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(54) Title: SYSTEMS AND METHODS TO REDUCE SCATTERING IN TEMPORAL FOCUSING MULTIPHOTON MICROSCOPY

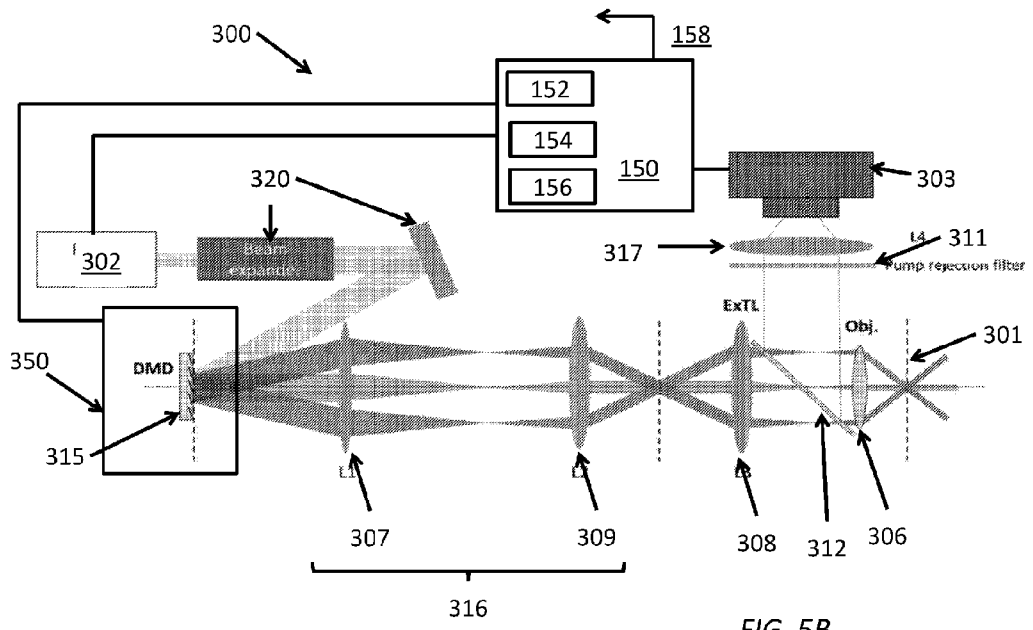


FIG. 5B

(57) Abstract: Systems and methods herein provide improved, high-throughput multiphoton imaging of thick samples with reduced emission scattering. The systems and methods use structured illumination to modify the excitation light. A reconstruction process can be applied to the resulting images to recover image information free of scattering. The disclosed systems and methods provide high throughput, high signal-to-noise ratio, and high resolution images that are depth selective.



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