

**ANDRÉ E NEL, MD, PhD**

CURRICULUM VITAE

PERSONAL HISTORY:

Business:

Division of Clinical Immunology & Allergy  
Department of Medicine  
UCLA School of Medicine  
10833 Le Conte Avenue, 52-175 CHS  
Los Angeles, CA 90095-1680  
(310) 825-3718

Home:

4212 Murieta Avenue  
Sherman Oaks, CA 91423  
818-501-4882

DOB: 03/05/52

POB: South Africa

Naturalized US citizen

Married

EDUCATION:

M.B., Ch.B. (summa cum laude)

Undergraduate Medical Training (M.D. equivalent),  
University of Stellenbosch, Cape Town, R.S.A.  
1970-1975

M. Med. (summa cum laude)

Residency Internal Medicine, Tygerberg Hospital and  
University of Stellenbosch, Cape Town, R.S.A.  
1978-1982

Clinical Immunology Postdoctoral Fellowship,  
Department of Basic and Clinical Immunology and Microbiology,  
Medical University of South Carolina, Charleston, SC  
1983-1985

Doctorate in Medicine (Ph.D. Equivalent)

University of Stellenbosch, Cape Town, R.S.A.  
1983-1986

OTHER QUALIFICATIONS:

1977 Qualified Flight Medical Officer, South Africa Airforce, Rank of Captain

1976 E.C.F.M.G. Certificate, U.S.A.

1982 Visa Qualifying Exam. (V.Q.E.), U.S.A.

1983 Federal Licensing Exam. (FLEX), U.S.A.

LICENSURE:

California State License (#A047814), 1989

BOARD CERTIFICATION:

1989. Board Certification (American Board of Internal Medicine (Certificate #129886),

1991. Board Certification (American Board of Allergy & Immunology (Certificate #3389),

2001. Board Recertification (American Board of Allergy & Immunology (Certificate #3389)

PROFESSIONAL EXPERIENCE:

Chief and Founder of the Division of NanoMedicine  
Department of Medicine and the Jonsson Cancer Center  
UCLA School of Medicine, Los Angeles, CA  
2007-present

Professor of Medicine  
Department of Medicine and the Jonsson Cancer Center  
UCLA School of Medicine, Los Angeles, CA  
1995-present

Professor of Pediatrics  
Department of Pediatrics  
UCLA School of Medicine, Los Angeles, CA  
2008-present

Professor of Public Health  
Department of Environmental and Occupational Health  
UCLA School of Public Health, Los Angeles, CA  
2008-present

Associate Professor of Medicine  
Department of Medicine  
UCLA School of Medicine, Los Angeles, CA  
1990-1995

Assistant Professor of Medicine  
Department of Medicine  
UCLA School of Medicine, Los Angeles, CA  
1988-1990

Senior Consultant  
Department of Internal Medicine (General Medicine and Clinical Immunologist)  
Tygerberg Hospital & University of Stellenbosch, Cape Town, R.S.A.  
1986-1988

Director of Clinical and Laboratory Immunology  
Department of Internal Medicine Microbiology  
Tygerberg Hospital & University of Stellenbosch, Cape Town, R.S.A.

1986-1988

Visiting Faculty

Department of Basic and Clinical Immunology & Microbiology  
Medical University of South Carolina, Charleston, SC  
1985-1986

Postdoctoral Fellow

Department of Basic and Clinical Immunology & Microbiology  
Medical University of South Carolina, Charleston, SC  
1983-1985

Consultant Physician (Equiv. Assist. Professor)

Department of Internal Medicine  
Stellenbosch Medical School and Tygerberg Hospital, Cape Town, R.S.A.  
1983-1985

Return visits to Namibia as consultant to expand  
Internal Medicine services at primary care facilities  
1980-1982

Residency in Internal Medicine and Immunology

Stellenbosch Medical School and Tygerberg Hospital, Cape Town, R.S.A.  
1978-1982

Medical officer in compulsory national military service. Rank of Captain. Worked at  
several centers throughout R.S.A. and Namibia. Established primary medical care  
facilities for native Nambians.

