

Curriculum Vitae
M. Z. Atassi

M. Zouhair Atassi

CURRICULUM VITAE,
PATENTS AND PUBLICATIONS

LAST UPDATE
JUNE 4, 2004

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CURRICULUM VITAE

NAME: M. ZOUHAIR ATASSI

CITIZENSHIP: USA

MARITAL STATUS: Married to
Lena M.P. Atassi, MD

CHILDREN: Daughter
Shana M. Atassi

TEL. NUMBER: (713) 798-6050

FAX. NUMBER: (713) 798-6437

E-MAIL: matassi@bcm.tmc.edu

EDUCATION:

B.Sc. Special Honours in Chemistry, University of Bristol, England

M.Sc. in Chemistry, University of Birmingham, England

Ph.D. in Chemistry, University of Birmingham, England

POSITIONS:

- 1983 – Present Robert A. Welch Chair of Chemistry
Professor of Biochemistry and Molecular Biology
Professor of Immunology
Baylor College of Medicine, Houston, Texas 77030, USA
- 1975 – 1983 Professor of Biochemistry and Professor of Immunology
Mayo Medical School, Rochester, Minnesota
Also, Professor of Biochemistry and Professor of Immunology,
University of Minnesota, Minneapolis, Minnesota
- 1971 – 1975 Professor and Chairman, Biochemistry Division
Wayne State University, Detroit, Michigan
- 1968 – 1975 Professor of Chemistry
Wayne State University, Detroit, Michigan
- 1963 – 1968 Assistant Professor of Biochemistry
State University of New York at Buffalo, Buffalo, New York.
- 1962 – 1963 Postdoctoral Research Fellow
Division of Laboratories and Research, New York State Health Department,
Albany, NY.
- 1960 – 1962 Postdoctoral Research Fellow in Chemistry
University of Birmingham, Birmingham, England

RESEARCH STATEMENT:

The overall research interest is in the areas of correlation of protein structure with function; protein-receptor interactions, protein-protein interactions, conformation of proteins and peptides, immune recognition of proteins by antibodies and by T cells; manipulation of the immune response, antigen presentation; design of synthetic peptide vaccines to neurotoxins and viral pathogens, peptide synthesis.

Research activities include:

Major research activities include the following: Antibody and T-cell recognition of proteins at the submolecular level and synthesis of the recognition sites (myoglobin, hemoglobin, lysozyme, serum albumin, hCG, urokinase, ragweed allergen, influenza virus hemagglutinin, human DR2 antigen; acetylcholine receptor; α -bungarotoxin; botulinum neurotoxin); design and synthesis of anti-viral peptide vaccines (influenza virus and foot-and-mouth disease virus are used as models); development of peptide vaccines against neurotoxins; mechanism of antigen presentation to the T cell; mechanism of T-B and T-T cell collaboration, dissection and synthesis of active sites of α -neurotoxins; dissection and synthesis of active sites of acetylcholine receptor; molecular and cellular autoimmune recognition in Myasthenia gravis; development of peptide-based diagnostic assay for Myasthenia gravis; autoimmune recognition of human insulin receptor; development of immunological diagnostic tests for malignant brain tumors (gliomas); development of sensitive immunodiagnostic tests for early diagnosis of cancer.

Ongoing Research:

1. To develop a synthetic peptide vaccine against botulinum neurotoxins (BoNT) A and B
2. To develop a peptide-based tolerization strategy to shut off the immunoresistance to treatment with BoNT/A.
3. To develop a tool for turning off the immune response to the autoimmune disease Myasthenia Gravis
4. To design and synthesize oxygen-carrying peptides for use as blood substituting transfusion agents.

