

Mechanistic Understanding and Technical Considerations for iDISCO Application

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The rising interests in understanding organ-wide complexity of biological natures (e.g. large-scale anatomical organization, cellular distribution and morphology, and pathological progression) has promoted the development and adaptation of advanced tissue clearing approaches with volumetric imaging. Simple and robust approaches like iDISCO-family protocols are becoming popular in broad biomedical research [1-4]. Here we will discuss the current advantages and future expectations of iDISCO protocols, from design to application, to ensure reliable whole mount analysis [5].

References:

- [1] Renier et al., *Cell*. **159** (2014), p. 896-910. doi: 10.1016/j.cell.2014.10.010.
- [2] Renier et al., *Cell*. **165** (2016), p. 1789-1820. doi: 10.1016/j.cell.2016.05.007.
- [3] Chi et al, *Cell Metab*. **27** (2018), p. 226-236.e3. doi: 10.1016/j.cmet.2017.12.011.
- [4] Chi et al, *J Vis Exp. [Online]* **137**, 58271 (2018), <https://www.jove.com/t/58271> (accessed July 28, 2018), doi: 10.3791/58271.
- [5] The author acknowledges funding from BRAIN Initiative Cell Census Network Program under Award Number U01MH114824.