CURRICULUM VITAE

Hiroko Nishimura, M.D., D.M.Sc.

PERSONAL DATA

Nationality: Japanese, U.S. permanent resident
Sex: Female
Marital Status: Married
Home Address: 111 Shady Glen
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EDUCATION

04/55-03/57	Premedical School, Tokyo Medical and Dental University; Tokyo, Japan
04/57-03/61	Medical School, Tokyo Medical and Dental University; Tokyo, Japan
04/61-03/62	Rotating Internship; U. S. Air Force Hospital; Tachikawa, Japan
04/2-08/66	Graduate Training for Degree of Medical Science: Department of Internal Medicine, The University of Tokyo Faculty of Medicine; Tokyo, Japan. Area of Training: Hypertensive cardiovascular diseases
04/2-08/66	Clinical Resident Training: General Internal Medicine, Cardiovascular Medicine

Degrees

1962	M.D., Tokyo Medical and Dental University; Tokyo, Japan
1968	Degree of Medical Sciences (D.M.Sc.), The University of Tokyo; Tokyo, Japan

License: Physician's License, Tokyo, Japan
Registry No. 179368

PROFESSIONAL HISTORY

04/62-08/66	Clinical Resident, Department of Internal Medicine, The University of Tokyo, Faculty of Medicine; Tokyo, Japan

09/66-11/69	Faculty Member (equivalent to Assistant Professor in U.S.A.), Department of Pharmacology, Toho University School of Medicine; Tokyo, Japan
07/67-09/69	Investigator (drug screening and toxicology), Medical Research Laboratory, Central Institute for Experimental Animals; Japan (secondary appointment)
12/69-10/73	Visiting Instructor and Research Associate, Department of Pharmacology, Columbia University College of Physicians and Surgeons; New York, New York
11/73-06/76	Assistant Professor, Department of Physiology and Biophysics, The University of Tennessee, Memphis; Memphis, Tennessee
07/74-06/83	Adjunct Professor, Department of Biology, Memphis State University; Memphis, Tennessee (secondary appointment)
07/76-06/77	Associate Professor, Department of Physiology and Biophysics, The University of Tennessee, Memphis; Memphis, Tennessee
07/77-06/79	Associate Professor and tenure, Department of Physiology and Biophysics, The University of Tennessee, Memphis; Memphis, Tennessee
07/78-06/83	American Heart Association Established Investigator
05/79-04/81	U. S. Organizer and Principal Investigator, U. S.-Japan Cooperative Research Science Program, Comparative Studies of the Renin-Angiotensin System, National Science Foundation
07/79-present	Professor and tenure, Department of Physiology and Biophysics, The University of Tennessee, Memphis; Memphis, Tennessee
11/80-02/81	Visiting Professor, Department of Pharmacology, Jichi Medical School; Japan
06/87-05/88	U. S. Principal Investigator, U. S.-Japan Cooperative Research Program, Evolution of Urine Concentration Mechanism, National Science Foundation
01/96-12/01	Associate Editor, *American Journal of Physiology*, Regulatory, Integrative and Comparative Physiology
06/98-06/01	Editorial Board Member, *General and Comparative Endocrinology*
07/01-present	Editorial Board Member, *American Journal of Physiology*, Regulatory, Integrative and Comparative Physiology
09/00-01/01	Visiting Lecturer, College de France, INSERM, Paris, France
06/05-09/05	JSPS (Japan Society for Promotion of Science)-Invitatory Scholar for Research, Department of Structural Pathology, Institute of Nephrology, Niigata University Graduate School of Medical and Dental Sciences
04/07-present	Project-based Professor, Niigata University, Graduate School of Medical and Dental Science, Niigata, Japan

MEMBERSHIP IN PROFESSIONAL SOCIETIES

The American Physiological Society (since1974)
The Endocrine Society (since 1972)
American Society of Nephrology (since 1973)
American Heart Association
    Fellow, Council for High Blood Pressure Research (since 1979)
    Member, Kidney in Cardiovascular Disease
American Society of Integrative Biology (since 1972)
International Society of Nephrology (since 1974)
Japanese Society for Comparative Endocrinology (since 2004)