HONORS AND AWARDS:

| | |
|-------------|--|
| 2003 | President, the Institute of Immunobiology |
| 2002 | Member Advisory Board, The Neurotoxin Institute |
| 1996 | The Japanese Society of Electrophoresis Award for Outstanding Research Contributions |
| 1995 | The Kuwait Prize in Basic Sciences |
| 1992 – 2002 | Member Edman Award Selection Committee |
| 1992 | Chairman of the 1994 International Conference on Methods in Protein Structure Analysis (MPSA) |
| 1991 | Distinguished Lecturer in Immunology, University of Texas Health Science Center, Galveston, Texas |

- 1988 Tohoku Medical Society Award
- 1988 Medico-Legal Society of Japan Award for distinction in research
- 1987 The Harden Medal, awarded by the Biochemical Society, London
Also, Jubilee Lecture of the Biochemical Society
- 1987 Distinguished Lecturer, State University of New York at Buffalo, Health Science Center
- 1984 Wellcome Visiting Professorship in Basic Medical Sciences, University of Mississippi, Oxford, MS; award supported by Borough-Wellcome and FASEB
- 1979 Distinguished Lecturer in Medical Science, Mayo Grad. Sch. of Medicine
- 1977 – Present President, International Symposium on the Immunobiology of Proteins and Peptides
- 1973 D.Sc. in Chemistry, University of Birmingham, England
- 1966 – 1971 Established Investigator of the American Heart Association
- 1960 British Empire Cancer Campaign Fellowship Award

MEMBERSHIPS:

American Society for Biochemistry and Molecular Biology
American Association of Immunologists
American Association for the Advancement of Sciences
American Chemical Society
American Heart Association Basic Science Council
Biochemical Society, England
Member of National Advisory Panel to Office of Naval Research – Life Sciences Section, 1981–1984.

EDITORIALS:

Editor-in-Chief: *The Protein Journal*, 2004 –

Editor-in-Chief: *Protein Reviews*, 2004 –

Editor-in-Chief: *Critical Reviews in Immunology*, 1979 –

Editor-in-Chief: *Journal of Protein Chemistry*, 1982 – 2003

Editor: *Toxin Report 2002* (see also: <http://www.wemove.org/pdf/toxins2002.pdf>)

Editorial Committee: *Immunological Investigations*, 1985 – Present

Editorial Advisory Board: *Preparative Biochemistry*, 1983 – Present

Editorial Board: *Journal of the Saudi Chemical Society*, 1986 – present

Editorial Board: *ImmunoMethods*, 1993 – Present

Editorial Board: *Methods. A companion to Methods in Enzymology*, 1995 – Present

Editorial Board: *Peptide and Protein Reviews*, 1982 – 1986

Editorial Advisory Board: *Biochem. J.*, 1981 – 1985

Editorial Advisory Board: *Immunological Communications*, 1981 – 1984

Editorial Advisory Board: *African J. Clin. and Exptl. Immunol.*, 1980 – 1983

Editorial Advisory Board: *Molecular Immunology*, 1979

Editorial Advisory Board: *Immunochemistry*, 1974 – 1978

PLENARY OR KEYNOTE LECTURES:

- 1996 Japanese Electrophoresis Society
- 1995 Kuwait Foundation for the Advancement of Sciences & Kuwait University
- 1990 American Chemical Society 200th National Meeting
- 1988 Tohoku Medical Society, Japan
- 1988 Medico-Legal Society of Japan
- 1987 Intl. Meeting on Biochemistry, The Chinese Biochemical Society, Beijing, China
- 1987 Jubilee Lecture of the Biochemical Society, London
- 1986 Symposium on Modern Methods in Protein Chemistry, Bielefeld, FRG
- 1984 3rd Intl. Symposium on Immunobiology of Proteins and Peptides Tahoe City, CA
- 1983 15th FEBS Meeting, Brussels, Belgium
- 1980 Structure and Variation of Influenza Virus, Thredbo, Australia
- 1978 11th Intl. Union of Pure and Appl. Chemistry-Symp. on the Chemistry of National Products, Varna, Bulgaria

INVITED SYMPOSIA:

In addition to the foregoing plenary lectures, I have given 156 invited symposia at National and International conferences in the U.S. and abroad.

INVITED SEMINARS:

I have given 181 invited seminars in U.S. and foreign universities and research institutions.

