

SUPPLEMENTAL INFORMATION

Elevated Transglutaminase 2 Activity is Associated with Hypoxia-Induced Experimental Pulmonary Hypertension in Mice

Thomas R. DiRaimondo^{1,#}, Cornelius Klöck^{2,#}, Rod Warburton^{3,#}, Zachary Herrera², Krishna Penumatsa³, Deniz Toksoz³, Nicholas Hill³, Chaitan Khosla^{1,2,*}, Barry Fanburg^{3,*}

Departments of ¹Chemical Engineering and ²Chemistry

Stanford University, Stanford CA 94305

³Pulmonary and Critical Care Division

Tufts University, Boston, MA. 02111

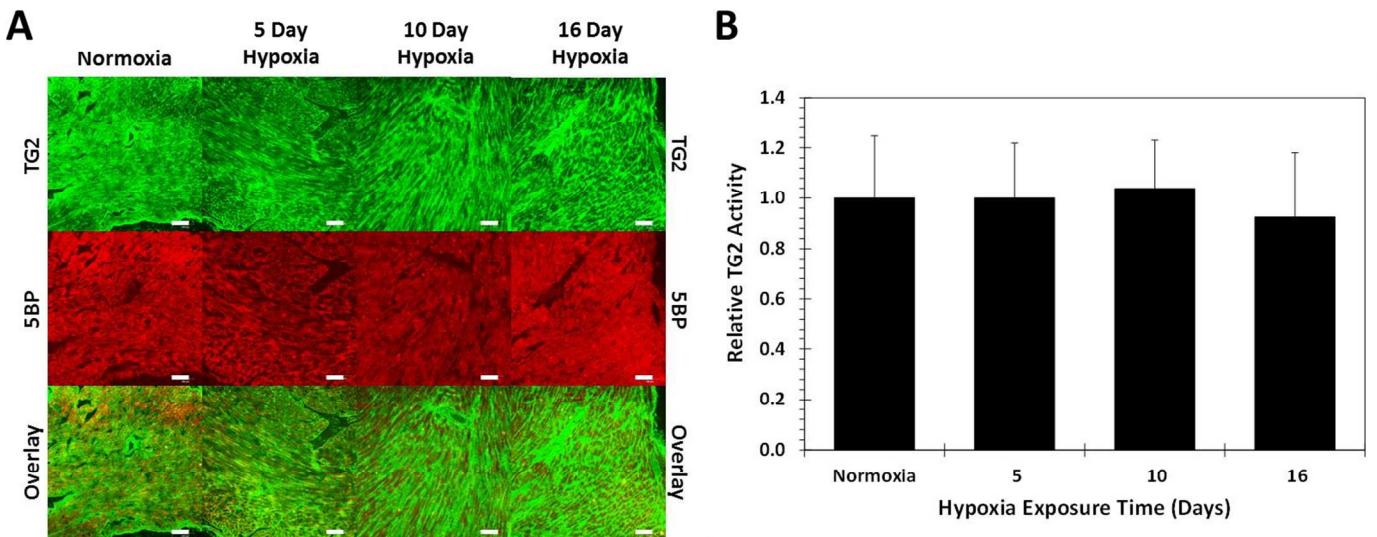
[#] These authors contributed equally to this manuscript

*Address correspondence to:

Barry Fanburg (bfanburg@tuftsmedicalcenter.org) or Chaitan Khosla (khosla@stanford.edu)

