EPIBIOS Meeting Feb 12 2020

Created	@July 6, 2021 1:51 PM
Tags	

Einstein imaging

- differences among DTI scans
  - 2D sequence with twice the slice thickness there
  - same b-value (2800) and SNR
  - Olli: worst case, we can downsample the other sites data to harmonize
  - Dominique will help Craig upload data

Plan for analysis

- 9 days, 5mo, and ex vivo are points
- Add another diffusion shell, with a smaller number of directions for tissue mapping
  - add 12 at b=1000
  - currently we have 42 directions at b=2800 and 4 at b=0

Attached is a perhaps relevant paper by Li et al. that evaluated the number of gradient directions for spherical mean analysis, suggesting that the minimum number of directions scales linearly with the b-value. So then it seems that we would need at least 15 directions at b=1000 to achieve comparable performance as 42 at b=2800 — so 21 seems like a safe bet. I'd also be happy to help with some tests if someone wanted to collected a longer test scan to run our own such experiments

https://s3-us-west-2.amazonaws.com/secure.notion-static.com/c5a4e973-cab3-49b4-9906-e5de74e3c533/nihms-1505789.pdf

https://s3-us-west-2.amazonaws.com/secure.notion-static.com/96fc8688-a310-428b-a9d8-0e52ee6046e4/Memo_TC13Feb2020_MRIrodent.docx