BOOKS:

IMMUNOCHEMISTRY OF PROTEINS: Volume 1, M.Z. Atassi, published by Plenum Press, 1977.

IMMUNOCHEMISTRY OF PROTEINS: Volume 2, M.Z. Atassi, published by Plenum Press, 1977.

IMMUNOCHEMISTRY OF PROTEINS: Volume 3, M.Z. Atassi, published by Plenum Press, 1979.

MOLECULAR IMMUNOLOGY: M.Z. Atassi, C.J. van Oss and D.R. Absolom, published by Marcel Dekker, 1984.

IMMUNOBIOLOGY OF PROTEINS AND PEPTIDES: Volume 1, M.Z. Atassi and A.B. Stavitsky, published by Plenum Press, 1978.

IMMUNOBIOLOGY OF PROTEINS AND PEPTIDES: Volume 2, M.Z. Atassi, published by Plenum Press, 1982.

IMMUNOBIOLOGY OF PROTEINS AND PEPTIDES: Volume 3, *Viral and Bacterial Antigens*, M.Z. Atassi and H.L. Bachrach, Plenum Press, 1985.

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M. Z. Atassi

IMMUNOBIOLOGY OF PROTEINS AND PEPTIDES: Volume 4, *T-Cell Recognition and Antigen Presentation*, M.Z. Atassi, Plenum Press, 1987.

IMMUNOBIOLOGY OF PROTEINS AND PEPTIDES: Volume 5, *Vaccines: Mechanisms, Design and Applications*, M.Z. Atassi, Plenum Press, 1989.

IMMUNOBIOLOGY OF PROTEINS AND PEPTIDES: Volume 6. M.Z. Atassi, Plenum Press, 1991.

IMMUNOBIOLOGY OF PROTEINS AND PEPTIDES: Volume 7. M.Z. Atassi, Plenum Press, 1994.

IMMUNOBIOLOGY OF PROTEINS AND PEPTIDES: Volume 8. M.Z. Atassi and G.S. Bixler, Plenum Press, 1995.

METHODS IN PROTEIN STRUCTURE ANALYSIS: M.Z. Atassi and Ettore Appella, Plenum Press, 1995.

CONSULTING:

I have acted as a consultant for the following agencies and companies:

Advanced Bio/Chem

Allergan

Amgen

BioCal/BioRad

DuPont Chemical Co.

Eastman Kodak

Genesis Labs

Igen

International Bioimmune Systems

Kuwait Foundation for the Advancement of Science

Kuwait University

Monoclonotics

Mount Sinai Medical Center, New York

National Aeronautics and Space Administration

National Institutes of Health

Norwest Bank

Office of Naval Research

Oncogen

Polaroid

Porotex

Receptogen

Sclavo (Italy)

Seppic (France)

Curriculum Vitae
M. Z. Atassi

Smith-Kline-Beckman

U.S. Air Force

U.S. Army Medical Research and Development Command

U.S. Department of Agriculture

U.S. Food and Drug Administration

Vega Biotechnologies

Wyeth Laboratories

Zeus Scientific

PUBLICATIONS

M. ZOUHAIR ATASSI

Mapping of the synaptosome-binding regions on the heavy chain of botulinum neurotoxin A by synthetic overlapping peptides encompassing the entire chain

Takahiro Maruta, Behzod Z. Dolimbek, K. Roger Aoki, Lance E. Steward and M. Zouhair Atassi

The Protein Journal (2004), in press

Editorial: New Name for the Journal

M. Zouhair Atassi

The Protein Journal (2004), 23, 1.

Mapping of the Antibody-Binding Profile on Botulinum Neurotoxin A H_N-Domain (Residues 449–859) with Anti-Toxin Antibodies from Four Host Species. Antigenic Profile of the Entire H-Chain of Botulinum Neurotoxin A

M. Zouhair Atassi and Behzod Z. Dolimbek

The Protein Journal (2004), 23, 39-52.

