**Proposed Checklists for use as one develops the model and the data analysis**

These are the in-house checklists used for the UW Model Repository at [www.physiome.org](http://www.physiome.org/)

The pages are: 1.Summary 2.Project file, 3. CODE, 4.Verif, 5. Valid, 6. Uncertainty, 7. Publication

The check list is to be used by the author and two reviewers, before approval for website.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | STANDARDS.1.SUMMARY: Summary of Expectations | Auth | Check1 | Ch 2 |
| Group 1: Identification and Description | | x |  |  |
|  | 1. Model Name and No: short and long descriptions complete |  | xy |  |
|  | 2. Code completed, checked .mod file, Model runs correctly |  |  | xyz |
|  | 3. Diagrams correct |  |  |  |
|  | 4. Reference to Publication describing the model |  |  |  |
|  | 5. Context and Purpose of model defined |  |  |  |
| Group 2. Project File: Basic Content: FIGURES and NOTES | |  |  |  |
|  | 1. The chosen model solutions tell some story |  |  |  |
|  | 2. The story is around data, figures and parameter sets (All matched) |  |  |  |
|  | 3. The figures and their titles fit story |  |  |  |
|  | 4. Every figure has axes labeled with symbol, name and units |  |  |  |
|  | 5. Figures use Very short tab labels fitting the topic. |  |  |  |
|  | 6. Graphs use same colors and line types for same variable in every figure. |  |  |  |
|  | 7. Sensitivity functions. How to plot. Why useful. Notes. Use same colors. |  |  |  |
|  | 8. Ontology consistent in notation of .mod, Figures and Notes and Par sets |  |  |  |
|  | 9. Notation consistent with diagrams in .mod text and on the Website |  |  |  |
|  | 10. Parameters sets: Description and rationale for each explained in Notes |  |  |  |
|  | 11. Loops: Purposes and settings; parameter set, plus explanation in Notes |  |  |  |
|  | 12. Optimization re data or other model: description, par set, Notes |  |  |  |
| Group 3. Verification methods: See STANDARDS-VERIF for detail | |  |  |  |
|  | 1. Under Notes: Check off list for the model file verification |  |  |  |
|  | 2. List variables computed in the MML code that are serving as checks |  |  |  |
|  | 3. Commentary on checks or missing checks |  |  |  |
|  | 4. Numerical Methods chosen and why. In notes. |  |  |  |
|  | 5. Solution times chosen; delta t chosen; comments |  |  |  |
| Group 4. Validation methods: See STANDARDS-VALID for detail | |  |  |  |
|  | 1. Justify initial and boundary conditions in accord with physiology |  |  |  |
|  | 2. List Data provided and fitted by model, and sources. |  |  |  |
|  | 3. Show fits of data in Figures, and optimization results |  |  |  |
|  | 4. Notes defining contents of each situation, figure or par set |  |  |  |
|  | 5. Parameters estimated and evaluated against literature or other |  |  |  |
| Group 5. Uncertainty Quantification: See STANDARDS-UQ for detail | |  |  |  |
|  | 1. Parameters and Variables chosen |  |  |  |
|  | 2. Define Measures of uncertainty |  |  |  |
|  | 3. Plots or contour maps of projected results |  |  |  |
| Group 6: Scientific Publication: See STANDARDS-PUB for detail | |  |  |  |
|  | 1. Summary of the science |  |  |  |
|  | 2. References to subsequent publications or alternative models |  |  |  |
|  | 3. Website for public dissemination, commentary and responses |  |  |  |

Updated: 8mar2018