- 4. Neugebauer, E. and Holaday, J.W. Handbook on Mediators and Mechanisms in Septic Shock, **1993**.

#### JOURNAL ARTICLES

#### 1969-1976:

- 1. Denton, Tom E., Meshad, M., Holaday, J.W., and O'Kelley, J.C. (1969). Ca and Sr influence oncarbohydrate synthesis and composition in protosiphon. **Plant and Cell Physiology**, 10, 711-714.
- 2. Rose, R.M., Holaday, J.W., and Bernstein, I.S. (1971). Plasma testosterone, dominance rank, and aggressive behavior in male rhesus monkeys. **Nature**, 231, 366-368.
- 3. Rose, R.M., Kreuz, L.E., Holaday, J.W., Sulak, K.J., and Johnson, C.E. (1972). Diurnal variation of plasma testosterone and cortisol. **Journal of Endocrinology**, 54, 177-178.
- 4. Natelson, B.H., Holaday, J.W., Meyerhoff, J., and Stokes, E. (1975). Temporal changes in growth hormone, cortisol and glucose: relation to light onset and behavior. **American Journal of Physiology**, 229, 409-415.
- 5. Natelson, B.H., Krasnegor, N., and Holaday, J.W. (1976). Relations between behavioral arousal and plasma cortisol levels in monkeys performing repeated free-operant avoidance sessions. Journal of Comparative and Physiological Psychology, 90(10), 958-969.

#### <u> 1977:</u>

6. Holaday, J.W., Martinez, H.M., and Natelson, B.H. (1977). Synchronized ultradian cortisol rhythms in monkeys: persistence during corticotropin infusion. **Science**, 198, 56.

- 7. Holaday, J.W., Meyerhoff, J.L., and Natelson, B.H. (1977). Cortisol secretion and clearance in the rhesus monkey. **Endocrinology**, 100, 1178-1185.
- 8. Holaday, J.W., Law, P.-Y., Tseng, L.F., Loh, H.H., and Li, C.H. (1977). β-endorphin: pituitary and adrenal glands modulate its action. **Proceedings of the National Academy of Sciences USA**, 74, 4628-4632.

## <u>1978:</u>

- 9. Holaday, J.W., Loh, H.H., and Li, C.H. (1978). Unique behavioral effects of  $\beta$ endorphin and their relationship to thermoregulation and hypothalamic function. Life Sciences, 22, 1525-1536.
- 10. Holaday, J.W., Tseng, L.F., Loh, H.H., and Li, C.H. (1978). Thyrotropin releasing hormone antagonizes  $\beta$ -endorphin hypothermia and catalepsy. Life Sciences, 22, 1537-1544.
- 11. Schmidt, W.K., Holaday, J.W., Loh, H.H., and Way, E.L. (1978). Failure of vasopressin and oxytocin to antagonize acute morphine antinociception or facilitate narcotic tolerance development. Life Sciences, 23, 151-158.
- 12. Holaday, J.W., Wei, E., Loh, H.H., and Li, C.H. (1978). Endorphins may function in heat adaptation. **Proc. Natl. Acad. Sci. USA**, 75, 2923-2927.
- 13. Holaday, J.W. and Faden, A.I. (1978). Naloxone reversal of endotoxin hypotension suggests role of endorphins in shock. **Nature**, 275, 450-451.
- 14. Holaday, J.W. and Natelson, B.H. (1978). Ultradian cortisol rhythms in monkeys: synchronized or not synchronized? **Science**, 202, 1001-1002.

## <u> 1979:</u>

- 15. Faden, A.I. and Holaday, J.W. (1979). Opiate antagonists: a role in the treatment of hypovolemic shock. **Science**, 205, 317-318.
- 16. Holaday, J.W., Dallman, M.F., and Loh, H.H. (1979). Effects of hypophysectomy and ACTH on opiate tolerance and physical dependence. Life Sciences, 24, 771-782.
- Holaday, J.W., Law, P.-Y., Loh, H.H., and Li, C.H. (1979). Adrenal steroids indirectly modulate morphine and β-endorphin effects. Journal of Pharmacology and Experimental Therapeutics, 268, 176-184.
- 18. Belenky, G.L. and Holaday, J.W. (1979). The opiate antagonist naloxone modifies the effects of electroconvulsive shock (ECS) on respiration, blood pressure, and heart rate. **Brain Research**, 177, 414-417.
- 19. Faden, A.I., Jacobs, T.P., and Holaday, J.W. (1979). Naloxone alteration of physiologic parameters in spinally transected animals. **Transactions of the American Neurological Association**, 104, 1-5.

