

**STATEMENT OF THE AMERICAN ACADEMY OF DERMATOLOGY AND  
THE SOCIETY FOR INVESTIGATIVE DERMATOLOGY  
ON THE  
FISCAL YEAR 2006 APPROPRIATIONS FOR THE  
NATIONAL INSTITUTES OF HEALTH  
AND  
THE NATIONAL INSTITUTE OF ARTHRITIS AND MUSCULOSKELETAL AND SKIN  
DISEASES  
BEFORE THE  
HOUSE APPROPRIATIONS SUBCOMMITTEE ON LABOR, HEALTH & HUMAN SERVICES,  
EDUCATION AND RELATED AGENCIES  
PRESENTED BY  
KEVIN D. COOPER, M.D.  
PRESIDENT, THE SOCIETY FOR INVESTIGATIVE DERMATOLOGY  
820 W. Superior Avenue  
7<sup>th</sup> Floor  
Cleveland, Ohio 44113-1800  
APRIL 21, 2005, 10:00 AM**

**SUMMARY OF FY 2006 RECOMMENDATIONS**

- 1) A 6% INCREASE FOR ALL OF THE NATIONAL INSTITUTES OF HEALTH AND THE NATIONAL INSTITUTE OF ARTHRITIS AND MUSCULOSKELETAL AND SKIN DISEASES (NIAMS).
- 2) ENCOURAGE THE NIH AND NIAMS TO MAINTAIN THE HIGHEST POSSIBLE PAYLINE AND LOWEST POSSIBLE DOWNWARD NEGOTIATIONS FOR INVESTIGATOR INITIATED RESEARCH PROJECT GRANTS.
- 3) ENCOURAGE NIAMS TO CREATE AND ENHANCE OPPORTUNITIES FOR TRANSLATION OF SCIENTIFIC FINDINGS TO CLINICAL APPLICATIONS THAT BENEFIT SKIN HEALTH AND THE UNDERSTANDING OF DERMATOLOGIC DISEASES.
- 4) ENCOURAGE NIAMS TO SPONSOR FURTHER BURDEN OF SKIN DISEASE RESEARCH AND EPIDEMIOLOGY ACTIVITIES TO INVESTIGATE GENERAL AND SKIN-DISEASE SPECIFIC MEASURES IN ORDER TO GENERATE DATA SURROUNDING THE INCIDENCE, PREVALENCE, ECONOMIC BURDEN, QUALITY OF LIFE, DISABILITY AND HANDICAPS ATTRIBUTABLE TO THESE DISEASES.
- 5) PROMOTE THE DEVELOPMENT OF NIH-SUPPORTED TRAINING RESOURCES DEDICATED TO ATTRACT MORE INDIVIDUALS TO CAREERS IN SKIN DISEASE RESEARCH.
- 6) CONSIDER MECHANISMS FOR DOD RESEARCH EFFORTS TO COOPERATE WITH NIAMS FOR FUNDING OF RESEARCH THAT MAY RESULT IN IMPROVED OUTCOMES FOR ACTIVE SERVICE MILITARY PERSONNEL WHO DEVELOP ABNORMALITIES, INJURIES OR DISEASES OF THE SKIN, BONE, JOINTS, MUSCLE AND CONNECTIVE TISSUES.

Mr. Chairman, and members of the subcommittee—I am very grateful for this opportunity to testify on behalf of the American Academy of Dermatology and the Society for Investigative Dermatology. I am Dr. Kevin Cooper, Professor of Dermatology, Chairman and Director of the Skin Diseases Research Center at the Department of Dermatology at Case Western Reserve University. I also serve as President of the Society for Investigative Dermatology.

#### Background

The American Academy of Dermatology has a membership of more than 14,000 physicians worldwide, each of whom is committed to advancing the diagnosis, medical, surgical and cosmetic treatment of the skin, hair and nails. This commitment to patients includes advocating for high standards in clinical practice, education, and research in dermatology and ultimately, enhancing overall patient care. The Society for Investigative Dermatology has over 2000 members worldwide dedicated to the advancement and promotion of the sciences relevant to skin health and disease through education, advocacy, and the scholarly exchange of scientific information. Members include scientists and physician researchers from universities, hospitals and industries committed to the science of dermatology. Each member of both organizations firmly believes that further research is critical to improved prevention, diagnosis, and treatment for the 3,000 different diseases of the skin, hair, and nails, which affect about 80 million Americans each year.

