

CURRICULUM VITAE

Andrea I. Doseff, Ph.D.

Current Address:

The Heart and Lung Research Institute
The Ohio State University
473 West 12th Avenue
Columbus, Ohio 43210
Phone: (614) 292-9507; FAX: (614) 292-7778
E-mail: doseff.1@osu.edu

Education and Training

1991-1996 Ph.D., Genetics. Cold Spring Harbor Laboratory and State University of New York at Stony Brook, New York. Advisor: Dr. Kim Arndt.
Thesis: "The *LAS1* gene and the Role of SIT4 Phosphatase in Budding and Cell Morphology".
1987-1989 Graduate Student. Center for Plant Ecophysiology, Buenos Aires, Argentina.
1987 B. Sc., Biology. Faculty of Science, University of Buenos Aires, Argentina.

Professional Experience

July 2002- Present Assistant Professor, Department of Molecular Biology and Department of Internal Medicine, The Ohio State University, Columbus, OH
1998-2002 Research Scientist, Department of Internal Medicine, The Ohio State University, Columbus, OH. Mentor Dr. Mark Wewers
1996-1998 Post-Doctoral Research Fellow with Dr. Yuri Lazebnik
Cold Spring Harbor Laboratory, Cold Spring Harbor, New York.
1989-1990 Research Associate with Dr. Venkatesan Sundaresan
Cold Spring Harbor Laboratory, Cold Spring Harbor, New York.

Honors and Awards

1988 - 1989 Argentine National Research Council (CONICET) Graduate Fellow
1996 - 1998 NIH Postdoctoral Fellowship
2001 - 2003 American Lung Association. Research Grant

Teaching

2005 Fall Molecular Genetics 500. Enrollment 300 undergraduate students. 5 credits
2005 Spring Molecular Cellular and Developmental Biology MCDB. Enrollment 28 graduate students
2003 and 2004 Molecular Genetics 500. Enrollment 125 undergraduate students. 5 credits
2004 Summer Mathematical Biosciences Institute. Enrollment 20, graduate students, postdocs and teachers
2004 Winter Biotechnology and Society: What are the issues today? Lecture in Stem Cell Biology, definitions and ethics. Enrollment 15 undergraduate students
2002-2005 Fall Molecular Genetics 801. Seminar Series. Enrollment 15 graduate students
2003-2006 Spring Integrated Biomedical Science Graduate Program (IBGP). Enrollment 25 graduate students

2003-2006 Spring IBGP Module 11, Sepsis. Enrollment 25 graduate students
2002-2005 Immunology Review Seminars. Classes for Medical Fellows, Dept. Internal Medicine
1990-1991 Teaching Assistant. Biology 101. State University of New York at Stony Brook, New York.

Professional Service and Memberships

1996 - Present Member Cell Death Society
1998 - Present Member American Lung Association
2001 - 2005 Acting Member of the Allergy and Immunology Assembly Program Committee. American Thoracic Society.
2002 - 2005 Acting Member of the Allergy and Immunology Assembly Planning Committee. American Thoracic Society.
2002 - Present Educational committee member Heart and Lung Research Institute
2004 - Present Member Undergraduate Recruitment committee. College of Biological Sciences
2002 - Present Associate Member, Comprehensive Cancer Center, The Ohio State University
2002 - Present Associate Member, Davis heart and Lung Research Institute, The Ohio State University
2005- Present Institute of Mitochondrial Biology
2006 - Present Mathematical Biosciences Institute, Local Scientific Advisory Committee, The Ohio State University

Graduate programs

Molecular Genetics (MG)
Molecular cell Developmental Biology (MCDB)
Integrative Biomedical Science Graduate Program (IBGP)

Patents

Inhibition of monocyte survival, differentiation or proliferation. Inventors: Andrea I. Doseff and Erich Grotewold. U.S. Patent #60/684,655. Provisional issue 26/05/05