HONORS AND AWARDS

1970	Annual Award of Medical Society of Toho University, Japan
1978-1983	American Heart Association Established Investigatorship
1981	The Grace Pickford Medal: Award from International Congress of Comparative Endocrinology (Award started in 1980)
1989	Tokyo Medical Association Lectureship Plaque
1997	Tokyo Medical Association Lectureship Plaque
2000	Assembly of the Professors at the College de France, Lectureship Medal
2005	JSPS (Japan Society for Promotion of Science) Invitatory Fellowship for Research
2006	August Krogh Distinguished Lectureship, American Physiological Society, Comparative and Evolutionary Physiology Section
2007	The 60th Niigata Nippo Culture Award, Science and Scholarly Activity Division, Niigata, Japan (state-wide award)

Plenary Lectures

12/19/84 Niigata University School of Medicine. Comparative physiology of urine diluting and concentrating mechanism. Niigata, Japan.

03/27/85 Annual Meeting for Japanese Society of Pharmacology. Comparative endocrinology of renin and angiotensin. Tokyo, Japan.

07/14/89 The Seventh Niigata Symposium on Hypertension. Comparative physiology of blood pressure regulation. Niigata, Japan.

07/26/89 Tokyo Medical Association Meeting. Comparative physiology of blood pressure regulation. Tokyo, Japan.

10/18/95 E. Eric Muirhead Hypertension Research Day Lecture. Memphis, Tennessee

11/25/97 Tokyo Medical Association Meeting. Angiotensin receptors and signaling: from a comparative viewpoint.

10/00-11/00 Assemby of Professors Lectures, College de France, Paris, France; four lectures
-Comparative physiology of urine concentration and dilution
-Comparative endocrinology of renin and angiotensin
-Blood pressure and vascular phenotype modulation in fowl
-Use of nonmammalian models in biomedical research

05/01 State of Art Lecture, XIVth International Congress of Comparative Endocrinology, May 26-30, 2001. Renal handling of water in vertebrates. Sorrento, Italy.

11/01 The 30th Conference for Hypertension Research. High blood pressure and vascular wall phenotype modulation. Niigata, Japan.

04/06 August Krogh Distinguished Lecture, American Physiological Society, Comparative and Evolutionary Physiology Section. Urine concentration and aquaporin water channels- Evolution and development. San Francisco, CA

Invited Seminars

Total (other than home department): 89

TEACHING

Medical pharmacology: Autonomics, diuretic drugs

Medical physiology

1. Systemic endocrinology, neuroendocrinology, and reproductive endocrinology: lectures for medical, dental, and pharmacy students
2. Gastrointestinal system: lectures for pharmacy and dental students
3. Medical, dental, and pharmacy laboratories and conferences: Cardiovascular physiology, Hormones, Blood pressure, Body fluid, Calcium regulation, etc.

Advanced graduate physiology

1. Endocrinology
2. Renal physiology
3. Comparative physiology

Predoctoral Fellows and Students Trained

1966-1969 Toho University School of Medicine, Department of Pharmacology; Tokyo, Japan. Research training for research fellows and medical students.

1971-1973 Columbia University, College of Physicians and Surgeons, Department of Pharmacology; New York, New York. Research training for pregraduate students and medical student laboratory.

1973-1997 University of Tennessee, College of Medicine, Department of Physiology & Biophysics; Memphis, Tennessee

Virginia Norton: Department of Biology, Memphis State University, Memphis
Randy Sumner: Honor Research Program, Department of Biology, Rhodes College, Memphis
Christopher Patton: NIH Medical Student Summer Research Fellowship Program, UT, 1991
Allison Taylor: Summer Research Program, Davidson College, North Carolina, 1992
Anthony Madison: NIH Minority Undergraduate Research Supplement Fellowship, LeMoyne Owen College 1992-1994
Lea P. Torbett: NIH Medical Student Summer Research Fellowship Program, UT, 1993
Polya Samardar: NIH Medical Student Summer Research Fellowship Program, UT, 1994
Dawn Meadows: Minority undergraduate student, LeMoyne Owen College, 1994
James E. Shamiyeh: NIH Medical Student Summer Research Fellowship Program, UT, 1995
Robin Donald: NIH Cardiovascular Short-term Minority Training Grant Fellowship, 1995
Kristina Bobo: NIH Cardiovascular Short-term Minority Training Grant Fellowship, 1996
Jesina Winton: NIH Cardiovascular Short-term Minority Training Grant Fellowship, 1997