My purpose in being here today is to emphasize the need for increased funding for the National Institutes of Health (NIH) and the National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS). Last year, Congress provided the National Institutes of Health (NIH) with a modest 1.9% funding increase. This year, we recommend a 6% increase for the NIH budget, and a similar increase for NIAMS, which would lead to a funding level of \$542 million for NIAMS.

This is necessary because research inflation exceeds general inflation. If NIH were funded at an increase of less than 1%, this would result in fewer grants being funded. If the NIAMS budget increase is the proposed .4%, it will be a tremendous blow to the vigilance of and the development of a critical mass of developing investigators. The U.S. stands to lose its competitive edge as a nation in inventions, patents and economic ingenuity.

#### The Burden of Skin Diseases

The American Academy of Dermatology Association and the Society for Investigative Dermatology commissioned a study to quantify the burden of skin disease. On April 6, 2005, the Burden of Skin Diseases report was released. The National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) sponsored a "Workshop on the Burden of Skin Diseases" in September, 2002. The Burden of Skin Diseases workshop provided a solid foundation for collaboration and to set an agenda for skin disease research. The Burden of Skin Diseases Report builds upon initiatives developed at the workshop.

This study shows that skin disease is more prevalent than anyone ever imagined – and carries serious medical and financial consequences. The costs to society for medical care and lost wages due to conditions of the skin, hair and nails are estimated to be \$37 billion annually. However, the costs to those suffering from these debilitating conditions are immeasurable: they encounter discomfort and pain, physical disfigurement, disability, dependency and death. At any given time, one in every three people in the United States suffers from a skin disease. The prevalence of skin disease exceeds that of obesity, hypertension or cancer.

#### Research Advances

Skin cancer is the most frequent cancer diagnosis, this year more than 1.3 million new cases of skin cancer will be diagnosed in the United States. Melanoma is the most deadly form of skin cancer, and advanced melanoma is almost always fatal. Researchers at NIH are investigating a cell-based form of immunotherapy for stage IV melanoma that produced tumor shrinkage or

disappearance in more than 50 percent of patients enrolled in a clinical trial. Additionally, researchers are investigating the possible genetic component of the disease and are also engaged in the search for a safe and effective melanoma vaccine.

Acne is the most common and well-known skin disorder. As you know, acne strikes people at a time when their peers are especially judgmental and their egos are particularly fragile – during adolescence. The social penalty for the more severe and disfiguring form of cystic acne, in which many large cysts are formed, can be ostracism, exclusion and depression. Acne was traditionally treated with antibiotics, soaps and drying agents, which are only partially effective. Recently, researchers have developed promising new treatments, such as the vitamin A derivatives called retinoids. These new treatments have the potential to dramatically improve one's ability to prevent and manage their acne, and may help ease the inevitable awkwardness that surrounds adolescence.

Psoriasis affects between six and seven million people in the United States each year. The inflamed, flaking and scaly skin of psoriasis is believed to be caused by inappropriate immunological activity that causes skin cells called keratinocytes to respond as they would during wound-healing. These cells multiply and grow excessively, failing to form the normal protective barrier. There is a strong genetic component to this disease, as with most autoimmune diseases, and researchers are hard at work to identify the genes responsible.

As the population ages and we live longer, dermatologists will be asked increasingly to treat skin disorders that appear more often in aged individuals. Dermatologists will need to find new and better ways to help prevent and heal common conditions of the elderly, such as bed sores. Ulcers of the skin alone cost \$8 billion per year to diagnose and treat.

The past two decades have seen explosive growth in technology and an increased sophistication in our understanding of the genetic and cellular mechanisms underlying many skin, hair and nail disorders. One result of these findings is a radically new paradigm shift in which the skin is now viewed as a complex organ that is intimately responsive to the immune system of the body.

Important new research findings include the following:

- A gene responsible for the inherited form of basal cell carcinoma has been identified and may lead to new information as to the origins of skin cancer.
- Biotechnology products based on NIH research findings have raised the bar for both safety and effectiveness in advanced psoriasis.
- A gene for an inherited form of hair loss has been discovered.
- A new protein that links collagen and vascular defects in scleroderma has been identified.
- Advances in the design of drug-delivery systems allow for sustained release of drugs through the skin, which will most likely lead to treatments that are more effective.
- Methods to grow real and artificial skin in laboratories are used to prepare skin grafts for burn victims.