Peer Reviewed Publications

1. Vargo, M.A., Voss, O.H., Cardounel, A.J., Grotewold, E., and **Doseff, A.I.** (2006). Apigenin-induced-apoptosis is mediated by the activation of PKC δ and caspases in leukemia cells. *Biochem. Pharmacol.*
2. Voss, O.H., Kim, S., Wewers, M.D. and **Doseff, A.I.** (2005). Caspase-3 is a phosphoprotein and associates with PKC δ during spontaneous monocyte apoptosis. *J. Biol. Chem.* **280**: 17371-17379.
3. Bao, S., Wang, Y., Sweeney, P., Chaudhuri, A., **Doseff, A.I.**, Marsh, C.B., and Knoell, D.L. (2005). Keratinocyte growth factor induces Akt kinase activity and inhibits Fas-mediated apoptosis in A549 lung epithelial cells. *A.J.P. Lung Cell. Mol. Physiol.* **288 (1)**: L36-42.
4. Wei G, Guo, J, **Doseff, AI**, Kusewitt, DF, Man, AK, Oshima, RG, and Ostrowski, MC. (2004). Activated Ets2 is required for persistent inflammatory responses in the mouse model of chronic inflammation. *J. Immunol.* **173**:1374-1379.
5. Elssner, A., **Doseff, A.I.**, Duncan, M., Kotur, M., and Wewers, M.D. (2004). Interleukin-16 is constitutively present in peripheral blood monocytes and spontaneously released during apoptosis. *J. Immunol.* **172**: 7721-7725.

6. **Doseff, A.I.**, Baker Jr., J.H., Bourgeois, T.A., and Wewers, M.D. (2003). IL-4-induced apoptosis entails caspase activation and dephosphorylation of ERK. *Am. J. Resp. Cell and Mol. Biol.* **29**: 367-374.
7. Zeigler, M.M., **Doseff, A.I.**, Galloway, M.F., Opalek, J.M., Nowicki, P.T., Zweier, J.L., Sen, C.K., and Marsh, C.B. The presentation of nitric oxide regulates monocyte life., and death through effects on caspase-9 and caspase-3 activation. *J. Biol. Chem.* **278**: 12894-129.
8. Rovin, B.H., Wilmer, W.A., Lu, L., **Doseff, A.I.**, Dixon, C., Kotur, M., and Hilbelink, T. (2002). The cyclopentenone prostaglandin 15-deoxy- $\Delta^{12,14}$ -prostaglandin J_2 regulates mesangial cell proliferation and death. *Kidney Intern.* **61**:1293-302.
9. Coulter, K.R., Sweeney, P., **Doseff, A.I.**, Wang, Y., Marsh, C.B, Wewers, M.D., Knoell, D.L. (2002). Opposing effect by cytokines on Fas-mediated apoptosis in A549 lung epithelial cells. *Am. J. Resp. Cell and Mol. Biol.* **26**: 58-66.
10. Goyal, A., Wang, Y., Graham, M.M., **Doseff, A.I.**, Bhatt, N.Y., and Marsh, C.B. (2002). Monocyte survival factors induce Akt activation and suppress caspase-3. *Am. J. Resp. Cell and Mol. Biol.* **26**: 224-230.
11. Fahy, R.J.*, **Doseff, A.I.***, and Wewers, M.D. (1999). Spontaneous human monocyte apoptosis utilizes a caspase-3 dependent pathway which is blocked by endotoxin and is independent of caspase-1. *J. Immunol.* **163**: 1755-1762.
12. Kirsch, D.G., **Doseff, A.I.**, Chau, B.N., Lim, D., Souza-Pinto, N.C., Hansford, R., Kastan, M.B., Lazebnik, Y.A., and Hardwick, J.M. (1999). Caspase-3-dependent cleavage of Bcl-2 promotes release of cytochrome c. *J. Biol. Chem.* **274**: 21155-21161.
13. Kelley, T.W., Graham, M.M., **Doseff, A.I.**, Pommerantz, R.W., Lau, S.M., Ostrowski, M.C., Franke, T.M., and Marsh, C. B. (1999). Macrophage colony-stimulating factor promotes cell survival through Akt/protein kinase B. *J. Biol. Chem.* **274**: 26393-26398.
14. Nestler. H.P., and **Doseff, A.I.** (1997). A two dimensional, diagonal SDS-PAGE technique to screen for proteases substrates in protein mixtures. *Anal. Biochem.* **251**: 122-124.
15. **Doseff, A.I.**, and Arndt, K.T. (1995). Las1 is an essential nuclear protein involved in morphogenesis and cell surface growth. *Genetics* **141**: 857-871.
16. **Doseff, A.I.**, Martienssen, R., and Sundaresan, V. (1991). Somatic excision of the *Mu1* transposable element of maize. *Nucl. Acids Res.* **19**:579-584.
17. Barneix, A.J., **Doseff, A.I.** and Rodgers, C.O. (1989). Nitrate reductase activity in Argentine wheat cultivars. *Cereal Research Comm.* **16**: 269-272.