SUPPLEMENTAL FIGURES

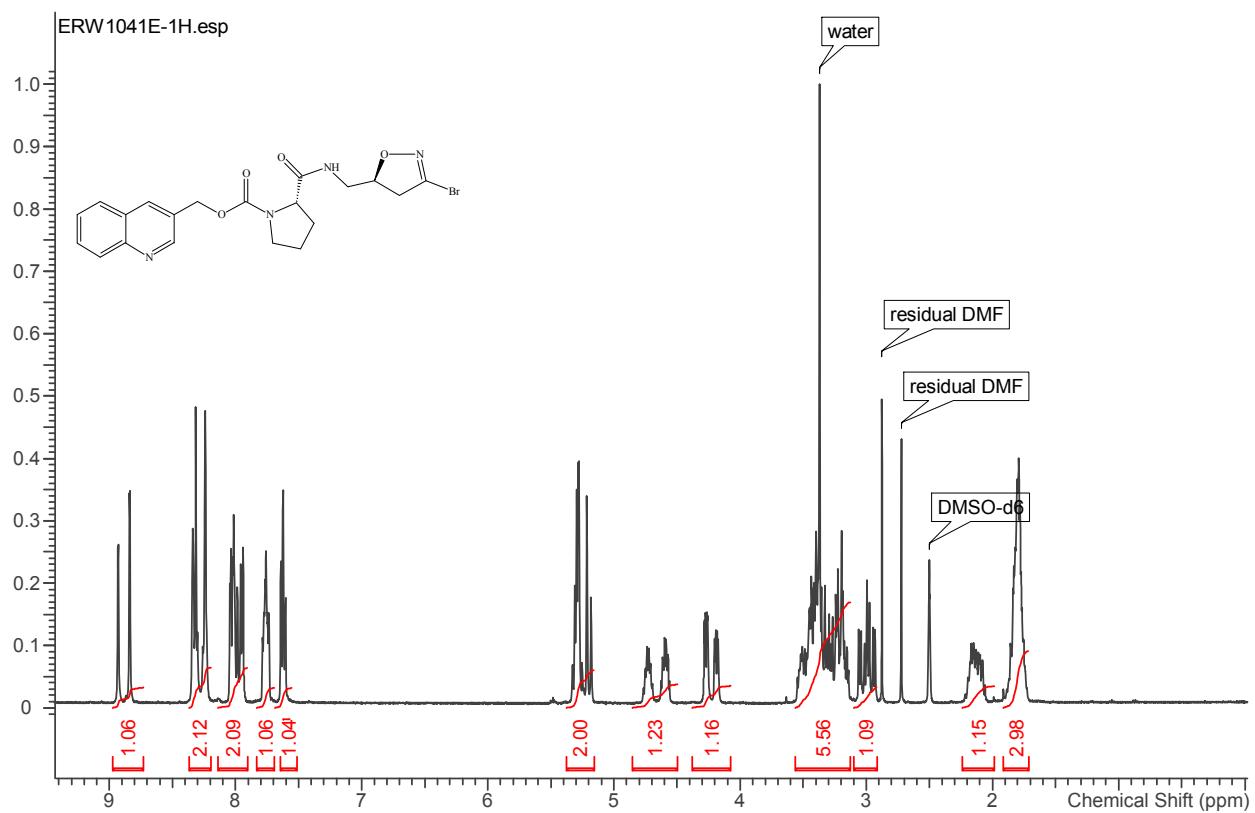
Supplemental Figure S1



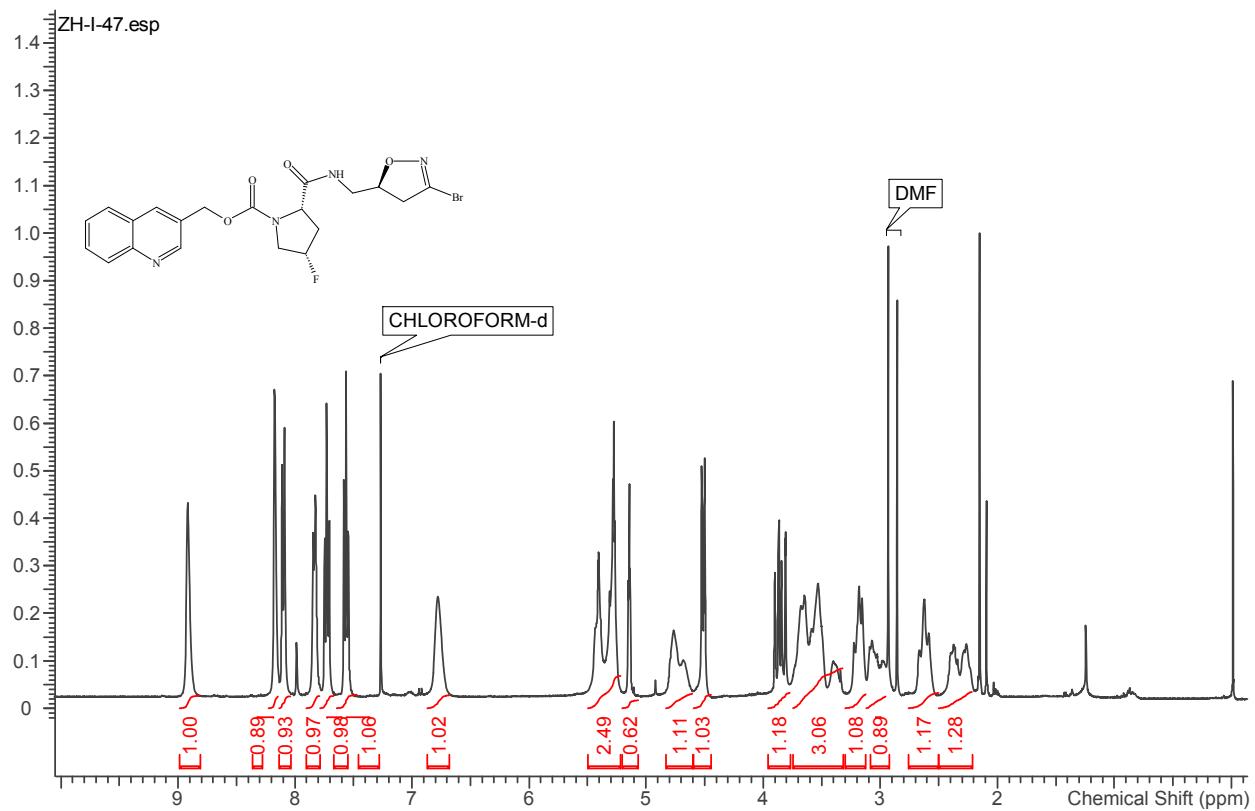
Supplemental Figure S1: C57BL/6 mice were placed in normobaric hypoxic (FIO₂ 10.5%) chambers for 5-16 days or left in atmosphere as the normoxia-exposed animal controls. TG2 activity in the lung was measured using the nucleophilic substrate, 5BP, as described in the main text. Alexa Fluor 488 (green) was used to visualize TG2 protein, whereas Alexa Fluor 555 (red) corresponded to TG2 activity. (A) TG2 activity in heart was constitutively high in room-air exposed mice, and did not change with hypoxia exposure time. (B) Quantitation of specific TG2 activity in heart tissue using ImageJ. At least 30 images per condition were collected of which representative images are shown. Data are represented as average +/- standard error. All images were processed identically.