Roshand Rao: NIH Medical Student Summer Research Fellowship Program, UT, 1997

Stephanie Bell: University of Memphis, Department of Biology, Master Student, 1998-1999

Kimberly S. Wilson: NIH Cardiovascular Short-term Minority Training Grant Fellowship, 2002

Jared White: NIH Medical Student Summer Research Fellowship Program, UT, 2003
Nominated, based on this summer research, for 2006 Alumni Research Achievement Award

Naimah Lubieddin: NIH Cardiovascular Short-term Minority Training Grant Fellowship, 2003

Postgraduate Fellows Trained and Current Position
Department of Physiology and Biophysics, University of Tennessee, Memphis

1976-1977	**Virginia Norton**, Ph.D. Head Nurse, Research, College of Nursing, Methodist Hospital, retired
1977-1980	**Albert Zucker**, Ph.D. University faculty
1979-1981	**Yukio Nakamura**, Ph.D. Head, Marine Laboratory, Japan
1980-1982	**John R. Bailey,** Ph.D. University faculty, Associate Professor, Canada
1981-1983	**Kimio Kamimura**, M.D. University faculty; private clinic
1982-1984	**Toichiro Miwa**, M.D. University faculty, private clinic
1982-1984	**Yoshio Takei**, Ph.D. Professor and Chair, Department of Marine Bioscience-Physiology, Ocean Research Institute, University of Tokyo
1984-1986	**Ken'ichi Yamaguchi**, Ph.D. Assistant Professor of Physiology, Niigata University College of Medicine; Councilor, Japanese Society of Physiology
1984-1987	**John N. Stallone**, Ph.D. Associate Professor, Department of Veterinary Physiology and Pharmacology, Texas A & M; PI of NIH RO1 grant
1986-1988	**Kazunori Hasegawa**, Ph.D., Curator, museum, Japan
1990-1992	**Elichi Osono**, M.D. Faculty of Medicine, Nephrology, Nihon University School of Medicine
1991-1993	**Orystine E. Walker**, Ph.D. Minority Investigator, Associate Professor LeMoyne-Owen College, Memphis, TN
1992-1995	**Ze-lian Qin,** M.D. Professor of Plastic Surgery, Director of Medical Research Center, Peking University, Beijing, P.R. China
1994-1996	**Toshio Shimada**, Ph.D. Assistant Professor, Nagasaki University School of Medicine
1995-1996	**Hong Q. Yan**, Ph.D. Research Instructor, Department of Neurosurgery, University of Pittsburgh; coinvestigator of NIH grant for neurological disorders and stroke

1996-1999	**Rhonda J. Kuykindoll**, Ph.D. Minority Investigator, Assistant Professor, Dillard University, LA; LeMoyne-Owen College, Memphis, TN
1998-1999	**Wenbo Xu**, Ph.D. Research Associate, University of New Foundland, Halifax, Canada
2000-2000	**David Yangling Zhan**, Ph.D. Instructor, Sidney, Australia
2000-2000	**Lin Zhang**, Ph.D. Research Associate, University of Pennsylvania School of Medicine, Philadelphia
2001-2003	**Ciro Ruiz-Feria**, Ph.D. Assistant Professor, Department of Animal Science, McGill University, Montreal, Canada; PI of research grant from Research Council of Canada, Provincial Government, and Industry
2004-2006	**Keith Lau**, M.D. Supported by Nephrology fellowship program research training. He will be Assistant Professor, Pediatric Nephrology, University of California, Davis, CA starting July, 2006. Dr. Lao received three grants submitted from Nishimura's laboratory (supply grant from National Kidney Foundation West Tennessee; he received highest score among all applications in 2004), La Bonheur Hospital supply grants in 2004 and 2005.
2001-present	**Yimu Yang**, Ph.D. Currently supported by Nishimura's NIH grant. Dr. Yang will submit AHA Southeast Affiliate Beginners Grant-in-Aid.