#### <u>1980:</u>

- 20. Faden, A.I. and Holaday, J.W. (1980). Naloxone treatment of endotoxin shock: stereospecificity of physiologic and pharmacologic effects in the rat. Journal of Pharmacology and Experimental Therapeutics, 212, 441-447.
- 21. Reynolds, D.G., Gurll, N.J., Vargish, T., Lechner, R., Faden, A.I., and Holaday, J.W. (1980). Blockade of opiate receptors with naloxone improves survival and cardiac performance in canine endotoxic shock. **Circulatory Shock**, 7, 39-48.

- 22. Vargish, T., Reynolds, D.G., Gurll, N.J., Lechner, R.J., Holaday, J.W., and Faden, A.I. (1980). Naloxone reversal of hypovolemic shock in dogs. **Circulatory Shock**, 7, 31-38.
- 23. Holaday, J.W. and Faden, A.I. (1980). Naloxone acts at central opiate receptors to reverse hypotension, hypothermia, and hypoventilation in spinal shock. **Brain Research**, 189, 295-299.
- 24. Faden, A.I. and Holaday, J.W. (1980). Experimental endotoxin shock: the pathophysiologic function of endorphins and treatment with opiate antagonists. **Journal of Infectious Diseases**, 142, 229-238.
- 25. Faden, A.I., Jacobs, T.P., and Holaday, J.W. (1980). Endorphin-parasympathetic interaction in spinal shock. J. Autonomic Nervous System, 2, 295-304.
- 26. Holaday, J.W. and Belenky, G.L. (1980). Opiate-like effects of electroconvulsive shock in rats: a differential effect of naloxone on nociceptive measures. Life Sciences, 27, 1929-1938.

# <u>1981:</u>

- 27. Faden, A.I., Jacobs, T.P., and Holaday, J.W. (1981). Opiate antagonist improves neurologic recovery after spinal injury. **Science**, 211, 493-494.
- 28. Holaday, J.W., O'Hara, M., and Faden, A.I. (1981). Hypophysectomy alters cardiorespiratory variables: central effects of pituitary endorphins in shock. American Journal of Physiology, 241 (Heart & Circ. Physiol 10), H479-H495.
- 29. Belenky, G.L. and Holaday, J.W. (1981). Repeated electroconvulsive shock (ECS) and morphine tolerance: demonstration of cross sensitization in the rat. Life Sciences, 29, 553-563.
- 30. Faden, A.I., Jacobs, T.P., Feuerstein, G., and Holaday, J.W. (1981). Dopamine partially mediates the cardiovascular effects of naloxone after spinal injury. **Brain Research**, 213, 415-421.
- 31. Faden, A.I., Jacobs, T.P., Mougey, E.H., and Holaday, J.W. (1981). Endorphins in experimental spinal injury: therapeutic effect of naloxone. **Annals of Neurology**, 10, 326-332.
- 32. Holaday, J.W. and Faden, A.I. (1981). Endorphins in shock and spinal injury: therapeutic role for opiate antagonists. **Psychopharmacology**, 17, 74-76.
- 33. Holaday, J.W. and Faden, A.I. (1981). The pathophysiologic role of endorphins in experimental shock. Journal of Infectious Diseases, 143, 863-864.
- 34. Holaday, J.W., D'Amato, R.J., and Faden, A.I. (1981). Thyrotropin releasing hormone improves cardiovascular function in experimental endotoxic and hemorrhagic shock. Science, 213, 216-218.
- 35. Holaday, J.W., Ruvio, B.A., and Faden, A.I. (1981). Thyrotropin releasing hormone improves blood pressure and survival in endotoxic shock. **European Journal of Pharmacology**, 74, 101-105.
- 36. Holaday, J.W. and Faden, A.I. (1981). Naloxone treatment in shock. Lancet, 1, 201.
- 37. Faden, A.I., Jacobs, T.P., and Holaday, J.W. (1981). Thyrotropin releasing hormone improves neurological recovery after spinal trauma in cats. **New England Journal of Medicine**, 305, 1063-1067.
- 38. Tortella, F.C., Cowan, A., Belenky, G.L. and Holaday, J.W. (1981). Opiate-like electroencephalographic and behavioral effects of electroconvulsive shock in rats. **European Journal of Pharmacology**, 76, 121-128.

