



2018-2019 Mid-Term Credibility Plan Review

PI: Timothy Secomb

#	Ten Simple Rules	REVIEWER #1		REVIEWER #2	
		Considered in the Credibility Plan?	Comments	Considered in the Credibility Plan?	Comments
1	Define context clearly	sufficient	The computational tools are being developed so they can be used by others in any tissue for which data are available about microvascular structure	sufficient	The model scope is well described
2	Use appropriate data	sufficient	Team of experimentalists and modelers; clear distinction between calibration and validation	sufficient	The PI plans to use experimental (animal?) data for model development and consult expert opinion throughout the project.
3	Evaluate within context	sufficient	Seems like sufficient VVUQ and sensitivity approaches in the context of the aims	sufficient	Validation, uncertainty analysis, and sensitivity analyses are planned. There is a brief description of code verification. More emphasis on code verification may be warranted since an in-house code platform is being developed.
4	List limitations explicitly	sufficient	Communicated in publications	sufficient	The description states that assumptions and limitations are provided in publications.
5	Use version control	sufficient	Github versioning	sufficient	A GitHub repository was recently implemented for version control
6	Document adequately	sufficient	Documentation through publications	insufficient	The PI states the group simultaneously authors a paper while writing code. Mark-up of the source code would facilitate re-use and future modification.
7	Disseminate broadly	sufficient	Data and models available.	sufficient	The PI shares not only the code and documentation, but also the source data used as part of the model development
8	Get independent reviews	sufficient	External consultants	sufficient	The PI has engaged (external) SMEs for code review and also supports code users from external groups.
9	Test competing implementations	sufficient	Use canonical models for testing theories	insufficient	The description provided is address the intent of this rule, which is to use a different code platform to answer a related research question. It is not known by this reviewer if a competing implementation exists.
10	Conform to standards	sufficient	Establishing their own standard for reporting model and code.	insufficient	The description provided does not address the intent of this rule, which is to ensure coding and documentation standards are followed.



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General Comments

Reviewer 1:

It's great that your team has modelers and experimentalists working together, along with external consultants and good data management plan.

Reviewer 2:

It is clear that significant thought and planning went into the development of this credibility plan. Investing effort into code verification and code documentation would provide more confidence in the outputs of the code platform and provide flexibility during code development. Also, are there any competing code platforms currently available to predict blood flow and oxygenation to brain tissues?