

Comment on “Tissue Factor–Dependent Chemokine Production Aggravates Experimental Colitis”

The article by Queiroz *et al.* in the September–October 2011 issue of *Molecular Medicine* (1) uses a genetic approach to examine the role of tissue factor (TF) in colitis. The authors conclude that TF contributes to colitis by enhancing expression of the granulocyte chemoattractant keratinocyte-derived chemokine (KC), leading to granulocyte recruitment. Three experimental groups of mice are used: C57BL/6, TF^{+/-}/hTF⁺ (50% mice) and TF^{-/-}/hTF⁺ (1% mice). The 50% and 1% mice generated by our laboratory (2) are on a genetic background that is not fully C57BL/6. These mice were created by backcrossing six generations with C57BL/6 mice. However, an increase in spontaneous hemorrhage caused us to discontinue this backcrossing (3). We therefore concluded that the 50% and 1% mice are not on a pure C57BL/6 genetic background. Many studies have shown significant differences in the phenotypes between different strains of mice (4,5). Subsequently, drawing conclusions regarding disease mechanisms when data are collected from different strains rather than comparing littermates is difficult. The correct control population for these studies should consist of TF^{+/+}/hTF⁺ mice, generated by intercrossing TF^{+/-}/hTF⁺ mice. Importantly, many of the differences reported by Queiroz *et al.* (1) may reflect differences in strain (C57BL/6 versus either the 50% or 1% mice) rather than differences in TF expression (50% versus 1% mice). Therefore, the data presented in this paper should be interpreted with caution.

Julia E Gambone,¹ A Phillip Owens III,² and Nigel Mackman²

Departments of ¹Pathology and ²Medicine, Division of Hematology and Oncology,

McAllister Heart Institute, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, United States of America

Address correspondence and reprint requests to Nigel Mackman, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599. Phone: 919-843-3961; Fax: 919-843-4896; E-mail: nmackman@med.unc.edu

Submitted August 18, 2011; Accepted for publication August 26, 2011; Epub (www.molmed.org) ahead of print October 18, 2011.

© 2011 The Feinstein Institute for Medical Research, www.feinsteininstitute.org
Online address: <http://www.molmed.org>
doi: 10.2119/molmed.2011.00303

DISCLOSURE

The authors declare that they have no competing interests as defined by *Molecular Medicine*, or other interests that might be perceived to influence the results and discussion reported in this paper.

REFERENCES

1. Queiroz KC, *et al.* (2011) Tissue factor–dependent chemokine production aggravates experimental colitis. *Mol. Med.* 17:1119–26.
2. Parry GC, Erlich JH, Carmeliet P, Luther T, Mackman N. (1998) Low levels of tissue factor are compatible with development and hemostasis in mice. *J. Clin. Invest.* 101:560–9.
3. Pawlinski R, *et al.* (2002) Tissue factor deficiency causes cardiac fibrosis and left ventricular dysfunction. *Proc. Natl. Acad. Sci. U. S. A.* 99:15333–8.
4. Moore KJ, *et al.* (2005) Loss of receptor-mediated lipid uptake via scavenger receptor A or CD36 pathways does not ameliorate atherosclerosis in hyperlipidemic mice. *J. Clin. Invest.* 115:2192–201.
5. Reardon CA, Blachowicz L, Lukens J, Nissenbaum M, Getz GS. (2003) Genetic background selectively influences innominate artery atherosclerosis: immune system deficiency as a probe. *Arterioscler. Thromb. Vasc. Biol.* 23:1449–54.