### Conclusion

Mr. Chairman, as you know, medical research organizations such as the AAD and SID work closely with patient groups, such as the Coalition of Skin Diseases. The many organizations that participate in the Coalition realize that major research efforts are required for advancement in our understanding and for improvements in the health of patients to occur. Every year, we collectively advocate for increased funding for the NIH and NIAMS. We want to reiterate how deeply grateful we are for your leadership, and that of the Subcommittee, for your support of biomedical research issues, which contribute so much to the health of the people in our nation. I will be pleased to answer any questions you may have.

**HOUSE COMMITTEE ON APPROPRIATIONS  
SUBCOMMITTEE ON LABOR, HEALTH AND HUMAN SERVICES, EDUCATION AND  
RELATED AGENCIES  
Witness Disclosure Requirement - "Truth in Testimony"**

Your Name: Kevin D. Cooper, M.D.

1) Other than yourself, please list what entity or entities you are representing:

American Academy of Dermatology  
Society for Investigative Dermatology

2) Are you testifying on behalf of a Federal, State, or Local Government entity? No

3) Are you testifying on behalf of an entity other than a Government entity? Yes

4) Please list any federal grants or contracts (including subgrants or subcontracts) which you have received since October 1, 1999: Please see biosketch below:

**BIOGRAPHICAL SKETCH**

Provide the following information for the key personnel in the order listed for Form Page 2.  
Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

AME Kevin D. Cooper, M.D.	POSITION TITLE Professor, Director and Chairman		
<b>EDUCATION/TRAINING</b> ( <i>Begin with baccalaureate or other initial professional education, such as</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
University of Florida, Gainesville, FL	B.S.	1973	Basic Biological
Univ. of Florida College of Medicine, Gainesville, FL	M.D.	1977	Sciences
Dept. of Derm. Oregon Health Sci. Univ.,	Residency	1981	Medicine
	Fellowship	1985	Dermatology

**NOTE: The Biographical Sketch may not exceed four pages. Items A and B (together) may not exceed two of the four-page limit. Follow the formats and instructions on the attached sample.**

**POSITIONS AND HONORS**

**Professional Experience**

- 1985-- Staff Physician, Veterans Affairs Medical Center, Ann Arbor, MI and Cleveland, OH
- 1985-95 Assistant, Associate, and Full Professor, Dept of Dermatology, University of Michigan, Ann Arbor, MI
- 1986-95 Director, Cutaneous Lymphoma Program, University of Michigan Comprehensive Cancer Ctr, Ann Arbor, MI
- 1995-- Professor and Chair, Dept of Dermatology, Case Western Reserve University/University Hospitals of Cleveland, Cleveland, OH

### Awards and Other Professional Activities

- 1989-95 Dermatology Foundation Scientific Advisory Committee
- 1989-2005 Nat'l Eczema Association for Science and Education Scientific Advisory Committee
- 1993 American Society for Clinical Investigation
- 1993-98 Nat'l Psoriasis Foundation Scientific Advisory Committee
- 1995 American Skin Association Research Award
- 1995-2000 American Skin Association Scientific Advisory Committee
- 1995-2000 Board of Directors: Society for Investigative Dermatology and Association of Professors of Dermatology
- 1995-- Research Committees: CWRU School of Medicine, CWRU/UHC Comprehensive Cancer Center
- 1996-- Federal Study Sections and Advisories: Special Emphasis Panels Member, GMA-1 and Immunologic Sciences Study Section and Ad Hoc Reviewer, SBIR/STTR Review Panel Member, VA Merit Review reviewer (Immunology), NIH Leprosy Advisory Board, NIAMS Advisory Group, FASEB Consensus Conference on Fed Research Funding
- 1998-- Associate Editor, *Clinical Immunology* (98-02), *J. Invest. Dermatol.*
- 1998-- American Academy of Dermatology, Task Force on Photobiology; Chair Environmental Council; Research Council; Scientific Assembly Committee (Chair Academy 05)
- 2001-05 Mycosis Fungoides Patient Adv Foundation
- 2003-05 Society for Investigative Dermatology, President-Elect and President (2005)

### SELECTED PEER-REVIEWED PUBLICATIONS (from among over 200 completed manuscripts)

**Cooper KD, Kazmierowski JA, Wuepper KD, Hanifin JM:** Immunoregulation in atopic dermatitis: Functional

analysis of T-B cell interactions and the enumeration of Fc receptor-bearing T cells. J Invest Dermatol, 80:139-145, 1983.

