

## BIOGRAPHICAL SKETCH

NAME Steven W. Dow, DVM, Ph.D.	POSITION TITLE Professor of Immunology		
eRA COMMONS USER NAME STEDOW1			
EDUCATION/TRAINING <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 Virginia	B.A.	1978	Biology
University of Georgia	D.V.M.	1982	Veterinary Medicine
Colorado State University	M.S.	1987	Clinical Sciences
Colorado State University	Ph.D.	1992	Comparative Pathology

### A. Professional Experience

2007-present: Professor, Dept of Microbiology, Immunology, and Pathology and Dept of Clinical Sciences, Colorado State University, Ft. Collins, CO

2001-2006 Associate Professor, Dept of Microbiology, Immunology, and Pathology and Dept of Clinical Sciences, Colorado State University, Ft. Collins, CO

1995-2001 Instructor, National Jewish Medical and Research Center, Denver, CO and the University of Colorado Health Sciences Center, Denver, CO

1993-1995 Post-Doctoral Fellow, National Jewish Medical and Research Center, Denver, CO

1990-1993 Special Assistant Professor, Department of Pathology, Colorado State University

1987-1990 Graduate Student, Department of Pathology, Colorado State University, Ft. Collins, CO

1984-1987 Residency in Small Animal Medicine, Dept Clinical Sciences, Colorado State University

### Honors, Positions, and Other Professional Activities

Magna cum laude graduate, University of Virginia (BA), 1978

Summa cum laude graduate, University of Georgia (DVM), 1982

Pfizer Animal Health Award for Research Excellence, Colorado State University, 2004

Ad hoc study section member, Innate Host Defense IRG, National Institutes of Health, Oct. 2005

Study section member, Topics in Bacterial Pathogenesis, NIH, Oct. 2006; Feb, 2007

Ad hoc study section member, Third Generation Anthrax Vaccine, NIH, Jan 2007

Member, Fogarty International and Cooperative Projects Study Section, 2007-2012

Member, American College of Veterinary Internal Medicine

Member, American Association of Immunologists

### B. Publications (selected out of 73 total, in chronological order)

1. Dow SW, Elmslie RE, Willson AP, Roche L, Gorman C, and Potter TA. (1998). In vivo tumor transfection with superantigen plus cytokine genes induces tumor regression and prolongs survival in dogs with malignant melanoma. *J Clin Invest.* 101:2406-2414.
2. Dow SW, Liggitt DL, Fradkin L, and Potter TA. (1999) Potent activation of innate immunity induced by intravenous administration of cationic lipid-DNA complexes. *J Immunol* 163:1552-1561.
3. Dow SW, Elmslie RE, Fradkin L, Liggitt D, Willson AP, Heath TH, Potter TA. (1999). Systemic injection of DNA-lipid complexes and IL-2 or IL-12 genes controls the growth of established lung tumor metastases *Hu Gene Ther* 10:2961-2972.
4. Dow SW, Roberts A, Orme I, and Potter TA. (2000). Immunization with f-met peptides induces immunity against *Mycobacterium tuberculosis*. *Tubercle and Lung Dis* 80:5-13.
5. Kedl R, Jordan M, Kappler J, Potter T, Marrack P, and Dow S. (2001) CD40 stimulation accelerates depletion of tumor-specific CD8+ T cells in the absence of tumor antigen vaccination. *Proc Natl Acad Sci* 98:10811-10816.