Basic immunological aspects of botulinum toxin therapy

M. Zouhair Atassi*

Mov. Disord. (2004), Suppl 8, S68-84

Cross reaction of tetanus and botulinum neurotoxins A and B and the boosting effect of botulinum neurotoxins A and B on a primary anti-tetanus antibody response

Behzod Z. Dolimbek, Joseph Jankovic, and M. Zouhair Atassi

Immunological Investigations (2002), 31, 247-262.

Vaccination with a MHC Class II Peptide Attenuates Cellular and Humoral Responses against tAChR and Suppresses Clinical EAMG

Minako Oshima, Philip Deitiker, Tetsuo Ashizawa, M. Zouhair Atassi

Autoimmunity (2002) 35, 183–190.

Immune recognition and cross-reactivity of botulinum neurotoxins

M. Zouhair Atassi

in Scientific and Therapeutic Aspects of Botulinum Toxins (edited by M. F. Brin, J. Jankovic and M. Hallett), pages 385–408, Lippincott Williams and Wilkins, Philadelphia, 2002.

On the Initial Trigger of Myasthenia Gravis and Suppression of the Disease by Antibodies Against MHC Peptide Region Involved in the Presentation of a Pathogenic T Cell Epitope

M. Zouhair Atassi, Minako Oshima, and Philip Deitiker

Critical Reviews in Immunology (2001) 21, 1-27.

T Cells of mice treated with mPEG-myasthenogenic peptide conjugate are involved in protection against EAMG by stimulating lower pathogenic antibody responses

Minako Oshima and M. Zouhair Atassi

Autoimmunity (2000), 32, 45–55.

Suppression of experimental myasthenia gravis by monoclonal antibodies against MHC peptide region involved in presentation of a pathogenic T cell epitope

Nori Nakayashiki, Minako Oshima, Philip R. Deitiker, Tetsuo Ashizawa and M. Zouhair Atassi

Journal of Neuroimmunology (2000), **105**, 131–144.

Antigen mimicry in autoimmune disease. Can immune responses to microbial antigens that mimic acetylcholine receptor act as initial triggers of myasthenia gravis?

Philip Deitiker, Tetsuo Ashizawa and M. Zouhair Atassi

Human Immunology (2000), **61**, 255–265.

Structure, activity and immune (T and B Cell) recognition of botulinum neurotoxin

M. Zouhair Atassi and Minako Oshima

Critical Reviews in Immunology (1999), **19**, 219–260.

Subunit interacting surfaces of human hemoglobin in solution. Localization of the α - β subunit interacting surfaces on the α -chain by a comprehensive synthetic strategy.

Naofumi Yoshioka and M. Zouhair Atassi

Journal of Protein Chemistry, (1999), **18**, 179–185.

Ability of antibodies to the alpha-bungarotoxin synthetic peptides to recognize conformational regions on the toxin molecule

OB.Z. Dolimbek and M.Z. Atassi

Chemistry of Natural Compounds, (1999), #4, 502–506.

In vitro inhibition of human malignant brain tumour cell lines proliferation by anti-urokinase-type plasminogen activator monoclonal antibodies

M-S I. Abaza, F A. Shaban, R K. Narayan and M. Zouhair Atassi

British Journal of Cancer (1998), **78**, 1578–1585.

Anti-urokinase-type plasminogen activator monoclonal antibodies inhibit the proliferation of human breast cancer cell lines *in vitro*.

1 Mohamed-Salah I. Abaza; Raj K. Narayan; and M. Zouhair Atassi

Tumor Biology (1998), **19**, 229–237.

Mapping of the subunit interacting surfaces of oligomeric proteins in solution by a comprehensive synthetic strategy.

2 M. Zouhair Atassi and Naofumi Yoshioka

Journal of Protein Chemistry (1998), **17**, 553–555

B-Cell activation *in vitro* by helper T cells specific to a protein region that is recognized both by T cells and by antibodies.

Susumu Hamajima and M. Zouhair Atassi

Immunological Investigations, (1998), **27**, 121–134.

Human glioma associated intermediate filament proteins: Over- expression, co-localization and cross-reactivity.