**Cooper KD, Baadsgaard O, Ellis CN, Duell E, Voorhees JJ:** Mechanisms of Cyclosporine A inhibition of antigen-

presenting activity in uninvolved and lesional psoriatic epidermis. J Invest Dermatol, 94:649-656, 1990.

**Cooper KD, Oberhelman L, Hamilton TA, Baadsgaard O, Terhune M, LeVee G, Anderson T, and Koren H:** UV exposure

reduces immunization rates and induces tolerance to epicutaneous antigens in humans: Relationship to dose, CD1a- DR+ epidermal macrophage induction and Langerhans cell depletion. Proc Natl Acad Sci, 89:8497-8501, 1992.

Meunier L, Gonzalez-Ramos A, **Cooper KD:** Heterogeneous populations of class II MHC II+ cells in human dermal cell

suspensions: identification of a small subset responsible for potent dermal antigen-presenting cell activity with features analogous to Langerhans cells. J Immunol, 151:1-13, 1993.

Bata-Csorgo Z, Hammerberg C, Voorhees JJ, **Cooper KD:** Flow cytometric identification of proliferative subpopulations

within normal human epidermis and the localization of the primary hyperproliferative population in psoriasis. J Exp Med, 178:1271-1281, 1993.

Hammerberg C, Duraiswamy N, **Cooper KD:** Active induction of tolerance to DNFB by *in vivo* UV-exposed epidermal cells is dependent upon infiltrating class II MHC+ CD11b<sup>bright</sup> monocytic/macrophagic cells. J Immunol, 153:5256-64, 1994.

Bata-Csorgo Z, Hammerberg C, Voorhees JJ, **Cooper KD:** Kinetics and regulation of human keratinocyte stem cell growth in short term primary *ex vivo* culture; growth factors cooperative with IFN gamma

- from psoriatic lesional T lymphocyte stimulate proliferation among psoriatic uninvolved, but not normal, stem keratinocytes. J Clin Invest 95:317-327, 1995.
- Griffiths CEM, Railin D, Gallatin WM, **Cooper KD**: The ICAM-3/LFA-1 interaction is critical for epidermal Langerhans cell alloantigen presentation to CD4<sup>+</sup> T cells. Brit J Dermatol 113:823-829, 1995.
- Stevens SR, Shibaki A, Meunier L, **Cooper KD**: Suppressor T cell-activating macrophages in ultraviolet-irradiated human skin induce a novel, TGF- $\beta$ -dependent form of T cell activation characterized by deficient IL-2 $\alpha$  expression. J Immunol 155:5601-07, 1995.
- Kang K, Kubin M, **Cooper KD**, Lessin SR, Trinchieri G, Rook AH: IL-12 synthesis by human Langerhans cells. J Immunol 156:1402-07, 1996.
- Hammerberg C, Duraiswamy N, **Cooper KD**: Reversal of immunosuppression inducible through ultraviolet-exposed skin by *in vivo* anti-CD11b treatment. J Immunol, 157:5254-5261, 1996.
- Hammerberg C, Bata-Csorgo Z, Voorhees JJ, **Cooper KD**: IL-1 and IL-1 receptor antagonist regulation during keratinocyte cell cycle and differentiation in normal and psoriatic epidermis. Exp Dermatol 5:218-226, 1996.
- Skov L, Chan LS, Fox DA, Larsen JK, Voorhees JJ, **Cooper KD**, Baadsgaard O: Lesional psoriatic T cells contain the capacity to induce a T cell activation molecule CDW60 on normal keratinocytes. Am J Pathol, 150:675-683, 1997.
- LeVee GJ, Oberhelman L, Anderson T, Koren H, **Cooper KD**: UVA II exposure of human skin results in decreased immunization capacity, increased induction of tolerance and a unique pattern of epidermal antigen presenting cell alteration. Photochem Photobiol 65(4):622-629, 1997.
- Javier F, Bata-Csorgo Z, Ellis CN, Kang S, Voorhees JJ, **Cooper KD**: Rapamycin (Sirolimus) inhibits PCNA expression and blocks cell cycle in the G<sub>1</sub> phase in human keratinocyte stem cells. J Clin Invest 99(9):2094-2099, 1997
- Hammerberg C, Katiyar SK, Carroll MC, **Cooper KD**: Activated complement component 3(C3) is required for UV induction of immunosuppression and antigenic tolerance. J Exp Med 187(7):1133-1138, 1998.
- Gilliam AC, Kremer IB, Yoshida Y, Stevens SR, Tootell E, Teunissen MBM, Hammerberg C, **Cooper KD**: The human hair follicle: a reservoir of CD40<sup>+</sup> B7-deficient Langerhans cells that repopulate epidermis after UVB exposure. J Invest Dermatol 110:422-427, 1998.
- Kang K, Gilliam AC, Chen G, Tootell E, **Cooper KD**: In human skin, UVB initiates early induction of IL-10 over IL-12 preferentially in the expanding dermal monocytic/macrophagic population. J Invest Dermatol 110:31-38, 1998.
- Szabo SK, Hammerberg C, Yoshida Y, Bata-Csorgo Z, **Cooper KD**: Identification and quantitation of interferon- $\gamma$  producing T cells in psoriatic lesions: localization to both CD4<sup>+</sup> and CD8<sup>+</sup> subsets. J Invest Dermatol 111:1072-1078, 1998.
- Yoshida Y, Kang K, Berger M, Chen G, Gilliam AC, Moser A, Wu L, Hammerberg C, **Cooper KD**: Monocyte induction of IL-10 and down-regulation of IL-12 by iC3b deposited in ultraviolet-exposed human skin. J Immunol 161:5873-5879, 1998.
- Bata-Csorgo Z, **Cooper KD**, Voorhees JJ, Hammerberg C: Fibronectin and  $\alpha$ 5 integrin regulate keratinocyte stem cell cycling: a mechanism for increased fibronectin potentiation of T cell lymphokine-driven keratinocytic stem cell hyperproliferation in psoriasis. J Clin Invest 101:1509-1518, 1998.
- Yoshida Y, Kang K, Chen G, Gilliam AC, **Cooper KD**: Cellular fibronectin is induced in ultraviolet-exposed human skin and induces monocytic/macrophagic cell IL-10 production. J Invest Dermatol 113:49-55, 1999.

