
BIOGRAPHICAL SKETCH

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NAME Carlos Subauste, M.D.	POSITION TITLE Associate Professor		
eRA COMMONS USER NAME SUBAUSTEC			
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Universidad Peruana Cayetano Heredia	M.D.	1983	Medicine
Southern Illinois University School of Medicine	Resident	1987	Medicine
Stanford University School of Medicine	Post-Doc	1992	Infec. Dis / Immunol

A. Positions and Honors.

Positions

- 1984-1987 Medical Residency, Southern Illinois School of Medicine
1987-1988 Instructor of Medicine (Chief Resident), Southern Illinois School of Medicine
1988-1992 Post-doctoral Fellow, Stanford University School of Medicine
1992-1996 Research Associate, Research Institute, Palo Alto Medical Foundation
1997-2003 Assistant Professor, University of Cincinnati College of Medicine
2004-2006 Associate Professor, University of Cincinnati College of Medicine
2006-present Associate Professor, Case Western Reserve University School of Medicine

Honors and Awards

- 1987 Barry Breen, M.D. Memorial Award
1988 The Alpha Omega Alpha Honor Medical Society
1991 University of California Universitywide AIDS Research Program Award
1993 American Foundation for AIDS Research Scholar Award
2007 Faculty teaching award, Case Western Reserve University

B. Selected peer-reviewed publications (in chronological order).

- Subauste, C.S.**, and J.S. Remington. 1991. Interferon gamma in *Toxoplasma gondii* infection. *Eur. J. Clin. Microbiol. Infect. Dis.* 10: 58-67.
- Subauste, C.S.**, A.H. Koniaris, and J.S. Remington. 1991. Murine CD8⁺ cytotoxic T lymphocytes lyse *Toxoplasma gondii*-infected cells. *J. Immunol.* 147: 3955-3959.
- Subauste, C.S.**, and J.S. Remington. 1992. The role of interferon gamma in resistance against *Toxoplasma gondii*. In *Anti-infective applications of interferon gamma*. H.S. Jaffe, L.R. Bucalo and S.A. Sherwin, editors. Marcel Dekker, Inc. New York. 87-121.
- Subauste, C.S.**, L. Dawson, and J.S. Remington. 1992. Human lymphokine-activated killer cells are cytotoxic against cells infected with *Toxoplasma gondii*. *J. Exp. Med.* 176: 1511-1519.
- Subauste, C.S.**, and J.S. Remington. 1993. Immunity to *Toxoplasma gondii*. *Current Opinion in Immunology.* 5: 532-537.
- Hunter, C.A., **C.S. Subauste**, V.H. van Cleave, and J.S. Remington. 1994. Production of IFN- γ by NK cells from *Toxoplasma gondii* infected SCID mice: regulation by IL-10, IL-12 and TNF- α . *Infect. Immun.* 62: 2818-2824.
- Hunter, C.A., E. Candolfi, **C.S. Subauste**, V.H. van Cleave, and J.S. Remington. 1995. Studies on the role of interleukin-12 in acute murine toxoplasmosis. *Immunology.* 84: 16-20.

