2018-2019 Mid-Term Credibility Plan Review

PI: Rajanikanth Vadigepalli

		REVIEWER #1		REVIEWER #2	
#	Ten Simple Rules	Considered in the Credibility Plan?	Comments	Considered in the Credibility Plan?	Comments
1	Define context clearly	sufficient	I would want to know to what extent the model will be appropriate in the context of different liver preparations: human, animal (different types of animal disease induction?) in vivo, in vitro, ex vivo, cultured cells 2D,3D .... (not sure what types of prep are used in this domain). Of course ultimately we want to know how to treat patients so "multiple tissue repair scenarios" -- after cirrhosis? (probably too late?); acetaminophen or etoh toxicity?; hepatitis (A,B,C,D?)	sufficient	The researchers do a good job of describing the context of use of the model. However, it is desirable for them to also explicitly state if the purpose of the model is research use, and the target end users.
2	Use appropriate data	sufficient	Here I have a critique of our rules. Generally one uses the data that is available rather than the data that is most appropriate to the problem to be solved. In the case of human disease the most appropriate data would come from pathological and normal human tissue, typically unavailable though perhaps available to some few groups from liver biopsy? Perhaps we are looking more for clever use of inappropriate data? I'm guessing that this rubric snuck through from other engineering fields where much more data is available.	insufficient	For the data planned to be collected, the researchers need to explicitly state if it is from an animal, and/or human.
3	Evaluate within context	sufficient	Now we get to a specific disease -- alcoholism. It is noted that we are looking at "alcoholic liver disease models" which I presume are animals, but could be culture with etoh dumped on? In this rule, perhaps one could say something about how one has or will bring these findings back to the patient in terms of proposing particular disease interventions?	insufficient	The researcher's evaluation sounds good. However, a clear statement needs to be made on the type of models the proposed model will be evaluated against (e.g. animal, computational model of an animal model, etc.).
4	List limitations explicitly	sufficient	Perhaps could give a couple examples or mention the major limitation here in addition to referring the reader back to the publications?	insufficient	The awardee indicate they have provided publications that explicitly state the limitations of the model. There should either explicitly reference these publications, or provide a synopsis as supplemental information.

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5	Use version control	sufficient	I'm a fan of git or hg as being the most likely to be usable by other groups. Also automatic versioning does not provide a narrative history and does not correlate with notebooks or tutorials or other documentation. For that one needs to provide labels for some saves (as is done with Google docs) or to label all repo saves as with git/hg.	sufficient	It would be preferable to have auto-versioning capability implemented for all aspects of the model. Especially for major changes. However, the fact they are using version control is noted, and if the intended use of the model is purely research, then the current version control method is sufficient. In this light, the researchers should explicitly state if the context of use of the model is for research and/or clinical application.If and when the model is going to be used for clinical purposes, automated version control method should be applied for stages of the model development and deployment.
6	Document adequately	sufficient	In process. Going for Jupyter?	sufficient	The researchers seem to be making deliberate effort to document the essential elements of their work. It is desirable, however, for the researchers to describe what is meant by "Development process is not being documented prior to publication"
7	Disseminate broadly	sufficient	My take on meetings and publications is that they both fail to disseminate - "disseminated via meetings" -- hand around thumb drives? Supplementary material good; ModelDB good -- tutorials, docs? ... of course all this would take a lot of work and more funding to really hire people to do the final software push.	sufficient	A well thought out, and sustainable dissemination strategy is in place.
8	Get independent reviews	sufficient	This is great -- far better than most of us do. But .... when someone is actually in the lab they will ask questions. Let's take a new student and lock him or her in a room with just what's provided and see if they can get it to run -- below in 'E' it sounds like that is what you actually have done.	sufficient	There is an adequate independent review plan in place. It would also be highly desirable to seek external independent reviewers unaffiliated with their laboratories. This may be done in conjunction with the dissemination process. For instance, (1) it may be worthwhile to release a “beta” version for evaluators to use the model and provide feedback to the researchers. (2) Have a breakout session or crowd source at relevant conferences and meetings to have a group of researchers spend an hour or so providing feedback on key aspects of the model. (3) work with IMAG and CPMS to organize an independent review breakout session or meetings in conjunction with the annual IMAG/MSM meetings.

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9	Test competing implementations	sufficient	A little more detail. Generally many of us have trouble finding other implementations in our domain, much less more than one! How many implementations are there comparable in detail and scope to what you do? -- frankly I'd be amazed that there is even one, so I'm guessing that it's just some subsidiary parts of the model that can be tested in this way?	sufficient	
10	Conform to standards	sufficient	Is Matlab a standard? OK I suppose that it is ... I'm speaking here as an impoverished researcher who can't afford to buy the thing ($18k each 3-4 years for a full lab installation).	sufficient	

General Comments

Reviewer 1:
This is, not surprisingly, a model model-credibility plan since was prepared by a CPMS member and the author of the credibility-rules rubric.

It is laid out according to the simple rules and thus clearly describes the efforts that have been made in the context of each context including of course model context (rule 1).

Having now said that the report is fantastic, I will proceed to be very picky in my critique purely in the interest of expanding our discussion of the topic. None of my suggestions in the table would even belong in an interim report such as this, but perhaps in a final report or in a review in the future.
Minor points:

B.d. Which animal models? (see further below)

D. Something more about leading to a credible model for clinical use?

E. "engage laboratory colleagues ... not ... involved in the project to start with ... manuscript text, equations, ... tables ... to independently develop ... code" Wow -- most of us would not have enough personnel to make something like this happen! -- how do you do this? -- rotators? (if you require them to do this for their rotation project are any of them still willing to join the lab????)

See table for more factors -- mostly about clinical usage and suitability for particular types of liver disease.

Reviewer 2:
Based on the track record of the investigators, I am certain they have a solid credibility plan. However, there is a lack of clarity if the models under consideration are animal or human based. Also where publications are inferred, it is desirable to clearly reference the publications and provide a synopsis of the pertinent sections that support the proposed credibility plan.