- Katiyar SK, Challa A, McCormick TS, **Cooper KD**, and Mukhtar H: Prevention of UVB-induced immunosuppression in mice by the green tea polyphenol (-)-epigallocatechin-3-gallate may be associated with alterations in IL-10 and IL-12 production. Carcinogenesis. 20:2117-24, 1999.
- Lim HW, **Cooper KD**: The health impact of solar radiation and prevention strategies: Report of the Environmental Council, J Am Acad Dermatol. 41:81-99, 1999.
- Ellis CN, Stevens SR, Blok BK, Taylor RS, **Cooper KD**: Interferon gamma therapy reduces blood leukocyte levels in patients with atopic dermatitis: Correlation with clinical improvement. Clin Immunol 92:49-55, 1999.
- Ting KM, Rothaupt D, McCormick TS, Hammerberg C, Chen G, Gilliam AC, Stevens S, Culp L, **Cooper KD**: Overexpression of the oncofetal Fn variant containing the EDA splice-in segment in the dermal-epidermal junction of psoriatic uninvolved skin. J Invest Dermatol: 114:706-711, 2000
- Xiong J, Ghannoum MA, Yoshida Y, **Cooper KD**, and Kang K: Live *Candida albicans*, but not *Candida krusei*, selectively fails to induce human blood mononuclear cell IL-12 and IFN $\gamma$  production. Infection and Immunity, 68:2464-2469, 2000
- Kremer IB, Stevens SR, Gould JW, DiCarlo J, Quinby G, and **Cooper KD**: Intradermal GM-CSF alters cutaneous antigen presenting cells and differentially affects local versus distant immunization in humans. Clin. Immunol, 96(1):29-37, 2000
- Selgrade MJ, Smith MV, Oberhelman-Bragg LJ, LeVeve GJ, Koren HS and **Cooper KD**: Dose response for UV-induced immune suppression in people of color: Differences based upon erythral reactivity rather than skin pigmentation. Photochemistry and Photobiology 74(1):88-95, 2001
- Liu L, Kang, K, Takahara M, **Cooper KD** and Ghannoum MA: Hyphae and yeasts of *Candida albicans* differentially regulate interleukin-12 production by human blood monocytes: inhibitory role of *C. albicans* germination. Infect. Immun. 69 4695-7, 2001
- Chen G, McCormick TS, Hammerberg C, Ryder-Diggs S, Stevens SR, and **Cooper KD** Basal keratinocytes from uninvolved psoriatic skin exhibit accelerated spreading and focal adhesion kinase responsiveness to fibronectin. Journal of Investigative Dermatology 117:1538-1545, 2001
- Stevens SR, Baron ED, Masten S, **Cooper KD**: Circulating CD4+CD7- lymphocyte burden & rapidity of response: predictors of outcome in the treatment of Sezary syndrome and erythrodermic MF with photopheresis. Arch Dermatol;138:1347-1350, 2002
- Toichi E., McCormick TS, and **Cooper KD**: Cell surface and cytokine phenotypes of skin immunocompetent cells involved in ultraviolet-induced immunosuppression Methods 28:104-110, 2002
- Demko CA, Borawski EA, Debanne SM, **Cooper KD**, and Stange KC: Use of indoor tanning facilities by white adolescents in the United States. Arch Pediatr Adolesc Med, Vol 257, 854-860, 2003
- Barzilai BA, **Cooper KD**, Neuhauser D, Rimm AA, and Cooper GS. Geographic and Patient Variation in Receipt of Surveillance Procedures After Local Excision of Cutaneous Melanoma. J Invest Dermatol 122: 246-255, 2004
- Kauffman CL, Aria N, Toichi E, McCormick TS, **Cooper K**, Gottlieb AB, Everitt DE, Frederick B, Zhu Y, Graham MA, Pendley CE, and Mascelli MA. A phase I study evaluating the safety, pharmacokinetics, and clinical response of human IL-12 p40 antibody in subjects with plaque psoriasis. J Invest Dermatol 123(6): 1037-1044, 2004.
- Sugiyama, H., Gyulai, R., Toichi, E., Garaczi, E., Shimada, S., Stevens, S.R., McCormick, T.S., **Cooper, K.D.** Dysfunctional Blood and Target Tissue CD4<sup>+</sup>CD25<sup>high</sup> Regulatory T Cells in Psoriasis: Mechanism Underlying Unrestrained Pathogenic Effector T Cell Proliferation. Journal of Immunology, 174: 164-173, 2005.

