Bioluminescence tomography (BLT) is a molecular imaging modality, which derives a bioluminescent source distribution inside a small animal from external bioluminescent signals. We published the first paper on BLT in 2004 using the modality fusion approach. The introduction of BLT can be compared to the development of x-ray CT based on radiography. Without BLT, bioluminescent imaging is basically qualitative. With BLT, quantitative and 3D analyses become feasible inside a living mouse, which reveal important molecular and cellular information for numerous preclinical applications.

Quotations from Distinguished Peers

Said Dr. David Piwnica-Worms, “If you just look at the number of papers published and the way the techniques are being used — comparing MR, PET, SPECT, radiopharmaceutical, fluorescence, ultrasound, and bioluminescence — in preclinical studies and in basic science studies, bioluminescence imaging seems to be dominating the playing field.”


Methods for bioluminescence tomography have recently been reported\(^53,54\), and there is a great impetus for in vivo tomographic applications for improving localization and quantification beyond what has been achieved by planar methods.


Papers by Our Team