Supplemental Figure S2

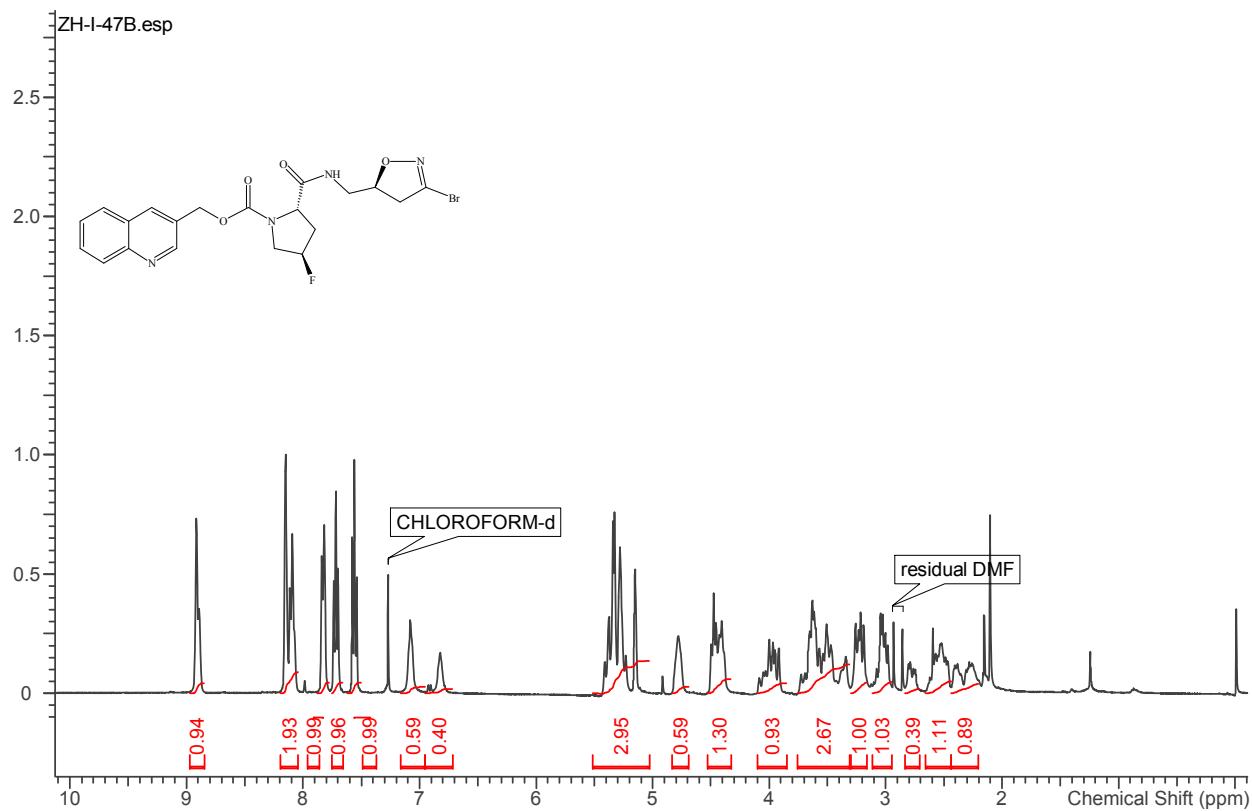
^1H -NMR spectra of (1)



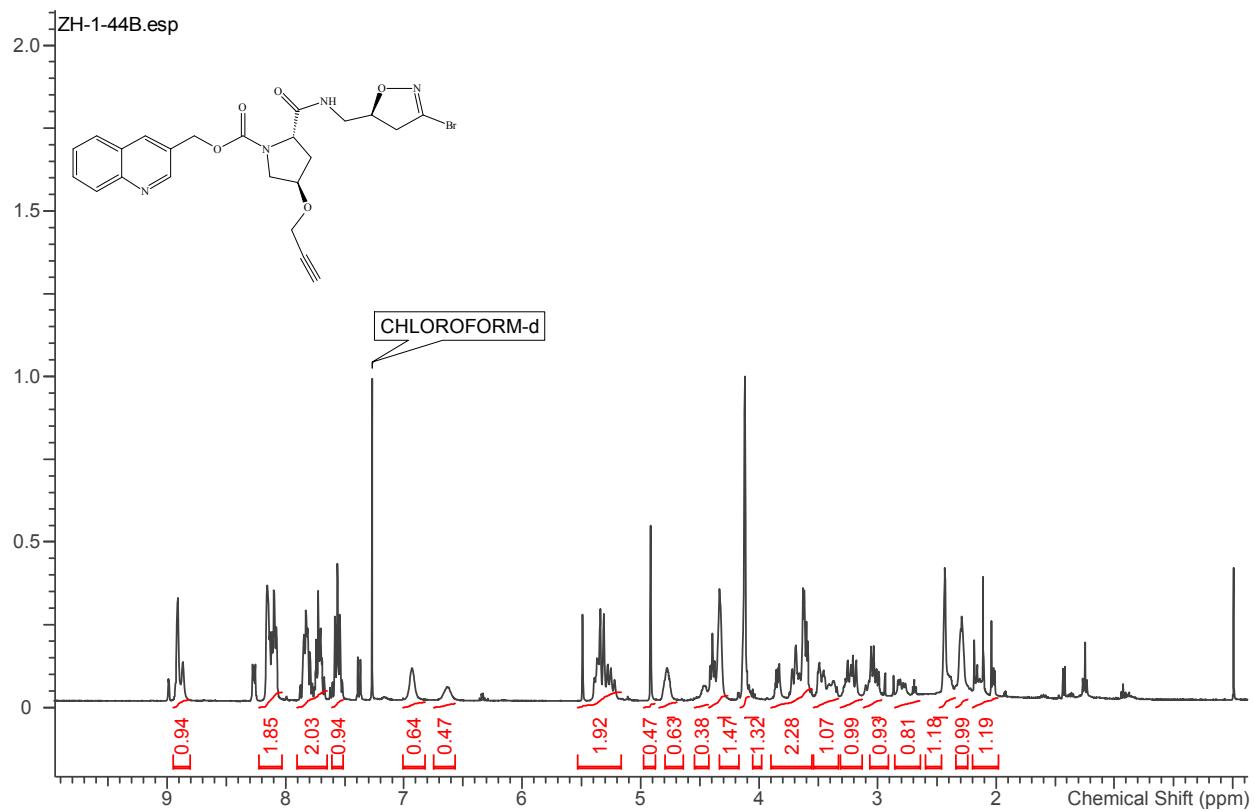
¹H-NMR spectrum of (2a)