1977-1978

Internship Tygerberg Hospital

(Internal Medicine, Ob-Gyn)  
1976-1977

PROFESSIONAL ACTIVITIES:

A. Societies:

American Society of Clinical Investigation (ASCI)  
American Academy of Allergy and Immunology (AAAI)  
American Federation of Clinical Research (AFCR)  
American Association of Immunologists (AAI)  
American Association for Advancement of Science (AAS)  
Western Association of Physicians, U.S.A.  
Clinical Immunology Society (CIS)

B. Scholarly Activities:

Editorial Board: *Immunology* 1989-2000.  
Editorial Board: *Clinical Immunology* 1999 - present

Associate Editor: *AIDS Medical Update*, 1988 - 1992  
Clinical Chiefs Committee, Department of Medicine 1989-1990  
Clinical Task Force, Department of Medicine 1990  
Billing Task Force, Department of Medicine 1990  
Legislative Assembly, Department of Medicine Representative 1990 - 1993  
Member, UCLA Jonsson Comprehensive Cancer Center, 1990 - present  
Johnson Cancer Center, Recruitment Committee for new faculty 1992 - 1997  
Grants reviewer Israeli Medical Research Council  
Peer reviewer for NIH Study Section and Site Visit, Immunobiology Group,  
University of Washington, Seattle, WA, 1994  
Chancellor's Ad Hoc Committee for Tenure Advancement, 1997  
UCLA Representative, National Allergy and Immunology Training Program  
Director's Meeting, Scottsdale, AZ, 1997  
Reviewer for *J. Immunol.*, *J. Biol. Chem.*, *J. Clin. Invest.*, *Mol. Cell Biol.*  
Chair and Member, Chancellor's Ad Hoc Committee for Tenure Advancement, 1999-  
2002  
Membership Committee, Clinical Immunology Society, 1999-2002  
Member UCLA Center of Occupational and Environmental Health, 1999-present  
Executive Committee member, Southern California Particulate Center (SCPC),  
1999- present  
Co-director Southern California Particulate Center (SCPCS), 2004- present  
Allergy, Immunology, and Transplantation Research Study Section, NIAID 2001-  
2005  
Chair of the Allergy, Immunology, and Transplantation Research Study Section,,  
NIAID 2004-2005  
Member of the AAAAI Air Pollution Committee, 2001-present  
Chair of the AAAAI Air Pollution Committee, 2006-2007  
Member of the AAAAI Basic and Clinical Immunology Interest Section  
Committee, 1995-present  
AAAI Basic and Clinical Immunology Interest Section Representative for  
AAAI Workshops at annual meeting, 2002-present  
AAAI Abstract Review Committee for annual Convention, 2001-2004.  
Member California Nanosystems Institute (CNSI), 2005-present  
UCLA Representative for the CNSI and the Vice-Chancellor's Office in a visit to  
Japan, April 2007. Lecture tour and meetings aimed at establishing  
collaborative NanoScience research agreements with the Universities of  
Tokyo, Kyushu, and Tohoku in Japan as well the Japanese Prime  
Minister's office for Science and Innovation, the Japanese Institute for  
Materials Science and NEC.  
Member of the International Alliance of Nanoharmonization, 2008-present

#### HONORS & SPECIAL AWARDS:

Invited US delegate representing the NIH at the Chinese Academy of Sciences at The 1<sup>st</sup>  
Joint U.S.-China Symposium on Nanobiology and Nanomedicine, Beijing, China,  
October 2008.

Invited US delegate, organizer and conference Chair of the US-Japan Cooperative  
Medical Science Program that is administered by the NIH, 2008

Director and PI of the \$24 Million Center for the Environmental Impact of Nanotechnology (CEIN) award. The UC CEIN emerged as the winner after an intense national competition for the CEIN in which > 100 US Universities competed for national honors (a smaller second award was also made to Duke)

Chief and Founder of the Division of NanoMedicine  
Department of Medicine and the Jonsson Cancer Center  
UCLA School of Medicine, Los Angeles, CA  
2007-present

Invited expert for the US Senate to review and write amendments to the Senate Bill on Nanotechnology Environmental Health and safety (Senator Dianne Feinstein). 2008.