Part-time Research Associates Trained

John N. Mugaas: Research Associate, Rhodes College (formerly Southwestern at Memphis)

Graduate Students Trained (Laboratory rotation)

1993: Bill Lester, Ph.D. program
1995: Matthew Fabian, M.D./Ph.D. program
1996: Jennifer Wong, Ph.D. program
1997: Qing Yuan, Ph.D. program
2001: Mi Miao

Graduate Committees

University of Tennessee Health Science Center, Memphis

1. Steven Lanier
2. Deborah Diz
3. Rebecca Morgan-Boyd
4. Lielie Hong
5. Jennifer Wong
6. Matthew Fabian

University of British Columbia, Department of Biology, Vancouver

1. John R. Bailey

University of Memphis, Department of Biology

1. Virginia Norton

Brooklyn College of New York, Department of Biology

1. Joyce Fructner

Training Grants

1978-1988 NIH Training Grant. Hypertension (Director: Leonard Share, Ph.D.). Role: preceptor.
1995-2000 NIH Training Grant. Cardiovascular and renal science (Director: Leonard Share, Ph.D.). Role: preceptor.
2005-2009 NIH T32 Research Training Grant for Pediatric Nephrology, Le Bonheur Children's Medical Center, University of Tennessee HSC (Director: Robert Wyatt, M.D., Role preceptor (pending)

Fellowship and Research Grants for Postdoctoral Fellows Awarded

1981-1982 John R. Bailey, Ph.D. The renin-angiotensin system in birds. Tennessee Heart Association Postdoctoral Fellowship.
1986-1987 John N. Stallone, Ph.D. Cardiovascular mechanisms of angiotensin in birds. National Research Service Award Postdoctoral Fellowship. Heart and Lung Institute: NIH.
1991 Christopher Patton. NIH Medical Student Fellowship Grant (summer research).
1991-1993 Anthony Madison. NIH Minority Undergraduate Research Supplement.
1991-1994 Orystine E. Walker, Ph.D. NIH Minority Investigator Research Supplement.
1992 Orystine E. Walker, Ph.D. American Physiological Society Travel Award.
1993 Lea P. Torbett. NIH Medical Student Fellowship Grant (summer research).
1993, 1994 Anthony Madison. American Physiological Society Travel Award.
1994 Polya Samardar, NIH Medical Student Fellowship Grant (summer research).
1995 James E. Shamiyeh, NIH Medical Student Fellowship Grant (summer research).
1996-1998 Rhonda Kuykindoll, NIH Minority Postdoctoral Research Supplement.
1997 Rhonda Kuykindoll, University of Tennessee, Research Day Poster Award.
1997 Rhonda Kuykindoll, American Physiological Society Travel Award.
1998 Rhonda Kuykindoll, American Physiological Society Travel Award.
1998 Wenbo Xu, Southeast Affiliate, American Heart Association Postdoctoral Fellowship.
2004 Keith Lau, Le Bonheur Children's Medical Center Small Grant ($10,000 supply)
2004 Keith Lau, National Kidney Foundation of West Tennessee, Inc. Supply grant ($5000).
2005 Keith Lau, Le Bonheur Children's Medical Center Small Grant ($14,979)

RESEARCH

Research fields and interests

1. Comparative endocrinology of the renin-angiotensin system; Control of renin release
2. Angiotensin receptors and signaling: maturation-dependent changes
3. Comparative physiology of blood pressure regulation
4. Vascular adaptation to injury in intact and atherogenic vessels.
5. Comparative renal physiology; Renal tubule and epithelial transport,
6. Urine-concentrating mechanisms and aquaporin water channels. Effects of prenatal programming in adult life.

Research grants

(All PI unless specified. Grants awarded but declined due to duplicate submission are not listed.)

07/74-06/77 American Heart Association Grant-in-Aid (74-680). Phylogeny of renin and its function(s) in fishes. $37,400.

09/74-08/77 NIH Research Grant (AM-17824). Comparative studies of renal handling of electrolytes. $88,757.

07/75-06/76 Tennessee Heart Association Grant-in-Aid. Renal responses to angiotensin in teleost fishes. $9,777.

03/76-02/78 NSF Research Grant. Vasopressor, diuretic, and natriuretic responses to angiotensins in teleost fishes. $28,100.