- Subauste, C.S.**, J.Y. Chung, D. Do, A.H. Koniaris, C.A. Hunter, J.G. Montoya, S. Porcelli and J.S. Remington. 1995. Preferential activation and expansion of human peripheral blood $\gamma\delta$ T cells in response to *Toxoplasma gondii* in vitro and their cytokine production and cytotoxic activity against *Toxoplasma gondii*-infected cells. *J. Clin. Invest.* 96: 610-619.
- Montoya, J.G., K. Lowe, C. Clayberger, D. Moody, D. Do, J.S. Remington, S. Talib, and **C.S. Subauste**. 1996. Both human CD4⁺ and CD8⁺ T lymphocytes are cytotoxic for *Toxoplasma gondii*-infected cells. *Infect. Immun.* 64: 176-181.
- Subauste, C.S.**, and J.S. Remington. 1996. Toxoplasmosis. In Cecil Textbook of Medicine 12th Edition. J.C. Bennett, and F. Plum, editors. W.B. Saunders Company. Orlando, FL.
- Hunter, C.A., Y. Suzuki, **C.S. Subauste**, and J.S. Remington. 1996. Cells and cytokines in resistance to *Toxoplasma gondii*. *Current Topics in Microbiology and Immunology.* 219: 113-125.
- Subauste, C.S.**, R. de Waal Malefyt, and F. Fuh. 1998. Role of CD80 (B7-1) and CD86 (B7-2) in the immune response to an intracellular pathogen. *J. Immunol.* 160: 1831-1840.
- Subauste, C.S.**, F. Fuh, R. de Waal Malefyt, and J.S. Remington. 1998. $\alpha\beta$ T cell response to *Toxoplasma gondii* in previously unexposed individuals. *J. Immunol.* 160: 3403-3411.
- Subauste, C.S.**, and J.S. Remington. Animal Models: *Toxoplasma gondii*. 1999. In Current Protocols in Immunology. J.E. Coligan, A. M. Kruisbeek, D.H. Margulies, E.M. Shevach, and W. Strober, editors. John Wiley & Sons, Inc. New York, NY.
- Subauste, C.S.**, M. Wessendarp, R.U. Sorensen, and L. Leiva. 1999. CD40 - CD40 ligand interaction is central to cell-mediated immunity against *Toxoplasma gondii*: Patients with hyper IgM syndrome have defective type-1 immune response which can be restored by soluble CD40L trimer. *J. Immunol.* 162: 6690-6700.
- Subauste, C.S.** and M. Wessendarp. 2000. Human dendritic cells discriminate between viable and killed *Toxoplasma gondii* tachyzoites: Dendritic cell activation after infection with viable parasites results CD28 and CD40 ligand signaling that controls IL-12-dependent and -independent T cell production of IFN- γ . *J. Immunol.* 165. 1498-1505.
- Subauste, C.S.**, M. Wessendarp, A.G. Smulian and P.T. Frame. 2001. Role of CD40 ligand signaling in defective type-1 cytokine response in HIV infection. *J. Infect. Dis.* 183: 1722-1731.
- Subauste, C.S.** 2002. Toxoplasmosis. In Conn's Current Therapy 2002. R.E. Rakel, E.T. Bope, editors. W.B. Saunders Co. Philadelphia, PA. 155-161.
- Subauste, C.S.** 2002. CD154 and type-1 cytokine response: From Hyper IgM syndrome to HIV infection. *J. Investigator/Infect. Dis.* 185(Suppl 1): S83-S89.
- Andrade, R.M., M. Wessendarp, and **C.S. Subauste**. 2003. CD154 activates macrophage anti-microbial activity in the absence of IFN- γ through a TNF- α -dependent mechanism. *J. Immunol.* 171: 6750-6756.
- Subauste, C.S.**, M. Wessendarp, J-A.C. Portillo, R.M. Andrade, L. Hinds, F. Gomez, A.G. Smulian, P.A. Grubbs, and L.A. Haglund. 2004. Pathogen-specific induction of CD154 is impaired on CD4⁺ T cells from HIV-infected individuals. *J. Infect. Dis.* 189:61-70.
- Subauste, C.S.** 2004. Toxoplasmosis and HIV. In HIV InSite Knowledge Base [textbook on-line]. <http://hivinsite.ucsf.edu/> L. Peiperl and P. Volverding, editors.
- Andrade, R.M., J-A.C. Portillo, M. Wessendarp and **C.S. Subauste**. 2005. CD40 signaling in macrophages induces anti-microbial activity against an intracellular pathogen independently of IFN- γ and reactive nitrogen intermediates. *Infect. Immun.* 73: 3115-3123.
- Andrade, R.M., M. Wessendarp, J-A.C. Portillo, J. Yang, F.J. Gomez, J.E. Durbin, G.A. Bishop and **C.S. Subauste**. 2005. TRAF6-dependent CD40 signaling primes macrophages to acquire antimicrobial activity in response to TNF- α . *J. Immunol.* 175:6014-6021.
- Subauste, C.S.** and M. Wessendarp. 2006. CD40 restrains in vivo growth of *Toxoplasma gondii* independently of gamma IFN. *Infect. Immun.* 74:1573-1579.
- Andrade, R.M., M. Wessendarp, M.J. Gubbels, B. Striepen, and **C.S. Subauste**. 2006. CD40 induces macrophage anti-*Toxoplasma gondii* activity by triggering autophagy-dependent fusion of pathogen-containing vacuoles and lysosomes. *J. Clin. Invest.* 116:2366-2377
- Subauste, C.S.** 2006. Primary immunodeficiency and the neonate. *Parasite Immunology.* 28:567-575.
- Subauste, C.S.**, A. Subauste and M. Wessendarp. 2007. Role of CD40-dependent downregulation of CD154 in impaired induction of CD154 in CD4⁺ T cells from HIV-1-infected patients. *J. Immunol.* 178:1645-1653.
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- Subauste** Andrade, R.M., M. Wessendarp and. 2007. CD40, autophagy and *Toxoplasma gondii*. *Autophagy*. 3:245-248.
- Subauste, C.S.**, J.G. Montoya and J.S. Remington. 2007. AIDS-associated toxoplasmosis. *In* The medical management of AIDS. 7th Edition. M.A. Sande, and P.A. Volberding, editors. W.B. Saunders Co. Philadelphia, PA.
- Klionsky, D.J., H. Abeliovich, P. Agostini, **C.S. Subauste**, et al. 2008. Guidelines for the use and interpretation of assays for monitoring autophagy in higher eukaryotes. *Autophagy*. 4:1-25.
- Portillo, J-A., J. Van Grol, L. Zheng, K. Daehnel, G. Okenka, A. Garland, T.S. Kern and **C.S. Subauste**. 2008. CD40 mediates retinal inflammation and neuro-vascular degeneration. *J. Immunol.* 181:8719-8726.
- Subauste, C.S.** 2009. CD40, autophagy and *Toxoplasma gondii*. *Mem. Inst. Oswaldo Cruz.* 104:267-272
- Subauste, C.S.** Autophagy and *Toxoplasma gondii*. *Curr. Topics Microbiol. Immunol.* In press.
- Subauste, C.S.** Autophagy as an anti-microbial strategy. *Expert Rev. Antiinfect. Ther.* In press.
- Portillo, J.A., G. Okenka, T.S. Kern and **C.S. Subauste**. Identification of primary retinal cells and ex vivo detection of pro-inflammatory molecules using flow cytometry. *Mol. Vision.* In press.
- Subauste, C.S.** CD40 and immunity to parasitic infections. *Sem. Immunol.* In press.