Recipient of the John Salvaggio Memorial Lectureship and Honorary award recognizing Dr Nel's outstanding service to the specialty and science of Allergy and Immunology, International Convention in San Diego, California, 2007.

Founder/Director of the UC Lead Campus NanoToxicology Research Training Program (2006-present)

Director/PI of the NIH-funded UCLA Asthma and Allergic Disease Clinical Research Center (AADCRC) (2006-present)

Chair NIH Study Section: Allergy, Immunology, and Transplantation Research Committee, NIAID 2001-2005 (2004-2005)

Best Doctors in America (Peer selected inclusion from 1998-present)

Visiting Scientist Award  
National Council for Research Development (Israel)  
Weizmann Institute of Science, Rehovot, Israel  
1986

South African Medical Research Council Overseas Award  
1984

Annual Clinical Fellowship Awards  
Medical University of South Carolina  
1983-1985

Stellenbosch University Fellowship  
Award for Overseas Studies  
1983

Dean's Medal for Top Final Year Resident  
Faculty of Medicine  
University of Stellenbosch, Cape Town, R.S.A.  
1983

M. Med summa cum laude  
1982

Winner of Hoescht Prize for the most promising final year medical student.  
1975

M.B., Ch.B. summa cum laude. Subject prizes for best final year student in Internal Medicine, Surgery, Ob-Gyn, Psychiatry, ENT, Pediatrics.  
1975

Winner of Gold Medal for Medicine. Best M.B., Ch.B. (M.D. equivalent) course student for the six year period January 1970 - December 1975.  
1975

Research prizes for research topics presented during medical students academic research day 1973 (acetylcholine receptors) and 1974 (clinical epidemiological study).  
1973-1974

Matriculation exam, distinction all subjects, national merit list.  
1969

LEADERSHIP POSITIONS:

Director of the NIH-funded UCLA Asthma and Immunological Disease Center

Director of the UC Lead Campus NanoToxicology Research Training Program

Co-director of the EPA-funded Southern California Particle Center

Director of the NSF/EPA-funded UC Center for the environmental Impact of Nanotechnology

RESEARCH GRANTS AND FELLOWSHIPS RECEIVED:

INACTIVE:

South African Medical Research Council  
“Lymphocyte Signaling Pathways: The Role of PKC and Tyrosine Protein Kinases”  
\$30,000 p.a. (salary support for PI & staff excluded)  
1986-1988  
P.I.: A.E. Nel

NIH/NIGMS RO1 GM-41576  
“Tyrosine and C-Kinase Activity and PI Turnover in T-cell”  
\$204,322  
09/01/88 - 08/31/91  
P.I.: A.E. Nel

NIH/NIAID AI-15332  
“Center for Interdisciplinary Research in Immunology and Disease”  
Program Project PI.: John L. Fahey, M.D.  
\$178,156 for Project 6  
Project 6: Immunologic Effects of Lymphokines Therapy  
09/01/88 - 08/31/93  
Investigator on Project 6: A.E. Nel

UC Systemwide Task Force on AIDS R89LA089  
“CD4 Cell Inhibition by CD4-Receptor and HIV Envelope Peptides”  
\$130,985  
07/01/89 - 06/30/91  
PI.: A.E. Nel

Concern Foundation of Los Angeles B911206  
“Utility of a Signal Integrating Kinase in Studying T-cell Activation”  
\$28,000  
01/01/92 - 12/31/92  
PI.: A.E. Nel

NIH/NIAID AI-28697  
Center for AIDS Research (CFAR)  
09/01/91 - 06/30/94  
Program Project P.I.: Irvin Chen, M.D.  
01/01/92 - 12/31/92  
\$30,000 seed grant  
“Cytokine signaling in Kaposi’s sarcoma”  
PI.: A.E. Nel