12/77-11/82 NIH Research Grant (AM-17824: 04-07). National Institute of Arthritis, Metabolism and Digestive Diseases. Comparative studies of renal handling of electrolytes. $165,942.

07/78-06/83 American Heart Association Established Investigatorship (AHA 78-144). Evolution of humoral control of blood pressure. 75% of salary.

05/79-04/81 NSF Grant, U. S.-Japan Cooperative Program (INT 7823990). Comparative studies of the renin-angiotensin system. $26,007, Program organizer.

07/79-06/83 NIH Research Grant (HL-22674: 01-04), National Heart, Lung and Blood Institute. The evolution of humoral control of blood pressure. $255,696.

07/82-06/85 NIH Research Grant (HL 29364: 01-03), National Heart, Lung and Blood Institute. Renal function in birds: a unique transitional model. $224,821.

11/83-10/86 NSF Research Grant (PCM 8302812). The role of the renin-angiotensin system in cardiovascular homeostasis in birds. $173,615 (direct costs).

08/85-04/86 University of Tennessee Contingency Fund (BRSG 83-03). Evolution of urine-concentrating mechanism. $28,000.

05/86-04/89 NIH Research Grant (HL 29364: 04-06), National Heart, Lung and Blood Institute. Urinary concentrating mechanism: unique avian models. $248,427.

01/87-12/87 NSF Research Grant (PCM 8616261). Angiotensin II-induced vascular relaxation. $67,000.

06/87-08/88 NSF Grant, U. S.-Japan Cooperative Program (INT 8614007). Evolution of urine-concentrating mechanism: a unique avian model. $14,378.

03/89-02/90 University of Tennessee Pilot Study Grant (BRSG 89-30). Renin secretory cell culture. $10,000.

07/89-06/90 University of Tennessee Contingency Fund — Interim Support (BRSG 89-05). Urinary concentrating mechanisms: unique avian models. $35,597.

01/90-11/94 NIH Research Grant (HL 29364 07-11). Urinary concentrating mechanism: unique avian models. $526,999.

07/90-06/92 Tennessee Heart Association Grant-in-Aid. Signals for cellular control of renin release. $50,000.

07/91-05/94 NIH Research Grant (HL29364 S1) — Minority Investigator Research Supplement. $150,000

02/92-11/94 NIH Research Grant (HL29364 S2) — Minority Undergraduate Research Supplement. $35,970.

07/92-06/95 American Heart Association Grant-in-Aid. Angiotensin and vascular cell interaction in birds. $120,000.

05/95-04/99 NIH Research Grant (HL52881 01-04). Avian vascular function: interaction with angiotensin. $557,626.

06/96-05/99 NIH Research Grant (HL52881 S1) — Minority Postdoctoral Research Supplement. $108,431.

07/99-06/01 AHA Southeast Affiliate Postdoctoral Fellowship. $50,000.

08/99-09/99 Univ. Tennessee Research Contingent Fund, Interim support. $7,400.

09/99-09/03 NIH Research Grant (HL52881 05-09). Avian vascular function. $703,548 (direct).

02/00-01/01 National Science Foundation Research Grant. Water channel in avian kidney collecting duct. $35,000 (total).

07/02-06/04 American Heart Association Southeast Affiliate Grant-in-Aid. Urine concentration and aquaporin water channels: unique avian models. $140,000.

07/02-06/03 Vascular Biology Center for Excellence Pilot and Feasibility Grant. Vascular adaptation to high blood pressure and injury: A unique avian model. $40,000

10/03-09/04 Univ. Tennessee Research Contingent Fund, Interim support. $32,000. (awarded but partly returned)

07/04-06/05 Le Bonheur Children's Medical Center Small Grant ($10,000 supply) (Coinvestigator)

07/04-06/05 Keith Lau, National Kidney Foundation of West Tennessee, Inc. Supply grant ($5000) (Coinvestigator)

07/05-06/06 Le Bonheur Children's Medical Center Small Grant ($14,979 supply) (Coinvestigator).

06/05-10/05 Japan Society for Promotion of Science (JSPS)-Invitational Research $11,600 (per diem and travel)

05/04-04/08 NIH Research Grant (HL52881 10-13). Avian vascular function. $700,000 (direct).