Mohamed-Salah I. Abaza, Fatma A. Shaban, Raj K. Narayan and M. Zouhair Atassi

Anticancer Res. (1998), **18** (Mar-Apr 2B), 1333-1340.

Antibodies and T cells against synthetic peptides of the C-terminal domain (H_C) of botulinum neurotoxin type A and their cross-reaction with H_C.

Minako Oshima, John L. Middlebrook and M. Zouhair Atassi

Immunol. Letters (1998), **60**, 7–12.

T-Cell responses in EAMG-susceptible and non-susceptible mouse strains after immunization with overlapping peptides encompassing the extracellular part of *Torpedo californica* acetylcholine receptor α chain. Implication to role in myasthenia gravis of autoimmune T-cell responses against receptor degradation products.

Minako Oshima, Tsuyoshi Yokoi, Philip Deitiker and M. Zouhair Atassi

Autoimmunity (1998), **27**, 79–90.

Presynaptic and Postsynaptic Neurotoxins: Structure of the Immune Recognition Sites.

Behzod Z. Dolimbek, M. Zouhair Atassi and Sh. I. Salikhov

Chemistry of Natural Compounds (1998), **1**, 22–40.

In vitro efficacy of anti-glial fibrillary acidic protein monoclonal antibodies against human malignant glioma cell lines.

Mohamed-Salah I. Abaza; Raj K. Narayan; and M. Zouhair Atassi

Japan. J. Cancer Res. (1997); **88** (Nov 11), 1094-1099.

Synthesis of Two α -Bungarotoxin Peptides and the Role of the Amino Acid Residue of Trp-28 in the Antigenicity of the Toxin Molecule

Behzod Z. Dolimbek and M. Zouhair Atassi.

Chemistry of Natural Compounds (1997), **4**, 628–631.

Immune Recognition of Botulinum Neurotoxin Type A: Regions Recognized by T Cells and Antibodies against the Protective H_C Fragment (Residues 855–1296) of the Toxin.

Minako Oshima, Makoto Hayakari, John L. Middlebrook and M. Zouhair Atassi

Molecular immunology (1997), **34**, 1031–1040.

Autoimmune Responses Against Acetylcholine Receptor: T and B Cell collaboration and Manipulation by synthetic peptides

M. Zouhair Atassi and Minako Oshima

Critical Reviews in Immunology (1997), **17**, 481–495

Localization of the regions on the C-terminal domain of the heavy chain of botulinum toxin A recognized by T-Lymphocytes and by antibodies after immunization of mice with pentavalent toxoid

Jana S. Rosenberg, John L. Middlebrook and M. Zouhair Atassi

Immunological Investigations (1997), **26**, 491–504.

Inter-site helper function of T cells specific for a protein epitope that is not recognized by antibodies.

Jana S. Rosenberg and M. Zouhair Atassi

Immunological Investigations (1997), **26**, 473–489.

Autoimmune Responses against Acetylcholine Receptor in Myasthenia Gravis and Their Manipulation by Synthetic Peptides.

M. Zouhair Atassi and Minako Oshima

Japan. Journal of Electrophoresis (1997), **41**, 95–110.

Mapping of the Antibody-Binding Regions on Botulinum Neurotoxin H-Chain Domain 855–1296 with Anti-Toxin Antibodies from Three Host Species.

M. Zouhair Atassi, Behzod Z. Dolimbek, Makoto Hayakari, John L. Middlebrook, Bruce Whitney, and Minako Oshima

Journal of Protein Chemistry (1996) **15**, 691–700.

B-Cell Activation *in vitro* by Helper T Cells Specific to Region α 146–162 of *Torpedo californica* Acetylcholine receptor.

Jana Rosenberg, Minako Oshima and M. Zouhair Atassi

Journal of Immunology (1996) **157**, 3192–3299.

Protection Against α -Bungarotoxin Poisoning by Immunization with Synthetic Toxin Peptides

Behzod Z. Dolimbek and M. Zouhair Atassi

Molecular immunology (1996) **33**, 681–689.