NIH/NIGMS RO-1 GM-41576  
“PKC and Tyrosine Kinases Synergize in T-cell Activation”  
\$455,321 total  
04/01/92 - 03/31/96  
PI.: A.E. Nel

NIH/NIDDK DK-44482  
Program Project: “IBD: Genetic and Immunopathologic Mechanisms”  
Program Project P.I.: Stephan Targan, M.D.  
\$341,500 total for Project 3  
Project 3: “IBD: Biochemical Pathways in Mucosal T-cell Activation”  
09/01/92 - 08/31/95  
PI. for Project 3: A.E. Nel

AmFAR 02104-15-RG  
“Oncostatin M Signaling Pathways in Kaposi’s Sarcoma”  
\$59,000  
1993-1994  
PI.: A.E. Nel

NIAID PO1 AI-34567

Program Project (Asthma and Immunology Center): "Molecular Regulation of Allergic-Immune Inflammation"

Program Project P.I: Andrew Saxon, M.D.; CO-P.I.: A.E. Nel, M.D., Ph.D.

\$600,000 for Project 2 (Project Leader: A.E. Nel)

Project 2: "Role of B-cell Tyrosine Protein Kinase Associated Signaling Cascade in IgE Production and Modulation of This Response by Aromatic Hydrocarbons"

9/1/93 - 8/31/97

PI. for Project 2: A.E. Nel

NIA RO3 AG14763

"Role of MAPK Cascades in Function Decline of Aged T-cells"

\$49,553

8/1/97 - 7/31/98

PI: A.E. Nel

ARTHRITIS FOUNDATION RESEARCH AWARD (LA Chapter)

"Role of Stress-activated Protein Kinases in Photosensitive Lupus"

\$40,000

7/1/98 - 6/30/99

PI: A.E. Nel

NCI RO-1 CA-65239

"Cytokine and Growth Factor Pathways in Kaposi's Sarcoma"

\$776,338

5/1/94 - 4/30/00

PI.: A.E. Nel

NIAID/NIEHS funded Asthma and Immunology Center PO-1 AI-34567

Program Project: Xenobiotics and Allergic Inflammation.

Program Project PI: Andrew Saxon; Co-PI: A.E. Nel

\$580,000 for Project C

Project C: Xenobiotic Effects on Allergic Responses via Macrophages.

PI for project C: A.E. Nel

9/1/97 - 8/31/01

NIA RO-1 AG14992

\$750,000

"Role of MAP Kinase Cascades in T-cell Decision Making"

8/1/97 - 3/31/02

PI: A.E. Nel

EPA-STAR AWARD

Southern California Center for Airborne Particulate Matter

Program Project PI: John Froines, Ph.D.

Project Leader: A. E. Nel

"Use of an Asthma Model in Mice and In Vitro Cell Culture for Examining the Adjuvant Effects of PAH and Redox-active Quinones in Particles on Allergic Inflammation"

\$720,000 for Dr Nel's project.  
6/99-6/05

NIAID-funded Asthma and Immunology Center PO-1 AI-50495  
Program Project: Xenobiotics and Allergic Inflammation.  
Program Project PI: Andrew Saxon; Co-PI: A.E. Nel  
\$1,000,000 for Project 2  
Project 2: The Airway Oxidant Stress Response to DEP Xenobiotics.  
PI for project 2: A.E. Nel  
9/1/01 - 6/30/06

NIEHS R0-1 ES10553  
"Biological Analysis of Toxic Diesel Chemicals"  
\$1,000,000 (direct)  
2/2/02 – 2/28/08  
PI: A.E. Nel

NIEHS R0-1 ES12053  
"Proteomics of DEP-induced Oxidative Stress"  
\$750,000 (direct)  
8/1/02 – 7/31/08  
PI: A.E. Nel

ACTIVE:

NIAID-funded Asthma and Allergic Diseases Cooperative Research Centers (AADCRC)  
1 U19 AI070453-01  
Cooperative Agreement Center Theme: "Xenobiotics, Oxidative Stress and Allergic Inflammation"  
PI(s): Andre Nel  
Source: NIH/NIAD  
Amount (Center): \$7,173,258 (direct and indirect)  
Period: 7/1/06 – 6/30/11

