

Abstract Submitted
for the TSS08 Meeting of
The American Physical Society

Optical Characterization of Biological Tissues L. MIMUN, FREDERICK BARRERA, DHIRAJ SARDAR, ANDREW TSIN — University of Texas at San Antonio, San Antonio, Texas 78249 An in-depth characterization of the optical properties of biological tissues has been performed. The wavelength-dependent total diffuse reflection (R_d) and total transmission (T_t) measurements have been taken for individual tissues by using a double-integrating sphere setup. The index of refraction of the tissues will be determined using conventional optical techniques. The Kubelka Munk theory is applied to determine the scattering and absorption coefficients of these samples from the measurements of diffuse transmission and reflection. A thorough study of the scattering characteristics of these tissues has been made. *This work was supported in part by the NSF sponsored Center for Biophotonics Science and Technology (CBST) at UC Davis under Cooperative Agreement No. PHY 0120999.

Frederick Barrera

Date submitted: 11 Feb 2008

Electronic form version 1.4