<u>1982:</u>

- 39. Faden, A.I., Jacobs, T.P., and Holaday, J.W. (1982). Thyrotropin releasing hormone for spinal trauma (letter: Hall, E.D. and Braughler, J.M.). New England Journal of Medicine, 306, 429-430.
- 40. Faden, A.I., Jacobs, T.P., and Holaday, J.W. (1982). Comparison of early and late naloxone treatment in experimental spinal injury. **Neurology**, 32, 677-681.
- 41. Holaday, J.W. and D'Amato, R.J. (1982). Naloxone or TRH fails to improve neurologic deficits in gerbil models of "stroke". Life Sciences, 31, 385-392.
- 42. Holaday, J.W. and D'Amato, R.J. (1982). Naloxone in Cerebral Ischaemia. Lancet, May 29, 1238.
- 43. Holaday, J.W., Ruvio, B.A., Robles, L.E., Johnson, C.E., and D'Amato, R.J. (1982). ICI M154,129, a putative δ antagonist, reverses endotoxic shock without altering morphine analgesia. Life Sciences, 31, 2209-2212.
- 44. Holaday, J.W., Hitzemann, R.J., Curell, J., Tortella, F.C., and Belenky, G.L. (1982). Repeated electroconvulsive shock or chronic morphine treatment increases the number of <sup>3</sup>H-D-Ala<sup>2</sup>, D-Leu<sup>5</sup>-enkephalin binding sites in rat brain membranes. **Life Sciences**, 31, 2359-2362.
- 45. Holaday, J.W. and D'Amato, R.J. (1982). Naloxone and ischemic neurologic deficits in the gerbil: is there an effect? **Science**, 218, 592-593.
- 46. Holaday, J.W. (1982). Cardiorespiratory effects of  $\mu$  and  $\delta$  opiate agonists following 3rd or 4th ventricular injections. **Peptides**, 3, 1023-1029.
- 47. Faden, A. I., Jacobs, T. P., & Holaday, J. W. (1982). Neuropeptides and spinal cord injury. *Advances in biochemical psychopharmacology*, *33*, 131–8.

#### <u>1983:</u>

- Holaday, J.W. (1983). Cardiovascular consequences of endogenous opiate antagonism. Invited commentary, Biochemical Pharmacology, Pergamon Press, New York, 573-585.
- 48. Faden, A.I., Jacobs, T.P., Smith, M.T., and Holaday, J.W. (1983). Comparison of Thyrotropin Releasing Hormone (TRH), Naloxone, and Dexamethasone Treatments in Experimental Spinal Injury. **Neurology**, 33, 673-678.
- 49. Holaday, J.W., Pasternak, G.W., and Faden, A.I. (1983). Naloxazone pretreatment modifies cardiorespiratory and behavioral effects of morphine. **Neuroscience Letters**, 37, 199-204.
- 50. Holaday, J.W., Pasternak, G.W., D'Amato, R.J., Ruvio, B.A., and Faden, A.I. (1983). Naloxazone lacks therapeutic effects in endotoxic shock yet blocks the effects of naloxone. **European Journal of Pharmacology**, 89, 293-296.
- 51. Belenky, G.L., Gelinas-Sorell, D., Kenner, J.R., and Holaday, J.W. (1983). Evidence for δ receptor involvement in the post-ictal antinociceptive responses to electroconvulsive shock in rats. Life Sciences, 33, 585-586.
- 52. Tortella, F.C., Robles, L.E., Holaday, J.W., and Cowan, A. (1983). A selective role for δ-receptors in the regulation of opioid-induced changes in seizure threshold. Life Sciences, 33, 603-606.
- 53. Holaday, J.W., and D'Amato, R.J. (1983). Multiple opioid receptors: evidence for  $\mu$ - $\delta$  binding site interactions in endotoxic shock. Life Sciences, 33, 703-706.

- 54. Holaday, J.W., D'Amato, R.J., Ruvio, B.A., Feuerstein, G., and Faden, A.I. (1983). Adrenalectomy blocks pressor responses to naloxone in endotoxic shock: evidence for sympatho-medullary involvement. **Circulatory Shock**, 11, 201-210.
- 55. Holaday, J.W., and Faden, A.I. (1983). TRH: Autonomic effects upon cardiorespiratory function in endotoxic shock. **Regulatory Peptides**, 7, 111-125.