Personal Project support for A.E. Nel under this program:

Project 1: PM Adjuvant effects, Dendritic Cells, and the Hierarchical Oxidative Stress Response  
PI for project 1: A.E. Nel  
Amount (Project 2): \$1,261,677 (direct)  
7/1/06 - 6/30/11

Core A: Administrative Core  
PI for Core A: A.E. Nel  
Amount (Core A): \$498,634 (direct)  
7/1/06 - 6/30/11

EPA-STAR AWARD RD-83241301

Southern California Center for Airborne Particulate Matter

Program Project PI: John Froines, Ph.D.

Co-Director and Project 2 Leader: A. E. Nel

“Project Title: The Role of Oxidative Stress in the Susceptibility to PM-Induced Adverse Health Effects”

Project 2 budget (direct): \$1,570, 000

10/1/05-9/30/10

NIA RO-1 AG14992

"Lipid Rafts in JNK and NF- $\kappa$ B Activation by TCR/CD28"

\$1,125,000 (direct)

5/01/02 - 4/30/09

PI: A.E. Nel

NIEHS R0-1 ES013432

“Effects of PM on Atherosclerosis in Susceptible Animal Models”

\$1,114,800 (direct)

8/1/04 – 7/31/09

PI: A.E. Nel

NIEHS RO-1 ES015498-01

“Development of Methods and Models for Nanoparticle Toxicity Screening”

\$399,000 (direct)

9/1/06-8/30/09

PI: A.E. Nel

NIEHS R0-1 ES016746

“Nano-Biological Interactions and Toxicity of Engineered Metal Oxide Particles”

\$1,125,000 (direct)

05/15/08-02/28/13

PI: A.E. Nel

UC TSRP UC Lead Campus for Toxic Substances Research Training Program

“UC Lead Campus Program for Nanotoxicology Research and Training”

\$1, 620,000 (direct)

7/1/06-6/31/12

PI: A.E. Nel

NSF and EPA Cooperative Agreement (EF 0830117).

" UC Center for the Environmental Implications of Nanotechnology (CEIN)"

PI: A.E. Nel

10/1/08 - 9/30/13

Program award: \$24,000,000 (direct and indirect)

Personal Project support for A.E. Nel under this program:

Administrative Core (Center Director): \$1.97 million (direct)

Investigator (IRG2) (project allocation \$300,000 (direct)

Investigator (IRG5) (project allocation \$300,000, direct)

COURSES AND TEACHING:

Medicine Grand Rounds, Course M819-132, 1988-2008  
Organizer and Chairman UCLA Clinical Immunology/Allergy Core Curriculum Lecture Series, 1989-1990  
Clinical Case Conferences in Immunology/Allergy for Clinical Fellows, 1988-present  
Attending Physician in General Medicine and Allergy/Immunology Service, 1988-present  
Clinical Immunology-Allergy Preceptor, Course ME225, 1998-present  
T-cell Biology, Course M262D, graduate students, May 1992  
Biology, Course 199, undergraduate, Spring 1992  
Immunology Forum, Course M260, 1993-1994  
Graduate Access Program, Lake Arrowhead, November 1996: "Role of the MAP Kinase Cascades in T-cell Decision Making"  
Pathology, Course M237, "Molecular and Cellular Foundations of Disease," spring 1998  
Chemistry, Courses 140/240, undergraduates & graduates "Bionanotechnology", Spring 2006  
Course Co-director, Principles of Nanobiological Interactions & Nanotoxicology (Environmental Health 180/280), capstone course for the UC Lead Campus for Toxic Substances Research Training Program, 2007- present.  
Lecturer in Nanotox Seminar Series (Jointly with Molecular Tox) UCLA Course M411, 2006-present

INVITED PRESENTATIONS AND CHAIRING OF SCIENTIFIC CONFERENCES (last 10 years)