* Indicates shared first authorship

Review

18. **Doseff, A.I.** (2004). Apoptosis: the sculptor of development. *Stem Cells and Development.***13**: 473-483.

Meeting Presentations and Invited Seminars

- 2006 **Doseff, A.I.*** Invited speaker. Apoptosis: sculptor of development. Meeting Society for Gynecologic Investigation. Toronto, Canada.
- 2005 **Doseff, A.I. *** Invited speaker. Caspases controlling life and death in cancer and immunity. University of Buenos Aires. Argentina.
- 2005 **Doseff, A.I.*** Invited speaker. Caspases controlling life and death in cancer and immunity. Department of Molecular Genetics. The Ohio State University (OSU), Columbus, OH.

- 2005 **Doseff, A.I.*** Invited speaker. Flavonoids: anti-cancer and anti-inflammatory compounds. Therapeutic Team. Department of Internal Medicine. OSU, Columbus, OH.
- 2005 **Doseff, A.I.*** Invited speaker. Apoptosis. Basic Research Conference. Div. Pulmonary and Critical Care. OSU, Columbus, OH.
- 2005 Voss, O.H., Sharma, A., and **Doseff, A.I.** Regulation of monocyte life span y the interaction of hsp27 with caspase-3. Biennial Retreat Molecular Biology and Cancer Genetics Program. OSU.
- 2005 Vargo, M.M., and **Doseff, A.I.** (Poster). The flavonoid apigenin is a potent inducer of apoptosis in monocytic leukemias. Comprehensive Cancer Center Annual Scientific Meeting, OSU.
- 2005 Voss, O.H., and **Doseff, A.I.** (Poster). Caspase-3 phosphorylation by PKC δ has a proapoptotic effect. Comprehensive Cancer Center Annual Scientific Meeting, OSU.
- 2005 Voss, O.H., and **Doseff, A.I.** (Poster). Caspase-3 phosphorylation by PKC δ has a proapoptotic effect. OSU-Medical Center Graduate and Postgraduate Research Day.
- 2004 Kolattukudy, S., Batra, S., and **Doseff, A.I.** Hsp27 regulation in monocytes (Poster). OSU-Medical Center Graduate and Postgraduate Research Day.
- 2004 Kolattukudy, S., Batra, S., and **Doseff, A.I.** (Poster). The role of HSP in monocyte apoptosis. Comprehensive Cancer Center Annual Scientific Meeting, OSU.
- 2004 Kolattukudy, S., Batra, S., and **Doseff, A.I.** Hsp27 regulates caspase-3 in monocytes (Poster). Undergraduate Colloquium College of Biological Sciences, OSU.
- 2004 Kolattukudy, S., Batra, S., and **Doseff, A.I.** Role of Hsp27 in the regulation of monocytes apoptosis (Poster). Denman ,Undergraduate Research Forum, OSU.
