Supplementary Materials for

Changing the Mindset in Life Sciences Toward Translation: A Consensus

Georg N. Duda,* David W. Grainger, Megan L. Frisk, Leena Bruckner-Tuderman, Andrew Carr, Ulrich Dirnagl, Karl Max Einhäupl, Stephen Gottschalk, Elliott Gruskin, Christoph Huber, Carl H. June, David J. Mooney, Ernst Th. Rietschel, Georg Schütte, Werner Seeger, Molly M. Stevens, Robert Urban, Alex Veldman, Günther Wess, Hans-Dieter Volk

*Corresponding author. E-mail: Georg.Duda@charite.de

This PDF file includes:

Manuscript checklist.

Checklist of requirements for your revised manuscript:

Style and Editing Guidelines

☐ Remove any claims that your findings are "novel" or are the first to demonstrate a particular conclusion.

☐ We do not allow "data not shown." The data must be added to the paper or the conclusion must be removed. All claims, results or conclusions must be supported by published and/or publicly accessible data or references.

☐ Avoid references to future work.

☐ Do not include results within figure legends.

☐ Indicate **Data and materials availability**: The data for this study have been deposited in the database dbGAP. The sequence of XXX can be found as GenBank XXXXXX. [If any of the data are not in the paper or SM itself, include the location of these data.]

Data Deposition

See www.sciencemag.org/about/authors for details and approved databases.

☐ DNA sequence data must be deposited in an appropriate database before acceptance.

☐ Atomic coordinates and structure factor files or electron microscopy maps for molecular structures must be deposited in an appropriate database before acceptance.

☐ Microarray data must be MIAME compliant and submitted to an appropriate database before acceptance.

☐ Protein and molecular interaction data may also be deposited in public databases.

☐ Clinical trials must be registered in a public database.

☐ Accession numbers for all deposited data must be included in the Acknowledgements.

Study Design

☐ It is strongly recommended that authors consult an experienced expert in statistics and experimental design before manuscript submission to validate these aspects of the study.

☐ *Study design paragraph*. Include a separate section at the beginning of Materials and Methods on study design. It should contain:

☐ Predefined study components (where applicable): Sample size justification (power analysis), rules for stopping data collection, data inclusion/exclusion criteria, treatment of outliers, endpoint selection method.

☐ Rationale and design of study. Briefly (2-3 sentences) describe the overall objective and design of your study, including the treatments, the types of observations made and the measurement techniques used.

☐ Randomization. Include whether the subjects or other experimental units were assigned randomly to the experimental groups and, if not, how the sample was selected

☐ Blinding. Include whether the study was blinded and the method used for allocation concealment, blinded conduct of the experiment, and blinded assessment of outcomes.

☐ Replication. Specify how many sampling and experimental replicates were performed for each experiment. If this differs among experiments, include in the figure legend.

☐ If your study falls into one of the categories listed in the EQUATOR Network library, follow the indicated reporting guidelines and note the appropriate guideline in your study design paragraph.

Statistical Analysis

☐ Units must be supplied for all measurements.

☐ Display results with continuous variables using graphs such as scatterplots, boxplots, or histograms or by reporting measures of central tendency (e.g., mean or median) and dispersion (e.g., SD, interquartile range).

☐ *Uncertainty*. Point estimates of population parameters (e.g., mean, correlation coefficient, slope) or comparative measures (e.g., mean difference, odds ratio, hazard ratio) should be accompanied by a measure of uncertainty. Identify the uncertainty represented by error bars in figures (standard deviation, standard error of the mean). This can be stated in the statistics paragraph (see below) if all values are the same in the paper or the figure legend, if they differ among figures.

☐ Error bars cannot be included unless $N > 2$, where N is the number of biological replicates. If only two values were generated show both in the graph.

☐ N, the number of times an experiment was independently performed, must be included for each experiment. Distinguish between technical and biological replicates. This should usually be included in the figure legend.

☐ For very small samples sizes (e.g., N < 20), present all data values in tabular format, usually in the SM.

☐ *Statistics in figure legends.* In each figure legend, include the individual statistical test name used, value for N, P value (or equivalent), and identification of the uncertainty for each experiment in the figure. Include this in the main text for data not shown in a figure.

☐ *Statistics paragraph.* Each paper must have a separate section at the end of Materials and Methods describing the statistical analysis that includes the information below. Include in the paragraph:

☐ The methods used for determining significance (t-test, Wilcoxon signed rank test, Wald test of regression coefficient) and for constructing confidence intervals (e.g., normal-based 95% CI: mean ± 2SD, likelihood ratio-based interval).

☐ The testing level (alpha) and whether one-sided or two-sided testing was used.

☐ Adjustments made to alpha levels (e.g., Bonferroni correction) or other procedures to account for multiple testing (e.g., false discovery rate control).

☐ Verification that the statistical approaches are valid (e.g., data are normally distributed; survival data are consistent with proportional hazards in a Cox regression model).