09/06-08/08 NSF Grant, IOB 0615359 Does prenatal undernutrition impair body fluid homeostasis in birds?-Role of aquaporin2- $212,446 (direct and indirect)

PROFESSIONAL SERVICES

Federal and National Advisory Committees

09/01/81-08/31/84	National Science Foundation Regulatory Biology Panel, member; Physiology, Cellular and Molecular Biology
07/01/85-06/30/89	National Institutes of Health; Cardiovascular and Renal Study Section, member
09/89-05/90	National Institutes of Health; SCOR in Hypertension Parent Committee member and site visits
07/01/92-06/30/95	American Heart Association Cardiovascular Regulation Grant Review Committee, member
1994-1996	American Physiological Society Program Committee, member
1999-2002	American Physiological Society, Comparative Physiology Section, Steering Committee, member
09/01/99-08/01/02	American Heart Association Council for High Blood Pressure, Publications Committee, member
Nominated	National Institutes of Health; National Heart, Lung, and Blood Institute, Heart, Lung, and Blood Research Review Committee and Parent Committee for Program Project, member

Editorship

01/96-07/01	Associate Editor, *American Journal of Physiology*, Regulatory, Integrative and Comparative Physiology
07/2007-	Associate Editor, *American Journal of Physiology*, Regulatory, Integrative and Comparative Physiology

Editorial Board

07/78-12/95	*American Journal of Physiology*, Regulatory, Integrative and Comparative Physiology
06/98-12/01	*General and Comparative Endocrinology*
07/01-present	*American Journal of Physiology*, Regulatory, Integrative and Comparative Physiology

Referee

American Journal of Physiology (Renal, Fluid and Electrolyte; Cardiovascular, and Regulatory);*Endocrinology*; *Endocrinology Review; Canadian Journal of Zoology; Comparative Physiology; General and Comparative Endocrinology; Blood Vessels; Hypertension; Circulation Research; Receptor, Zoological Physiology*, Others

Ad hoc and External Reviewer

NIH site visits: Hypertension SCOR grant, Minority Biomedical Support Program, Environmental Health Sciences, SCOR grant, etc.
External reviewer: National Science Foundation; Veterans Administration grant; Research Council, Canada; Natural Environment Research Council, UK, etc.

Symposium Organizer and/or Chairman

11/77 U. S.-Japan Cooperative Science Program Joint Seminar. Comparative Studies of the Renin-Angiotensin System. Tochigi, Japan (U.S. organizer).
02/80 Gordon Research Conference. Angiotensin Actions on the Cell. California (Co-chairman).
04/81 FASEB Symposium. Control of Renal Function (Co-chairman).
01/84 Gordon Research Conference. Angiotensin: Biochemistry and Physiology. California (Co-chairman).
01/86 Gordon Research Conference. Angiotensin: Function in Central Nervous System. California (Co-chairman).
02/87 Gordon Research Conference. Angiotensin: Interaction with Other Biological Systems. California (Chairman).
04/90 American Physiological Society, Annual Spring Meeting, FASEB. Nonmammalian Models for the Study of Renal Tubule Transport (Chairman and Organizer).
10/90 American Physiological Society, Annual Fall Meeting. Nonmammalian Models for the Study of Cardiovascular and Renal Homeostasis: Integrative and Cellular Approach (Chairman and Organizer).
04/90 American Physiological Society, Annual Spring Meeting, FASEB. Meeting Honoring Dr. Wilbur H. Sawyer (Organizer and Co-chairman).
04/93 American Physiological Society, Spring Meeting, FASEB. Physiology and Pharmacology Disciplines for the 21st Century (Organizer and Chairman).
05/93 XIIth International Symposium/First International Congress on Comparative Endocrinology. Invited session organizer and Chairman: Structure and function of myotropins and cardiac peptides.
11/97 XIII International Congress of Comparative Endocrinology, Yokohama, Japan. Angiotensin Receptors and Signalling (Organizer and Chairman)
04/99 American Physiological Society, EB '99. Angiotensin Receptors and Signaling: Evolution and Perspectives (Organizer and Chairman).
08/99 Angiotensin Gordon Research Conference. Vascular cell and extracellular matrix interaction (Session Chair).
05/01 XIVth International Congress on Comparative Endocrinology. Sorrento, Italy. Epithelial water transport and its control (Organizer and Chair)
04/05 XXXV International Congress of Physiological Sciences, San Diego, USA. Phylogeny and ontogeny of the renin-angiotensin system (Organizer and Chair).
05/05 The XVth Internatinal Congress for Comparative Endocrinology, Boston, USA. Vascular hormeons: Interactions between systemic and local mechanisms (Organizer and Chair)
10/06 APS conference in Comparative Physilogy: Integrating diversity. "Aquaporins and aquaglyceroporins in vertebrates; Evolution and diversity" (Organizer and Chair)
02/08 XXXVI International Congress of Physiological Sciences, Kyoto, Japan. Developmental origins of adult cardiovascular and renal disorders (Organizer; submitted).

