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## University of Michigan iGEM Software Team Place Database Project 2014

The Michigan iGEM Software Team is creating a protocol database and rating system to help eliminate reproducibility issues in laboratory science experiments. Review studies estimate up to only 10-25% of published scientific results are reproducible, and up to 54% of materials/antibodies /organisms are not identifiable for reproducibility studies (<a href="https://peerj.com/articles/148/">https://peerj.com/articles/148/</a>). We are hoping to address some of these issues by providing a tool that allows researchers to upload protocols and share specific reagents (product numbers and so on) to increase the likelihood of reproducible scientific results and protocols.

We'd love feedback from any software or laboratory team, individual or scientist on if and how such a tool could be most useful to potential users. Thanks in advance for your suggestions!

To learn more about iGEM, click here: http://2014.igem.org/Tracks/Software

\* Required Give a name for your responses \* This is to ensure we do not have duplicate entries:) What best describes your role in research? \* Non-student scientist Graduate student researcher Undergraduate student Laboratory iGEM team Software iGEM team Software engineer/no wet lab work Corporation Other: How many years of laboratory research experience do you have? \* Laboratory courses at University do \*not\* count Less than 1 year 1-3 years 4+ years How often do you have trouble replicating new protocols you get from collaborators, the internet, publications or other lab members? \*

less than 25% of the time the experiment outcome differs

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up to 50% of the time the outcome differs						
O up to 100% of the time the outcome differs						
My protocols always work perfectly every time						
When troubleshooting difficulties you're having with a new protocol, what problems ultimately cause the most difficulty? *						
Unclear/confusing direction language						
☐ Using different reagents than the protocol writer (e.g.; antibodies)						
☐ User error						
☐ Missing steps from the protocol						
☐ Tools/calibration of instruments not specified in protocol						
□ Other:						
What resources do you consult when dealing with a difficult protocol?*						
☐ The primary source of the protocol (PI, grad student, collaborator, paper author)						
☐ The internet Google searches, etc						
Social media Twitter, Facebook, etc						
☐ Lab members/team members						
□ Companies for reagent questions						
Other:						
Have you ever contacted the Customer Service department of a scientific product company for help with protocols or reagents? *						
<ul> <li>Yes, and their solutions ultimately helped me</li> </ul>						
O Yes, and their advice was mostly unhelpful						
O No						
If there was a free, online repository of established protocols for a variety of scientific procedures, would you *						
Use the site to browse and download protocols?						
Submit your lab's own protocols in detail?						
☐ Be willing to answer other scientist's questions about your protocol via comments?						
■ Be interested in voting up/down protocols that worked or did not work for you?						
☐ Be interested in linking directly to specific reagents you use for your work?						
■ Be interested in being able to purchase specific reagents for specific protocols?						
Use the site to calculate specific ratios of reagents?						
Other:						

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