- 2004 Voss, O. and **Doseff, A.I.*** Caspase-3 phosphorylation by PKC δ has a proapoptotic effect by increasing its activity and inhibition of PKC δ induces prolonged human monocyte survival. (Poster). American Thoracic Society International Conference, Orlando, FL.
- 2004 **Doseff, A.I.*** Sanjay Batra, Sunny Kolattukudy. Small heat shock proteins are differentially regulated and their localization varies during human monocyte apoptosis and prolonged survival. (Oral presentation). American Thoracic Society International Conference, Orlando, FL.
- 2004 **Doseff, A.I.*** Invited speaker. Molecular and Cell Developmental Biology Program. Molecular mechanisms of apoptosis. The Ohio State University, Columbus, OH.
- 2004 **Doseff, A.I.*** Invited speaker. Human Cancer Genetics. Apoptotic proteases as executioners of unwanted cells. OSU, Columbus, OH.
- 2003 **Doseff, A.I.*** Invited speaker. The Heart and Lung Research Institute. Caspases: Regulating monocyte lifespan during innate immunity. OSU, Columbus, OH.
- 2003 **Doseff, A.I.*** Invited Speaker. When cells dye: pathways and approaches to study apoptosis. Sunrise Seminar. American Thoracic Society International Conference, Seattle, WH.
- 2003 **Doseff, A.I.***, Voss, O., and Wewers, M.D. Caspase-3 is a phosphoprotein that associates with and is phosphorylated selectively by a PKC during monocyte lifespan. (Oral presentation). American Thoracic Society International Conference, Seattle, WH.
- 2003 **Doseff, A.I.***, Baker, J., Bourgeois, T., and Wewers, M.D. IL-4 induces apoptosis of activated monocytes by inducing ERK dephosphorylation and reactivation of caspases. (Oral presentation). American Thoracic Society International Conference, Seattle, WH.
- 2003 Sancaktar, O., and **Doseff, A.I.** Mitochondria depolarization is hastened by caspase-3 inhibitor during spontaneous monocyte apoptosis and is not required during Fas-induced monocyte apoptosis. (Poster). American Thoracic Society International Conference, Seattle, WH.
- 2003 Zhang, H., Wevers, M.D., Chalmers, J.J. and **Doseff, A. I.** An immunomagnetic based technology to quantify receptors presence and numbers on Alveolar Macrophages. (Poster). American Thoracic Society International Conference, Seattle, WH.
- 2003 Vargo, M. A., Bennett, K., Schweiger, L., and **Doseff, A. I.** The Role of Caspase-3 Regulation in Cell Death of Breast Cancer Cells (Poster). Denman, Undergraduate Research Forum, OSU, Columbus, OH.