Antibody and T-Cell Recognition of α -Bungarotoxin and its Synthetic Loop Peptides

M. Zouhair Atassi, Behzod Z. Dolimbek and Taghi Manshoury.

Molecular immunology (1995) **13**, 927–932

Protection of Mice Against Lethal Viral Infection by Synthetic Peptides Corresponding to B- and T-Cell Recognition Sites of Influenza A Hemagglutinin.

Jana Simeckova-Rosenberg, Zhong Yun, Philip R. Wyde and M. Zouhair Atassi

Vaccine (1995) **13**, 927–932.

Effect of Amino Acid Substitutions within the Region 62–76 of I-A^b on Binding with and Antigen Presentation of *Torpedo* Acetylcholine Receptor α -Chain Peptide 146-162.

Minako Oshima and M. Zouhair Atassi

Journal of Immunology (1995) **154**, 5245–5254.

Regions of Interaction between Nicotinic Acetylcholine Receptor and α -Neurotoxins and Development of a Synthetic Vaccine Against Toxin Poisoning.

M. Zouhair Atassi and Behzod Z. Dolimbek in

Methods of Protein Structure Analysis (M.Z. Atassi and E. Appella, Eds.) (1995), 311–326 Plenum Press, New York.

Manipulation of Autoimmune Responses by Synthetic Peptides

M. Zouhair Atassi and Minako Oshima

Advances in Experimental Medicine and Biology (1995) **383**, 141–156.

Perspectives from Immune Recognition of Discontinuous Sites.

M. Zouhair Atassi and Garvin S. Bixler

Synthetic Vaccines, B. Nicholson, Ed. (1994) pp. 93–115, Blackwell Scientific, Oxford.

Mapping the Extracellular Topography of the α -Chain in Free and in Membrane-Bound Acetylcholine Receptor by Antibodies Against Overlapping Peptides Spanning the Entire Extracellular Parts of the Chain.

M. Zouhair Atassi and Biserka Mulac-Jericevic

Journal of Protein Chemistry (1994) **13**, 37–47.

α -Bungarotoxin Peptides Afford a Synthetic Vaccine Against Toxin Poisoning.

Behzod Z. Dolimbek and M. Zouhair Atassi

Journal of Protein Chemistry (1994) **13**, 490–493.

Synthetic Peptides of Influenza A Hemagglutinin Induce Protective Immunity in Mice Against Lethal Viral Infection.

Jana S. Rosenberg, Z. Yun, Philip R. Wyde and M. Zouhair Atassi

Journal of Protein Chemistry (1994) **13**, 493–494.

Profile of the Regions of Acetylcholine Receptor α Chain Recognized by T-Lymphocytes and by Antibodies in EAMG-Susceptible and Non-Susceptible Mouse Strains after Different Periods of Immunization with the Receptor.

Minako Oshima, Andrew R. Pachner and M. Zouhair Atassi

Molecular immunology (1994) **31**, 833–843.

Suppression of Experimental Autoimmune Myasthenia Gravis by Epitope-Specific Neonatal Tolerance.

Premkumar Christadoss, Mohan Shenoy, Minako Oshima and M. Zouhair Atassi

Adv. Expt. Med. Biol. (1994) **347**, 65–75.

Mapping of the Polypeptide Chain Organization of the Main Extracellular Domain of the α -Subunit in Membrane-Bound Acetylcholine Receptor by Anti-Peptide Antibodies Spanning the Entire Domain.

M. Zouhair Atassi, Biserka Mulac-Jericevic and Tetsuo Ashizawa

Adv. Expt. Med. Biol. (1994) **347**, 221–229.

Molecular Recognition of Acetylcholine Receptor. Recognition by α -Neurotoxins and by Immune and Autoimmune Responses and Manipulation of the Responses.

M. Zouhair Atassi

Adv. Neuroimmunol. (1995) **4**, 403–432.

Analysis of Exposed Regions on the Main Extracellular Domain of Mouse Acetylcholine Receptor α -Subunit in Live Muscle Cells by Binding Profiles of Antipeptide Antibodies.