#### <u>1984:</u>

- 56. Holaday, J.W. (1984). Opiate antagonists in shock and trauma. American Journal of Emergency Medicine, 2, 8-12.
- 57. Tortella, F.C., Cowan, A. and Holaday, J.W. (1984). Pituitary opioid involvement in electroconvulsive shock-induced postictal electrogenesis and behavioral depression in rats. **Peptides**, 5, 115-118.
- 58. D'Amato, R.J., and Holaday, J.W. (1984). Multiple opiate receptors in endotoxic shock: evidence for  $\delta$  involvement and  $\mu$ - $\delta$  interactions in vivo. **Proc. Natl. Acad. Sci. USA**, 81, 2898-2901.
- 59. Holaday, J.W., and Bernton, E.W. (1984). Thyrotropin releasing hormone: a potent neuromodulator with therapeutic potential. Archives of Internal Medicine, 144, 1138-1140.
- 60. Tortella, F.C., Robles, L.E., Holaday, J.W. and Cowan, A. (1984). 1C1 154, 129, a δ opioid receptor antagonist raises seizure threshold in rats. **European Journal of Pharmacology**, 97, 141-144.
- 61. Tortella, F.C., and Holaday, J.W. (1984).  $\mu$  and  $\delta$  opioid receptor interactions in a rat model of drug induced seizures. **Proc. West. Pharmacol. Society**, 27, 435-437.
- 62. Holaday, J.W., Kenner, J.R., Glatt, C.E. & Long, J.B. (1984). Dynorphin: Cardiovascular consequences of opioid receptor interactions in normal and endotoxemic rats. **Proc. West. Pharmacol. Society**, 27, 429-433.
- 63. Holaday, J.W. (1984). Internal and external opioids update. U.S. Journal of Drug and Alcohol Dependence, 8, 19.
- 64. Tapp, W.N., Holaday, J.W. & Natelson, B.H. (1984). Ultradian glucocorticoid rhythms in monkeys and rats continue during stress. **American Journal of Physiology**, 866-871.
- 65. Tortella, F.C., Robles, L., Mosberg, H.I. and Holaday, J.W. (1984). Electroencephalographic assessment of the role of  $\delta$  receptors in opioid peptide-induced seizures. **Neuropeptides**, 5, 213.
- 66. Long, J.B., Ruvio, B.A., Glatt, C.E. and Holaday, J.W. (1984). ICI 174864, a putative  $\delta$  opioid antagonist, reverses endotoxemic hypotension: pretreatment with dynorphin 1-13, a  $\kappa$  agonist, blocks this action. **Neuropeptides**, 5, 291-294.
- 67. Chernow, B. and Holaday, J.W. (1984). The pathogenesis of septic shock. J.A.M.A. Letter, 252, 20B.
- 68. Tortella, F.C., Robles, L, Holaday, J.W., and Cowan, A. (1984). ICI 154,129, a δ opiate receptor antagonist raises seizure threshold in rats. **European Journal of Pharmacology**, 97, 141-144.
- 69. Sampson, J.A., Bass, B.L., Harmon, J.W., and Holaday, J.W. (1984). Naloxone reduces renal blood flow in rabbit hemorrhagic shock. **Surgical Forum**.
- 70. Dixon, W.R., Viveros, O.H., Unsworth, C.D., Diliberto, E.J., Jr., Way, E.L., Lewis, J.W., Chandra, A., Holaday, J.W., Long, J.B., and Tortella, F.C. (1984). Multiple opiate receptors: functional implications. American Society for Pharmacology and Experimental Therapeutics, December 7.

<u>1985:</u>

- 71. Long, J.B. and Holaday, J.W. (1985). Blood-brain barrier: endogenous modulation by adrenal-cortical function. **Science**, 227, 1580-82.
- 72. Bernton, E.W., Long, J.B. & Holaday, J.W. (1985). Opioids and neuropeptides: mechanisms in circulatory shock. **Federation Proceedings**, 44, 290-299.
- 73. Tortella, F.C., Long, J.B., and Holaday, J.W. (1985). Endogenous opioid systems: physiological role in the self-limitation of seizures. **Brain Research**, 332, 174-178.
- 74. Tortella, F.C., Robles, L. and Holaday, J.W. (1985). The anticonvulsant effects of DADLE are primarily mediated by activation of  $\delta$  opioid receptors: Interactions between  $\delta$  and  $\mu$  receptor antagonists. Life Sciences, 37, 497-503.
- 75. Malcolm, D.S. and Holaday, J.W. (1985). Opioid peptides and their antagonists: a role in respiratory function. Seminars in Respiratory Medicine, 7, 81-87.
- 76. Gilbeau, P.M., Almirez, R.G., Holaday, J.W., and Smith, C.G. (1985). The role of endogenous opioids peptides in the control of androgen levels in the male non-human primate. **Journal of Andrology**, 5, 339-343.
- 77. Gilbeau, P.M., Almirez, R.G., Holaday, J.W. and Smith, C.G. (1985). Opioid effects on plasma concentrations of luteinizing hormone and prolactin in the adult male rhesus monkey. Journal of Clinical Endocrinology and Metabolism, 60, 299-305.
- 78. Holaday, J.W., Long, J.B. and Tortella, F.C. (1985). Evidence for  $\kappa$ ,  $\mu$  and  $\delta$  opioid binding site interactions in vivo. Federation Proceedings, 44, 2860-2862.
- 79. Kinney, R.C., Holaday, J.W., Harmon, J.W. (1985). Naloxone decreases neurologic deficits in experimental aortic cross-clamping ischemia. **Surgical Forum**, 36, 460-461.
- Gruenke L D; Craig J C; Klein F D; Nguyen T L; Hitzemann B A; Holaday J W; Loh H H; Braff L; Fischer A; Glick I D. (1985). Determination of chlorpromazine and its major metabolites by gas chromatography/mass spectrometry: application to biological fluids. Biomedical mass spectrometry, 12, (12) 707-13.
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