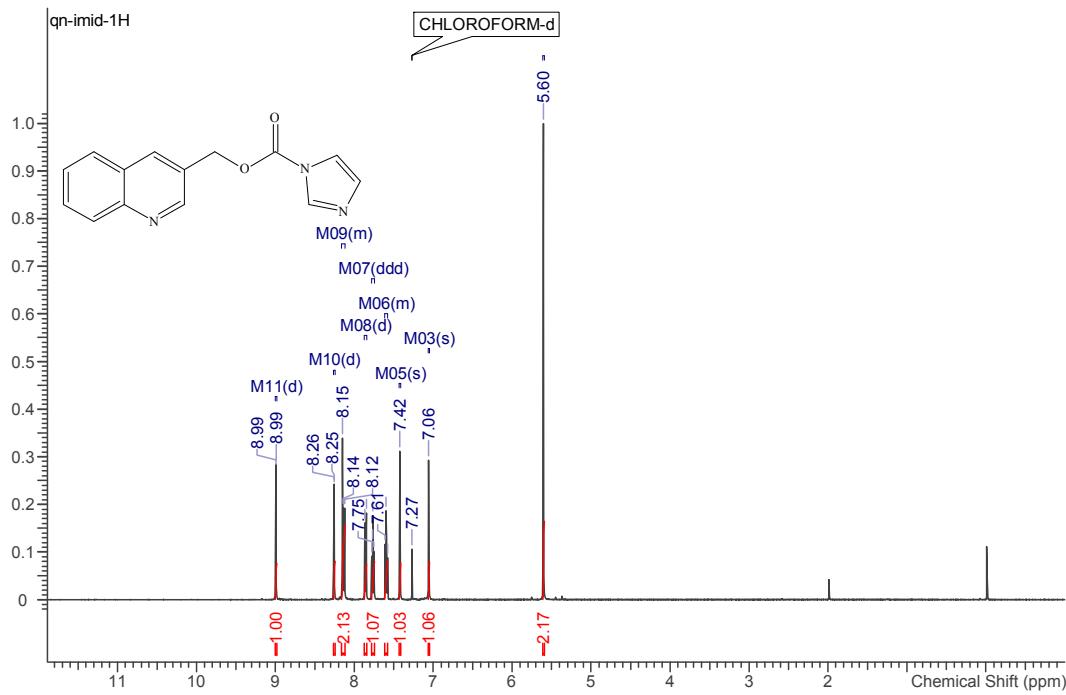
¹H-NMR spectrum of (2b)



¹H-NMR spectra of (3)



¹H and ¹³C NMR spectra of (5b)



¹H and ¹³C NMR spectra of (5-BP*HCl)

