Takashi Nakazawa, Ph. D.

Present Position and Address:
Professor,
Department of Chemistry
Nara Women's University
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Date of Birth: 9 September 1954 (in Tokyo)

Education:

B. Sc.: Department of Chemistry (Faculty of Science), Osaka University, 1977.

M. Sc.: Graduate School of Science/Institute for Protein Research, Osaka University, 1979. Supervised by Prof. *Kozo Narita*.

Ph. D.: Graduate School of Science/Institute for Protein Research, Osaka University, 1982. Supervised by Prof. *Fumio Sakiyama*. Thesis of Ph. D.: "Isotope labeling of the C-2 atoms of indoles: application to tryptophan-62 in hen egg-white lysozyme"

Academic Positions:

Post-doctoral fellow: National Institute for Physiological Sciences, Okazaki, 1983. Supervised by Prof. *Hiroshi Watari*. (Biomedical NMR)

Research Assistant: Department of Chemistry (Faculty of Science), Nara Women's University, 1984-1988.

Lecturer: Department of Chemistry (Faculty of Science), Nara Women's University, 1988-1993.

Associate Professor: Department of Chemistry (Faculty of Science), Nara Women's University, 1993-2007.

Professor: Department of Chemistry (Faculty of Science), Nara Women's University, 2008-present.

Other Research Activities in Overseas (Fields):

Visiting Scholar: Department of Chemistry, University of Cambridge, UK. 1995-1996. Supervised by Prof. *Ray Freeman, FRS*. (NMR spectroscopy)

Visiting Scholar: A.G. Bioorganische Chemie, Max-Planck-Institut für Biochemie, Munich, Germany. 1996. Collaborated with Prof. *Luis Moroder*. (Peptide Chemistry)

Collaborations (Research Institutions)

(1) Prof. *Yuko Okamoto* (Biophysics, Computer Science), Institute of Molecular Science, Okazaki. 1995-2004.
(2) Prof. *Yuji Kobayashi* (Biochemistry, Biophysics), Department of Pharmaceutical Sciences, Osaka University. 1999-present.
(3) Dr. *Susumu Tsunasawa* (Mass Spectrometry, Proteomics), Life Science Laboratory, Shimadzu Corporation, Kyoto. 1999-2012.
(4) Prof. *Osamu Nishimura* (Proteomics), Institute for Protein Research, Osaka University. 2007-2014.
(5) Dr. *Masaru Miyagi* (Protein Mass Spectrometry), Department of Pharmacology, Case Western Reserve University. 2007-present.
(6) Dr. *Mehdi Moini* (Conservation of Arts and Cultural Heritages, Mass Spectrometry),
(7) Prof. *Yoko Taniguchi* (Archaeology and Conservation of Cultural Heritages), Department of History and Archaeology, Tsukuba University. 2012-present.
(8) Dr. *Seiji Kadowaki* (Paleolithic Archaeology), Nagoya University Museum, 2017-present.
(9) Prof. *Yoshihiro Nishiaki* (Prehistoric Archaeology), The University Museum, The University of Tokyo, 2017-present.

Memberships of Academic Organizations:

Japanese Biochemical Society: 1977-present
Chemical Society of Japan: 1984-present
Protein Science Society of Japan: 2000-present
American Chemical Society: 2003-present
American Society for Mass Spectrometry: 2004-present
The Japan Society for Scientific Studies on Cultural Property: 2009-present
The Mass Spectrometry Society of Japan: 2011-present
The Japan Society of Analytical Chemistry: 2013-present

Present Research Interests:

(1) Development of methods in chemical modification of proteins.
(2) Development of spectroscopic methods for elucidating structure and dynamics of proteins.
(3) Experimental assessment of computational approaches to tertiary structure prediction of peptides and proteins.
(4) Study of enzyme reaction mechanisms including serine proteases.
(5) Organic syntheses of dehydro and isotopically labeled amino acid derivatives.
(6) Study of protein folding using collagen model peptides.
(7) Development of chemical methods associated with mass spectrometry for

proteomics research.

(8) Mass spectrometry of peptides and proteins.

(9) Biophysical analysis of proteins using mass spectrometric measurement of hydrogen/deuterium exchange reaction rate at the C2-position of histidine residue.

(10) Establishment of protein archaeology based on proteomics.