

(12) **United States Patent**
Tearney et al.

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(54) **SYSTEMS, METHODS AND COMPUTER-ACCESSIBLE MEDIUM WHICH PROVIDE MICROSCOPIC IMAGES OF AT LEAST ONE ANATOMICAL STRUCTURE AT A PARTICULAR RESOLUTION**

(2013.01); *A61B 5/0075* (2013.01); *A61B 5/0084* (2013.01); *G01B 9/02091* (2013.01); *G02B 6/32* (2013.01)

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(58) **Field of Classification Search**
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See application file for complete search history.

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(57) **ABSTRACT**

Exemplary embodiments of apparatus, systems and methods can be provided for providing at least one electro-magnetic radiation to at least one sample. For example, a plurality of wave-guiding arrangements can be provided which are configured to (i) provide the electro-magnetic radiation(s), and (ii) at a point of emission of each of the wave guiding arrangements, cause a phase of each of the electro-magnetic radiation(s) to have a predetermined value. The exemplary apparatus can be part of a probe. Further the exemplary apparatus can include an interferometric arrangement provided in communication with the probe and/or be part of the probe.

17 Claims, 26 Drawing Sheets