6. Higgins RJ, McKisic M, Dickinson PJ, Jimenez DF, Dow SW, Tripp LD, LeCouteur RA. (2004). Growth inhibition of an orthotopic glioblastoma in immunocompetent mice by cationic lipid-DNA complexes. *Cancer Immunol Immunother* 53:338-344.
7. Mueller, R, Veir J, Fiesler K, and Dow S. (2005) Use of immunostimulatory liposome-nucleic acid complexes in allergen specific immunotherapy of dogs with refractory atopic dermatitis - a pilot study. *Vet Dermatol* 16:61-68.
8. Dow S, Elmslie R, Kurzman I, McEwen G, Pericle F, and Liggitt D. (2005) Phase I study of liposome-nucleic acid complexes encoding the IL-2 gene for treatment of canine osteosarcoma metastases. *Hu Gene Ther* 16:937-946.
9. Sellins K, Fradkin L, Liggitt D, and Dow S. (2005). Type I interferons potently suppress gene expression following gene delivery using liposome-DNA complexes. *Mol Therapy* 12:451-459.
10. Bosio C and Dow S. (2005) Aberrant activation of pulmonary dendritic cells by *Francisella tularensis*. *J Immunol* 175:6792-6801.
11. Kamstock D, Guth A, Elmslie R, Kurzman I, Fairman J, Coro L, and Dow S. (2006) Liposome-DNA complexes infused intravenously inhibit tumor angiogenesis and elicit antitumor activity in dogs with soft tissue sarcoma. *Cancer Gene Ther* 13, 306-317.
12. Gowen B, Fairman J, Smee D, Wong M, Jung K, Pace A, Heiner M, Bailey K, Dow S, and Sidwell R. (2006) Protective immunity against acute phleboviral infection elicited through immunostimulatory cationic liposome-DNA complexes. *Antiviral Research* 69:165-172.
13. Walter C, Biller B, Lana S, Bachand A, and Dow S. (2006) Effects of chemotherapy on immune responses in dogs with cancer. *J Vet Intern Med* 20:342-347.
14. U'Ren L, Kedl R, and Dow S. (2006) Immunization with liposome-DNA complexes elicits enhanced antitumor immunity. *Cancer Gene Ther* 13:1033-1044.
15. Veir J, Lappin M, and Dow S. (2006) Evaluation of a novel immunotherapy for treatment of chronic rhinitis in cats. *J Fel Med Surg*, 8: 400-411.
16. Zaks K, Jordan M, Guth A, Sellins K, Kedl R, Izzo A, Bosio C, and Dow S. (2006) Efficient immunization and cross-priming by vaccine adjuvants containing TLR3 and TLR9 agonists complexed to cationic liposomes. *J Immunol* 176:7335-7345.
17. U'Ren L, Biller B, Elmslie R, Thamm D, and Dow S. (2007). Evaluation of a novel tumor vaccine in dogs with hemangiosarcoma. *J Vet Intern Med* 21:113-120.
18. Mathes M, Jordan M, and Dow S. (2006) Evaluation of liposomal clodronate in a canine model of spontaneous autoimmune hemolytic anemia. *Expt Hematol*, 34:1393-1404.
19. McMahan RH, Williams JA, Jordan KR, Dow SW, Wilson DB, and Slansky JE. (2006) Relating MHC-Peptide, TCR affinity to immunogenicity for the rational design of tumor vaccines. *J Clin Invest* 116:2543-2551.
20. McWilliams JA, McGurran SM, Dow SW, Slansky JE, and Kedl RM. (2006) A modified tyrosinase related protein 2 epitope generates high affinity tumor-specific T cells but does not mediate therapeutic efficacy in an intradermal tumor model. *J Immunol* 177:155-161.
21. Biller B, Elmslie R, Burnett R, Avery A, and Dow S. (2007) Use of FoxP3 expression to identify regulatory T cells in healthy dogs and dogs with cancer. *Vet Immunol Immunopath*:116:69-78.
22. Lana S, U'Ren L, Elmslie R, Plaza S, and Dow S. (2007) Low-dose continuous chemotherapy for adjuvant therapy of canine hemangiosarcoma. *J Vet Intern Med* 21:764-769.
23. Kamstock D, U'Ren L, Elmslie R, Lana S, Thamm D, and Dow S. (2007) Evaluation of a xenogeneic VEGF vaccine in dogs with soft tissue sarcoma. *Cancer Immunol Immunother* 56:1299-1309.
24. Avery P, Lehman T, Hoover E, and Dow S. (2007) Sustained generation of dendritic cells from multiple tissues of cats using long-term stromal cell cultures. *Vet Immunol Immunother* 117:222-235.
25. Webb C, McCord K, and Dow S. (2007) Neutrophil function defects in dogs with sepsis. *J Vet Intern Med* 21:982-999.
26. Webb C, Lehman T, McCord K, Avery P, and Dow S. (2008) Oxidative stress during acute FIV infection in cats. *Vet Immunol Immunopath* 122:16-24.
27. Dow, S. (2008). Liposome-nucleic acid immunotherapeutics. *Expert Opinion Drug Delivery* 5:11-24.
28. Morley P, Mathes M, Guth A., and Dow S. Prevalence of erythrocyte antibodies in anemic and non-anemic dogs. *J Vet Intern Med*, in press, 2008.
29. Elmslie R, Glawe P, and Dow S. Metronomic chemotherapy with cytoxan and piroxicam effectively delays tumor recurrence in dogs with incompletely resected soft tissue sarcoma, *J Vet Intern Med*, in press, 2008.