- 2002 **Doseff, A.I.***. Killer caspases: The good guys in cancer and inflammation. Seminar Series. The Heart and Lung Research Institute. OSU, Columbus, OH.
- 2002 **Doseff, A.I.***. Invited Seminar Speaker. Killer caspases: the executioners of apoptosis in cancer and inflammation. Winthrop-University Hospital, Mineola, NY.
- 2002 **Doseff, A.I.***, Sancaktar, O. Waggoner, A.N. and Wewers, M.D. Caspase-3 is a phosphoprotein that associates with and is phosphorylated selectively by a PKC isoform during monocyte lifespan. (Oral presentation). American Thoracic Society International Conference, Atlanta, GO.
- 2002 Parker-Barnes, **Doseff, A.I.**, and Wewers, M.D. MAIL gene ($\text{IkB}\zeta$) is rapidly induced by LPS in monocytes but not in alveolar macrophages. (Poster). American Thoracic Society International Conference, Atlanta, GO.
- 2002 Matthews, N., **Doseff, A.I.**, Sun, H. Davuluri, V.R. A bioinformatic approach to identifying new human apoptotic markers. (Poster). Denman, Undergraduate Research Forum, OSU, Columbus, OH.
- 2002 Guo, W., Kim, HJ, **Doseff, A.I.**, and Wewers, M.D. Cardiak is a constitutively expressed in monocytes and interacts transiently with caspase-1 after endotoxin. (Poster). FASEB. New Orleans, LO.
- 2002 Sancaktar, O., Wewers, M.D. and **Doseff, A.I.** The apoptotic machinery of monocytes is halted until caspase-3 is activated. (Poster). Landacre, OSU Columbus, OH.
- 2002 Guo, W., Kim, HJ, **Doseff, A.I.**, and Wewers, M.D. Cardiak is a constitutively expressed in monocytes and interacts transiently with caspase-1 after endotoxin. (Poster). Keystone Symposia: Innate Immunity: evolution and link to adaptive immunity. Keystone, CO.
- 2001 **Doseff, A.I.***, Bourgeois, T., and Wewers, M.D. IL-4 induces apoptosis of activated monocytes through a caspase-dependent pathway. (Oral presentation). American Thoracic Society International Conference, San Francisco, CA.
- 2001 Rovin, B.H., Wilmer, W. A., Lu, L., Dixon, C., **Doseff, A.I.**, and Hilbelink, T. The cyclopentenone prostaglandin 15-deoxy- $\Delta^{12,14}$ -PGJ₂ (15dPGJ₂) regulates human mesangial cell (HMC) proliferation and survival. ASN/ISN World Congress of Nephrology. San Francisco, CA.
- 2001 **Doseff, A.I.***, and Wewers, M.D. (Oral presentation). Internal Medicine Fellows Day. OSU, Columbus, OH.
- 2001 Graham, M.M., **Doseff, A.I.**, Goyal, A., Nowicki, P. T., and Marsh, C.B. Nitric oxide has a dual role in monocyte apoptosis via caspase-3 and the AKT-dependent pathway. (Poster). FASEB. Orlando, FL.
- 2001 **Doseff, A.I.*** Molecular Biology and Cancer Genetics Program (Invited speaker). OSU, Columbus, OH.
- 2001 **Doseff, A.I.***, and Wewers, M.D. Caspase-3 is a phosphoprotein and associates with a kinase that is modulated during monocyte activation and spontaneous monocyte apoptosis. (Poster). Keystone Symposia: Macrophage activation and deactivation: links between innate and acquired immunity and interfaces between innate and adaptive immunity. Keystone, CO
- 2000 **Doseff, A.I.*** Caspases: regulating by proteolysis the apoptotic cascade. (Invited plenary speaker: Postgraduate course on regulation and function of apoptosis in lung biology). American Thoracic Society International Conference, Toronto, Canada.
- 2000 **Doseff, A.I.**, *, Sadler, P.M. and Wewers, MD. Caspase-3 phosphorylation and its role in monocyte apoptosis. (Oral presentation). American Thoracic Society International Conference, Toronto, Canada.
- 2000 **Doseff, A.I.***, Fahy, R.J. and Wewers, M.D. Spontaneous monocyte apoptosis and endotoxin protection are dependent on caspase-3 and do not require caspase-1 activity. (Poster). FASEB, Washington, D.C.
- 1997 **Doseff, A.I.***, Soengas, M.S., Lowe, S., and Lazebnik, Y. Delineating the caspase cascade by caspase depletion. (Oral presentation). Meeting on Programmed Cell Death. Cold Spring Harbor Laboratory, N.Y.

- 1995 **Doseff, A.I.***, and Arndt, K. Genetic screen to isolate genes involved in the function of SIT-4 phosphatase. (Poster). Meeting on Cell Cycle. Cold Spring Harbor Laboratory, N.Y.
- Indicates presenter

Reviewer for Scientific Journals:

Cell Death and Differentiation, Journal of Leukocyte Biology, Blood, American Journal of Physiology, Biochemical Pharmacology, Stem Cell and Development.