Scientific Session Chairman

1979 Scientific sessions of FASEB
1982 Scientific sessions of FASEB
1985 Scientific sessions of FASEB
1991 Scientific sessions of FASEB

University Committees (major assignments only)

1. Academic Appointments and Promotions, College of Medicine, UT
2. Executive Committee of Faculty Organization, UT
3. Space Committee, UT
4. Promotion and Tenure Committee (chairman), Department of Physiology, UT
5. Faculty Senate, UT
6. University of Tennessee, Memphis, Research Committee
7. Faculty Senate *Ad Hoc* Committee on Admission and Operation of the Graduate College
8. Graduate Program Committee, Department of Physiology, UT
9. Neuroscience Center Review Committee
10. Search Committee: Chair, Department of Surgery
11. Hypertension Research Day, Coordinator
12. Hypertension Research Day, Chair

INVITED SYMPOSIA

1968 Sokabe, H., and H. Nishimura. The renin-angiotensin system in the fishes. Japan-U.S.A. Cooperative Science Program and Joint Seminar. Endocrine Glands and Osmoregulation in Fishes. Tokyo, Japan.

1968 Nishimura, H., and H. Sokabe. The role of angiotensinases in the renin-angiotensin system. Symposium Chem. Physiol. Pathol. Tokyo, Japan.

1972 Nishimura, H., and M. Ogawa. The renin-angiotensin system in fishes. lst Symposium, The Current Status of Fish Endocrine Systems. *Am. Soc. Zool.*, Div. Comp. Endocrinol. Washington, D. C.

1974 Nishimura, H. The renin-angiotensin system and sodium balance in teleosts. VIIth Int. Symp. Comp. Endocrinol. Nairobi.

1976 Nishimura, H., and J. T. Crofton. The renin-angiotensin system in teleost fishes. Satellite Symposium, Renin-Substrate Reaction. 60th Annual Meeting of Fed. Am. Soc. Exp. Biol., organized by M. P. Sambhi. Murietta, California.

1976 Nishimura. H. Renal responses to diuretic drugs in teleost fishes. Symposium, Renal and Electrolyte Physiology in Fish, organized by L. Goldstein and B. Schmidt-Nielsen. Salsbury Cove, Maine.

06/77 Nishimura, H. Physiological evolution of the renin-angiotensin system. Northeast Regional Symposium, The Evolution of Vertebrate Endocrines, organized by A. Epple and P. K. T. Pang. Philadelphia, Pennsylvania.

11/77 Nishimura, H. Physiological evolution of the renin-angiotensin system. In: The U. S.-Japan Cooperative Science Program, Joint Seminar. Tochigi, Japan.

11/77 Nishimura, H., and W. H. Sawyer. Diuretic and natriuretic responses to angiotensins by the American eel, *Anguilla rostrata*. In: The U. S.-Japan Cooperative Science Program, Joint Seminar. Tochigi, Japan.

11/77 Nishimura, H., L. G. Lunde, and A. Zucker. Renin response to hemorrhage and hypotensive drugs in the aglomerular toadfish, *Opsanus tau*. In: The U. S.-Japan Cooperative Science Program, Joint Seminar. Tochigi, Japan.

11/77 Nishimura, H., V. M. Norton, and F. M. Bumpus. Lack of specific inhibition of angiotensin II in eels by angiotensin antagonists. In: The U. S.-Japan Cooperative Science Program, Joint Seminar. Tochigi, Japan.