Invited Speaker, Occupational Disease Conference, ACAAI, Philadelphia, PA, November, 1998: "Role of Diesel Exhaust Particles as Adjuvants for Allergic Inflammation."  
Moderator (LA), National Video Teaching Conference, "Mitigating the Sedative Effects of Allergies and Antihistamines," Postgraduate Institute for Medicine, September 1998.  
Symposium Chair, "Effect of the Environment on Immune Function", Clinical Immunology Society/AAI, Washington DC, March 1999. Presentation: "Role of Diesel Exhaust Particles as Adjuvants for Allergic Inflammation."  
Symposium Chair, "Molecular Mechanisms of Macrophage Activation," AAI Annual Convention, Seattle, WA, April 2000. Presentation: "Induction of heme oxygenase-1 expression in macrophages by diesel exhaust particles and quinones is mediated through antioxidant response elements in that gene enhancer."  
Invited Speaker, Gerontological Society of America, Annual Convention, Washington DC, November, 2000. Session: Aging, Cytokines and Signals: "Age-related changes in the signal transduction process."  
Invited Speaker, Federation of Clinical Immunology Societies (FOCIS), Boston, MA, 2001, Major Symposium on Costimulation: "NF- $\kappa$ B activation by CD28 costimulation involves lipid rafts and is critical for T-cell survival."  
Invited Speaker, AAI/FASEB Symposium on Signaling of the Lung's Response to Inhaled Particles, April 2001, Orlando, FL, "Role of oxidative stress in the adverse health effects of diesel exhaust particles."  
Invited Speaker, EPA Particle Center Director's Meeting, July 2001, Boston, MA, "Role of oxidative stress in the adverse health effects of diesel exhaust particles."

- Workshop Chair, "Negative Regulation of Cytokine Signaling", AAAAI International Convention, March 2002, New York, NY.
- Oral Abstract Session Chair, "T-cell/B-cell Immunoregulation and Autoimmunity," AAAAI International Convention, March 2002, New York, NY.
- Invited Speaker, AAAAI International Convention, March 2002, New York, NY, in course in Lymphocyte Development and Function, "Molecular mechanisms of T-cell activation by the TCR."
- Invited Speaker, American Thoracic Society International Convention, May 2002, Atlanta, GA, in the Symposium, "Allergens and Air Pollutants: Co-exposures and Airway Responses," Title: "Mechanisms by which DEP enhance allergic airway disease."
- Presenter, American Thoracic Society International Convention, May 2002, Atlanta, GA, at Symposium: "Response to Particle Air Pollution: Science and Public Health", on behalf of the Southern California Particle Center and Supersite.
- Invited Speaker, AAAAI International Convention, March 2003, Denver, CO, to Fellows-in Training Program, "The importance of T-lymphocytes in the orchestration of the Immune System."
- Moderator/Speaker, AAAAI International Convention, March 2003, Denver, CO, in Symposium, "T-cell antigen receptor activation: From bench-top to bedside."
- Moderator/Speaker, AAAAI International Convention, March 2003, Denver, CO, in Workshop, "Role of oxidative stress in pulmonary inflammation and asthma."
- Moderator, AAAAI International Convention, March 2003, Denver, CO, at Year-in-Review Session, "Immunity Year-in review."
- Moderator/Speaker, AAAAI International Convention, March 2004, San Francisco, CA, in Workshop, "Use of Proteomics to Advance our Understanding of Allergy and Immunology."
- Moderator/Speaker, AAAAI International Convention, March 2004, San Francisco, CA, in Symposium, "T-cell antigen receptor activation: From bench-top to bedside."
- Co-Moderator, AAAAI International Convention, March 2004, San Francisco, CA, of Oral Abstract Session, "Immunomodulation."
- Keynote Speaker, Molecular Research in Environmental Medicine (International Conference), March 2004, Dusseldorf, Germany.
- Invited Speaker, EPA Center Director's Meeting, September 2004, Washington DC, "Particle toxicity and Mechanisms: Three tiers of Oxidative Stress in Response to Air Pollutants."
- Invited Speaker, "The Role of Air Pollutants in Cardiovascular Disease NIEHS/EPA Research Program", September 2004, Washington DC, Title: "Atherogenic Effects of Ambient PM in Susceptible Animals."
- Invited Speaker, "Environmental Influences on the Induction and Incidence of Asthma Workshop" convened jointly by the EPA and the NIEHS at EPA headquarters, Research Triangle Park, NC, October 2004, Title: "Role pro-oxidative DEP chemicals in airway inflammation."
- Visiting Professor, California Institute of Technology, Environmental Science and Engineering Seminars, April 2005, "Air Pollutants in Asthma and Cardiovascular Disease: Role of Oxidative Stress and Inflammation."
- Visiting Professor, Harvard School of Public Health, Environmental Science Seminars, May 2005, "The Biology of Oxidative Stress as an Explanation for the Adverse Health Effects of Particulate Pollutants in the Lung and CVS."