C. Research Support

Ongoing Research Support

R01 EY018341 Subauste (PI)
NIH/NEI

7/1/09 – 6/30/14

Autophagy and ocular toxoplasmosis

The purpose of this application is to study the in vivo role of CD40-induced autophagy in resistance against toxoplasmic retinochoroiditis.

Subauste (PI)

3/1/09 – 2/29/12

Juvenile Diabetes Research Foundation

Intracellular signaling and control of diabetic retinopathy

The purpose of this study is to determine examine the effects of in vivo blockade of CD40-TRAF signaling in the development of diabetic retinopathy.

Subauste (PI)

7/1/07-6/30/09

American Heart Association

Manipulation of CD40 signaling to control atherosclerosis and arterial injury.

The purpose of this study is to determine whether manipulation of events downstream of CD40 impair pro-atherogenic responses in endothelial cells, smooth muscle cells and macrophages and prevent in vivo the inflammation associated with vascular injury.

Subauste (PI)

1/1/08-12/31/09

Dietrich Diabetes Research Institute

Regulation of diabetic retinopathy

The purpose of this proposal is to explore the role of advanced glycation end products in CD40 signaling and determine whether CD40 controls the development of diabetic retinopathy.

Subauste (PI)

9/1/08 – 8/31/09

Ohio Lions Eye Research Foundation

Identification of inhibitors of diabetic retinopathy

The purpose of this application is to perform high throughput screening to identify small molecules that inhibit CD40-TRAF signaling.