

## Advanced Real-Time Fluorescence Imaging System for Rat's Femoral Vein Thrombosis Monitoring

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**Abstract :** Artery and vein occlusion changes observed in patients and experimental animals are unexplainable symptoms. As the fat accumulated in cardiovascular ruptures, it causes vascular blocking. Likewise, early detection of cardiovascular disease can be useful for treatment. In this study, we used the mouse femoral occlusion model to observe the arterial and venous occlusion changes without darkroom. We observed the femoral arterial flow pattern changes by proposed fluorescent imaging system using an animal model of thrombosis. We adjusted the near-infrared light source current in order to control the intensity of the fluorescent substance light. We got the clear fluorescent images and femoral artery flow pattern were measured by a 5-minute interval. The result showed that the fluorescent substance flowing in the femoral arteries were accumulated in thrombus as time passed, and the fluorescence of other vessels gradually decreased.

**Keywords :** thrombus, fluorescence, femoral, arteries

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