Kenji Jinnai, Tetsuo Ashizawa and M. Zouhair Atassi

Journal of Protein Chemistry (1994) **13**, 715–721

Molecular immunopathogenesis of myasthenia gravis using MHC class II mutant and transgenic mice

Mohan Shenoy, Chella David, Minako Oshima, M. Zouhair Atassi and Premkumar Christadoss

Annals of the New York Academy of Sciences. (1993) **681**, 329–31.

Biological Activities of Rat Antisera Raised against Synthetic Peptides of Human Thyrotropin Receptor.

Ikuo Matsui, Shigeki Sakata, Toru Ogawa, Hiroshi Takuno, Hiroshi Sarui, T. Komaki, Taghi Manshoury, and M. Zouhair Atassi

Endocrine Journal (1993) **40**, 607–612.

Amino Acid Substitutions Outside a Preselected Antigenic Region in Hemoglobin Affect the Binding to Monoclonal Antibodies Obtained by Immunization with the Synthetic Region.

Minako Oshima, Shigenori Nakamura and M. Zouhair Atassi

Journal of Protein Chemistry (1993) **12**, 403–412.

Design of Peptide Enzymes (pepzymes): Surface-Simulation Synthetic Peptides that Mimic the Chymotrypsin and Trypsin Active Sites Exhibit the Activity and Specificity of the Respective Enzyme.

M. Zouhair Atassi and Taghi Manshoury

Proc. Natl. Acad. Sci. USA (1993) **90**, 8282–8286.

Suppression of Experimental Autoimmune Myasthenia Gravis by Epitope-Specific Neonatal Tolerance to Synthetic Region α 146-162 of Acetylcholine Receptor.

Mohan Shenoy, Minako Oshima, M. Zouhair Atassi and Premkumar Christadoss

Clin. Immunol. Immunopath. (1993) **66**, 230–238.

Autoimmune T-Cell Recognition Sites of Human Thyrotropin Receptor in Graves' Disease.

Shigeki Sakata, Syun-Ichi Tanaka, Kenji Okuda, Kiyoshi Miura, Taghi Manshoury and M. Zouhair Atassi

Mol. Cell. Endocrin. (1993) **92**, 77–82.

Congenital Myasthenic Syndromes. II. Syndrome Attributed to Abnormal Interaction of Acetylcholine with its Receptor.

Osvaldo Uchitel, Andrew G. Engel, Timothy J. Walls, Alexander Nagel, M. Zouhair Atassi and Vera Bril

Muscle and Nerve (1993) **16**, 1293–1301.

Epitope-Specific Suppression of Antibody Response in Experimental Autoimmune Myasthenia Gravis by an mPEG Conjugate of a Myasthenogenic Synthetic Peptide.

M. Zouhair Atassi, Ke-He Ruan, Kenji Jinnai, Minako Oshima and Tetsuo Ashizawa

Proc. Natl. Acad. Sci. USA (1992) **89**, 5852–5856.

Biological Activities of Rabbit Antibodies Against Synthetic Human Thyrotropin Receptor Peptides Representing Thyrotropin Binding Regions.

Shigeki Sakata, Toru Ogawa, Ikuo Matsui, Taghi Manshoury and M. Zouhair Atassi

Biochem. Biophys. Res. Commun. (1992) **182**, 1369–1375.

HIV Envelope Protein is Recognized as an Alloantigen by Human DR-Specific Alloreactive T Cells.

Hammad Atassi and M. Zouhair Atassi

Human Immunology (1992) **34**, 31–38.

Profile of the Regions on the α -chain of Human Acetylcholine Receptor Recognized by Autoantibodies in Myasthenia Gravis.

Tetsuo Ashizawa, Ke-He Ruan, Kenji Jinnai and M. Zouhair Atassi
Molecular immunology (1992) **29**, 1507–1514.