- Keynote Speaker, International Nanoparticle Symposium, National Institute for Environmental Studies, Tsukuba, Japan, June 2005, Title: “The Role of Oxidative Stress and Mitochondrial Damage in Mediating the Effects of DEP and Ultrafine Particles.”
- Invited Speaker, “The Application of Systems Biology Methodology in Environmental Research 2005 Conference,” West Virginia Systems Biology Initiative and CIIT Centers for Research, Morgantown, West Virginia, July 2005.
- Visiting Professor, Duke University, Environmental Genomics Seminar, July 2005, “The Biology of Oxidative Stress in Mediating the Adverse Health Effects of Particulate Pollutants.”
- Invited Speaker, “Mechanisms of Action of Inhaled Fibers, Particles and Nanoparticles in Lung and Cardiovascular Disease,” International Conference at EPA Conference Center, Research Triangle Park, NC, October 2005. Title: “The role of oxidative stress in the effects of ambient particulate matter and their components on the lung and cardiovascular system.”
- Invited Speaker, AAAAI International Convention, March 2006, Miami, FL, Symposium, “Oxidative Stress and Asthma,” Title: “Particulate matter, oxidative stress and airway inflammation.”
- Invited Speaker, American Society of Toxicology Symposium, “Models and mechanisms of occupational/environmental asthma,” SOT International Convention, March 2006, San Diego, CA. Title: “The role of oxidative stress in the exacerbation of asthma by particulate air pollution.”
- Visiting Professor, University of British Columbia, Vancouver BC, April 2006
- Invited Speaker, International Conference on Ultrafine Particles: The Science, Technology, and Policy issues, South Coast Air Quality Management District, May 2006, Los Angeles, CA. Title: “Oxidative stress effects of ambient particles”
- Invited Speaker/Visiting Professor, CNSI/National Technological University (Singapore) Workshop and UCLA/NTU Co-operative Agreement on Nanotechnology, Singapore, August 2006. Title: “Nanotoxicology: Nanomaterial Safety Assessment”
- Invited Plenary Speaker, AAAAI International Convention, February 2007, San Diego, CA, Plenary Session, “Immunopathogenesis of Asthma,” Title: “Role of Oxidative Stress by Particulate Air Pollution in Asthma Exacerbations.”
- Invited Speaker, Cal/EPA and DTSC Nanotechnology Symposium, Sacramento, California, March 2007. Title: “What are the potential health and environmental impacts of nanotechnology?”
- Keynote address at the International Conference of the Japanese Society for Medical and Biological Engineering in Sendai, Japan, April 25-27, 2007. Title: “Nanobiology at UCLA using nanoparticle design to study Biocompatibility and Material Toxicity”.
- Visiting Professor and Lecturer representing CNSI and UCLA at the Universities of Tokyo, Kyushu in Japan as well as the Japanese Institute for Materials Science and NEC, April 17-28, 2007. Title: “Approach to Nanotoxicology in the UCLA Center for Nanotoxicology Research and Testing”
- Invited Symposium Speaker at the American Thoracic Society International International Convention, May 2007, San Francisco, CA. Symposium: “Mechanisms of Particulate Matter Induced Mortality”. Title: “Proteomic approaches to particulate matter induced toxicity.”