## RESEARCH PROJECTS

### Ongoing:

1. "Mechanisms of UV radiation therapy in psoriasis" (Determines the mechanism of UV action in lesional psoriatic skin; specifically the effect of UV upon lesional T cell function and keratinocyte proliferation.)  
Principal Investigator: Kevin D. Cooper, MD  
Agency: Department of Veteran's Affairs  
Type: Merit Review                      Period: 4/1/02 - 3/31/06
2. "Clinical Oncology Research Career Development Program" (Facilitates interdisciplinary training in translational oncology research for MDs with a clinical training background in one of a number of oncology disciplines.)  
Principal Investigator: Clark Distelhorst, PhD  
Director, Cutaneous Oncology Training Program: Kevin D. Cooper, MD  
Agency: NIH/NCI  
Type: T32
3. "UV-induced immunosuppression to chemical toxicants" (The major and stated purpose of this grant is to examine using proteomics the protein changes that occur following UV exposure in combination with environmental toxicants.)  
Principal Investigator: Kevin D. Cooper, MD  
Agency: NIH  
Type: R01                      Period: 9/10/02 - 7/31/07
4. Skin Diseases Research Center (Major goal: To generate new knowledge that will have a sustained impact on cutaneous biology that will improve the quality of life of patients with skin disease.)  
Principal Investigator: Kevin D. Cooper, MD  
Agency: NIH/NIAMS  
Type: P30 AR 39750                      Period: 4/1/01 - 3/31/06
5. "Normal and UV induced cutaneous antigen presenting cells" (Role of UV-induced tissue changes on APC differentiation.)  
Principal Investigator: Kevin D. Cooper, MD  
Agency: NIH/NIAID  
Type: R01 AI041766-09A1                      Period: 12/1/02 - 11/30/07
6. "Psoriatic regulatory T cell dysfunction" (Identification of immunoregulation abnormalities in psoriasis.)  
Principal Investigator: Kevin D. Cooper, MD  
Agency: NIH/NIAMS  
Type: 1 R01 AR051498                      Period: 8/1/04 - 4/30/09
7. "Training in investigative and molecular dermatology" (Major goal is to provide interdisciplinary training to MD and PhD scientists contemplating a career in academic dermatology.)  
Principal Investigator: Kevin D. Cooper, MD  
Agency: NIH/NIAMS  
Type: T32 AR 07569                      Period: 5/1/91 - 4/30/07
8. "Mechanism of IL-12 inhibition by *Candida albicans*" (The aim is to identify novel means for the prevention and treatment of hematogenously disseminated candidiasis.)  
Principal Investigator: Mahmoud Ghannoum, PhD, EMBA  
Co-Investigator: Kevin D. Cooper, MD  
Agency: NIH  
Type: 2R01 A1035097                      Period: 2/1/05 - 1/31/10