Effects of Amino Acid Substitutions Outside an Antigenic Site on Protein Binding to Monoclonal Antibodies of Pre-determined Specificity Obtained by Peptide Immunization: Demonstration with Region 94-100 (Antigenic Site 3) of Myoglobin.

Mohamed S.I. Abaza and M. Zouhair Atassi
Journal of Protein Chemistry (1992) **11**, 433–444.

Effects of Amino Acid Substitutions Outside an Antigenic Site on Protein Binding to Monoclonal Antibodies of Pre-determined Specificity Obtained by Peptide Immunization: Demonstration with Region 15-22 (Antigenic Site 1) of Myoglobin.

Mohamed S.I. Abaza, Colin R. Young and M. Zouhair Atassi
Journal of Protein Chemistry (1992) **11**, 445–454.

Effects of Amino Acid Substitutions Outside an Antigenic Site on Protein Binding to Monoclonal Antibodies of Pre-determined Specificity Obtained by Peptide Immunization: Demonstration with Region 56-62 (Antigenic Site 2) of Myoglobin.

Mohamed S.I. Abaza and M. Zouhair Atassi
Journal of Protein Chemistry (1992) **11**, 455–465.

Effects of Amino Acid Substitutions Outside an Antigenic Site on Protein Binding to Monoclonal Antibodies of Pre-determined Specificity Obtained by Peptide Immunization: Demonstration with Region 113-120 (Antigenic Site 4) of Myoglobin.

Mohamed S.I. Abaza and M. Zouhair Atassi
Journal of Protein Chemistry (1992) **11**, 677–686.

Effects of Amino Acid Substitutions Outside an Antigenic Site on Protein Binding to Monoclonal Antibodies of Pre-determined Specificity Obtained by Peptide Immunization: Demonstration with Region 145-151 (Antigenic Site 5) of Myoglobin.

Mohamed S.I. Abaza and M. Zouhair Atassi
Journal of Protein Chemistry (1992) **11**, 687–698.

Synthesis, Biological Activity and Autoimmune Recognition of the Hormone-Binding Regions of the Human Thyrotropin Receptor.

M. Zouhair Atassi, Taghi Manshoury and Shigeki Sakata
Journal of Protein Chemistry (1992) **11**, 417–419.

Measuring the Metastatic Potential of Cancer Cells

Dennis R. Morrison, Howard Gratzner and M. Zouhair Atassi
The Third National Technology Transfer Conference (NASA Conference Publication 3189), (1993) **Volume 1**, 59–70

Insufficient Patient Humoral Response to Glioma-Associated Antigen(s) Identified by Immunofluorescence, RIA, and Immunoblots Using Polyclonal and Monoclonal Reagents.

Duncan K. Fischer, Fatma Shaban, Mohamed S.I. Abaza, Masafumi Matsuda, Raj K. Narayan and M. Zouhair Atassi

Surgical Forum (1991) **42**, 525–529.

Autoimmune Recognition Profile of the Alpha Chain of Human Acetylcholine Receptor in Myasthenia Gravis.

Tetsuo Ashizawa, Minako Oshima, Ke-He Ruan and M. Zouhair Atassi
Adv. Expt. Med. Biol. (1991) **303**, 255–261.

Paucity of Humoral Responses in Patients to Glioma-Associated Antigens: Antigen Localization by Immunofluorescence.

Duncan K. Fischer, Masafumi Matsuda, Fatma Shaban, Raj K. Narayan and M. Zouhair Atassi
Advances in Experimental Medicine and Biology (1991) **303**, 263–270.

Preparation and Characterization of Antisera and of Murine Monoclonal Antibodies to Human Glioma-Associated Antigens.

Masafumi Matsuda, Duncan K. Fischer, Raj K. Narayan and M. Zouhair Atassi
Advances in Experimental Medicine and Biology (1991) **303**, 271–283.

Synthesis of Tolerogenic Monomethoxypolyethylene Glycol and Polyvinyl Alcohol Conjugates to Peptides.

M. Zouhair Atassi and Taghi Manshour
Journal of Protein Chemistry (1991) **10**, 623–687.

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