- Invited Speaker/Visiting Professor, Feinberg School of Medicine, Northwestern University, Chicago, IL, June 2007. Title: "Air Pollution Health Effects: An Understanding of the Role of Oxidative in Heart and Lung Disease"
- Invited Speaker/Visiting Professor, Keck School of Medicine, University of Southern California, Los Angeles, CA, June 2007. Title: "Air Pollution Health Effects: An Understanding of the Role of Oxidative in Heart and Lung Disease"
- Invited Symposium Speaker at the ESF-EMBO Symposium, Probing interactions between nanoparticles / biomaterials and biological systems-alternative approaches to bio- and nanotoxicity, Sant Feliu de Guixols, Spain, 3-8 November 2007. Title: "Reactive Oxygen Species (ROS) diseases induced by nanoparticles"
- Invited Symposium Speaker at the CNBI (University Tokyo) - CNSI (UCLA) Symposium on NanoBiotechnology. UCLA-CNSI Building, November 1-2, 2007. Title: "Predictive Toxicological Paradigms for the Assessment of Nanoparticle Toxicity"
- Invited Conference Speaker, 2007 Nanotechnology Occupational Health and Safety Conference, UCSB, November 16-17, 2007. Title: ""Predictive Toxicological Paradigms for the Assessment of Nanoparticle Toxicity"
- Plenary Speaker, Asia Pacific Nanotechnology Forum, Nanotechnology in Environmental Protection and Pollution, 11-13 December 2007, Ft. Lauderdale, FL, USA. Title: "Predictive Toxicological Paradigms for the Assessment of Nanoparticle Toxicity"
- Invited Speaker, AAAAI International Convention, March 2008, Philadelphia, PA, (a) Symposium, " How do Air Pollutants Promote Airways Inflammation and Contribute to Asthma Morbidity?," Title: "How Does Composition of Air Particulates Cause Airways Injury and Promote Allergic Sensitization?." (b) Seminar Discussion Leader, "Nanotechnology Applications to Allergy and Asthma Therapy"
- Organizer and Chair of the joint meeting and workshop, "Gene, Environment, and Disease Panels", for the US-Japan Cooperative Medical Science Program that is administered by the NIH, San Francisco, CA, March 27-28, 2008. Also functioned as a speaker in the session, Oxidative Stress and Human Disease. Title: "The implications of the hierarchical oxidative stress hypothesis for cardiorespiratory disease".
- Invited Speaker and Session Chair, 11<sup>th</sup> International Inhalation Symposium (INIS), 2008, Fraunhofer ITEM, Hannover, Germany. Title: "Nanoparticle-bio-interactions: controlled design and cellular response"
- Invited speaker and Session Chair, 9th International Conference on Fine Particles: Risks and Opportunities., Capetown, South Africa, March 2008, Title: "The Role of Oxidative Stress in the Pathogenesis of Particle-Induced Cardiovascular and Pulmonary Disease"
- Invited Speaker and Session, 2nd International Conference on Nanotoxicology, Chair Zurich, Switzerland, September 2008. Title: "Predictive Toxicological Paradigms for the Assessment of Nanoparticle Toxicity"
- Invited speaker, Session Chair and Conference Summary Chair, The 1<sup>st</sup> Joint U.S.-China Symposium on Nanobiology and Nanomedicine, Beijing, China, October 2008. Title; "Nanotoxicology as a Predictive Science: Use of a Hierarchical Oxidative Stress Screening Paradigm".
- Invited speaker in the Symposium, "NanoPediatrics: Enabling Personalized Medicine for Children", to announce the Mattel UCLA NanoPediatrics Program, October 2008

## US PATENTS

1. Folate-attached mesoporous nanoparticles for targeted delivery of hydrophobic anticancer drugs. US Provisional patent, file January 08. UCLA # 58086-254202.
2. Reversing the loss of immune function in aged populations through the induction of antioxidant activity by a gene regulatory pathway. US Provisional patent, file January 08. UCLA # 2008-560.

## RESEARCH PAPERS

### A. RESEARCH PAPERS - PEER REVIEWED

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