### Completed Over Last 3 Years:

1. "Normal and UV-induced cutaneous antigen presenting cells." (The major goals of this project are to determine distinctive characteristics of UV-induced epidermal APC's in humans, and to establish an *in vitro* model of skin-induced APC differentiation.)  
Principal Investigator: Kevin D. Cooper, MD

Agency: NIH

Type: R01

Period: 4/1/97 - 3/31/02

2. "Interaction between psoriatic keratinocytes and T cells" (Identifies the cell type(s) in psoriasis responsible for production of EDA Fn, using assays for protein and mRNA with *in situ* localization.)

Principal Investigator: Kevin D. Cooper, MD

Agency: NIH

Type: R01

Period: 7/1/99 - 6/30/02

3. "Training in investigative and molecular dermatology" (Major goal of grant is to provide interdisciplinary research training to recent PhD's and MD's contemplating careers in cutaneous biology.)

Principal Investigator: Kevin D. Cooper, MD

Agency: NIH/NIAMS

Type: T32 AR 07569

Period: 5/1/97 - 4/30/02

5) If you answered "Yes" to question number 3, please list any federal grants or contracts (including subgrants or subcontracts) which were received by entities listed under question number 1 since October 1, 1999, which exceed 10% of the entities revenue in the year received, including the source and amount of each grant or contract to be listed.

6) If you answered "Yes" to question number 3, do any of the entities disclosed in question number 1 have parent organizations, subsidiaries, or partnerships whom you are not representing? No

7) If you answered "Yes" to question number 3, please list any offices or elected positions held or briefly describe your representational capacity with the entities disclosed in question number 1.

President, Society for Investigative Dermatology

Signature: Kevin D. Cooper, M.D.



Date: April 7, 2005

**Kevin D. Cooper, M.D.**  
**President of the Society for Investigative Dermatology**  
**Department of Dermatology**  
**University Hospitals of Cleveland**  
**11100 Euclid Avenue**  
**Cleveland, OH 44106**

Kevin D. Cooper, MD is Professor and Chairman, Department of Dermatology, and Director, Skin Disease Research Center, at Case Western Reserve University and University Hospitals of Cleveland in Cleveland, Ohio. He is also Professor in the Department of Oncology and Pathology, a Staff Physician for the Dermatology Service at the Cleveland VA Hospital, and Vice President of the University Faculty Practice Association.

Dr. Cooper received his MD degree from the University of Florida College of Medicine in Gainesville, Florida. He was a Resident in the Department of Dermatology at the Oregon Health Sciences University in Portland, Oregon, and a Fellow at the National Cancer Institute, National Institutes of Health in Bethesda, Maryland. He is board certified in dermatology and dermatologic immunology/diagnostic laboratory immunology.

Dr. Cooper is currently the President of the Society for Investigative Dermatology, the world's leading organization for scientific communication and advancement in cutaneous biology and dermatology. He is also a member of the American Academy of Dermatology Scientific Advisory Committee and is chair of this committee for the "Academy 2005" meeting. Dr. Cooper's most recent awards and honors include plenary lectureships at major conferences, the Dean's award of "Million-Dollar Professor", and recognition as one of "America's Top Physicians". He is also a member of the Association of Professors of Dermatology, the American Society for Clinical Investigation, and the American Dermatologic Association. He is a member of the Case School of Medicine Research Committee and the Executive Committee of the Ireland Cancer Center.

Dr. Cooper is currently on a Department of Veterans Affairs Data and Safety Monitoring Board, and serves as chair of the Medical Advisory Board for the National Eczema Association for Science and Education, and as chair of the American Academy of Dermatology's Expert Resource Group on Atopic Dermatitis. Dr. Cooper has lectured nationally and internationally on skin disease and has published hundreds of articles in scientific journals and book chapters on the pathophysiology of psoriasis, atopic dermatitis, photomedicine, lymphoma, and immune-mediated skin disorders.