06/78	Nishimura, H. The role of the renin-angiotensin system in hemodynamics and hydromineral homeostasis in teleosts. VIIIth Int. Symp. Comp. Endocrinol. Amsterdam.
09/78	Nishimura. H. Comparative endocrinology of renin and angiotensin. In: The 14th Midwest Conference on Endocrinology and Metabolism. The Renin-Angiotensin System, organized by J. A. Johnson. Columbia, Missouri.
02/80	Nishimura, H. Evolution of vasopressor action of angiotensin and angiotensin receptors. Gordon Research Conference, Angiotensin Actions on the Cell. California.
04/81	Nishimura, H. Control of renal function in glomerular and aglomerular teleosts. In: Symposium, Comparative Studies of Control of Renal Function. FASEB. Atlanta, Georgia.
06/81	Nishimura, H., and J. R. Bailey. Intrarenal renin-angiotensin system in primitive vertebrates. In: Symposium, The Juxtaglomerular Apparatus and the Tubuloglomerular Feedback Mechanism, organized by K. Thurau and J. Schnermann. Munich, Germany.
12/81	Nishimura, H. Role of renin-angiotensin and adrenergic nervous system in control of blood pressure in fowl. The IXth Int. Symp. Comp. Endocrinol. Tokyo, Japan.
12/81	Nishimura, H. The renin-angiotensin system in birds. In: Avian Endocrinology, Satellite Symposium for the IXth Int. Symp. Comp. Endocrinol. Tokyo, Japan.
12/81	Nishimura, H., and M. Imai. Sodium chloride and water transport in the renal tubules of freshwater rainbow trout. In: Fish Migration and Reproduction, Satellite Symposium for the IXth Int. Symp. Endocrinol. Tokyo, Japan.
02/82	Nishimura, H. Vasodepressor action of angiotensin in conscious chickens. In: Gordon Conference, The Cardiovascular Role of Brain Angiotensin and Other Peptide Hormones. Ventura, California.
10/82	Nishimura, H. Cardiovascular physiology of angiotensin in nonmammalian vertebrates. In: 25th Anniversary Symposium Commemorating the Synthesis of Angiotensin. Cleveland, Ohio.
01/84	Nishimura, H. Comparative biochemistry and physiology of angiotensin. In: Gordon Research Conference on Angiotensin. California.
05/84	Nishimura, H. Evolution of cardiovascular action of the renin-angiotensin system. In: Symposium, Hormonal Control of Cardiovascular Function; evolutionary aspects organized by Dr. A. Epple, at American Association for the Advancement of Science. New York.
06/84	Nishimura, H. Cardiovascular and renal action of vasoactive hormones in birds. In: 3rd International Symposium on Avian Endocrinology. New Jersey.
03/27-29/85	Nishimura, H. Comparative endocrinology of renin-angiotensin system — its role in control of blood pressure. Annual Meeting of Japanese Society for Pharmacology. Tokyo, Japan.
04/14-17/85	Nishimura, H. Evolution of the renin-angiotensin system and control of cardiovascular function in fishes. In: Workshop, Evolutionary Biology of Primitive Fishes. Ramfield, British Columbia, Canada.
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Patent/GenBank

Cui, Y., Y. Yang, J. Bolan, W. X. Wang, H. Nishimura, and Z. Fan. Cloning of cDNAs encoding avian aquaporin water channels from quail kidney. Gene name, qAQP4; source, kidney medullary cones form Japanese quail, *Coturnix coturnix* Bankit439990, AF 465730

Yang, Y., Y. Cui, W. Wang, L. Zhang, L. Bufford, S. Sasaki, Z. Fan, and H. Nishimura. Cloning of cDNAs encoding avian aquaporin water channels from quail kidney. Gene name, qAQP2; source, kidney, Japanese quail, *Coturnix coturnix* Bankit569868, AY 30098

Yang, Y., Z. Fan, and H. Nishimura. Molecular and functional characterization of a mercury-sensitive aquaporin water channel in quail kidney. Gene name, qAQP1; source, kidney, Japanese quail, *Coturnix coturnix* AY 692368

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