



June 4, 2015

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Hello DSHA SMART Team,

We are absolutely blown away by the very beautiful and precise TRPV1 model that you guys designed, built, and annotated! It was such a thrill for the lab to see our favorite molecule 'in the flesh' and to read the accompanying laminated description. We've spent many hours looking at the TRPV1 structure *in silico* – that is to say, as a 3D projection on a computer screen - but there is something so much more satisfying about being able to hold the protein in one's hand and really get an appreciation for what it looks like as an object in real space. Many thanks to you guys - the SMART Team - for making this possible. Of course, your color scheme was also an inspired choice!

Needless to say, the model and accompanying materials now occupy a special place in my office. In fact, several of my colleagues have already dropped by to ogle your creation and to ask how they can acquire a structure depicting their own favorite molecule. So perhaps there's some business potential here if you guys want to put together a start-up company, 'SMART Team Molecular Sculptures, Inc.'

All kidding aside, I'm thrilled to know that what we've done in our lab has caught your attention and perhaps sparked your interest in science and basic research. We've used some state-of-the-art technology in carrying out these structural studies, but the most important factor for success has been the passion, dedication, and brilliance of the students who actually did the work. They are motivated by curiosity and by the thrill of seeing something for the first time – such as the 3D structure of TRPV1.

Like you, many students in my lab first became interested in science because they were fortunate enough to meet a superb teacher or mentor who encouraged them to be curious. In my case, I had a high school physics teacher who demystified science and taught us how it is relevant to everyday experiences and phenomena. I imagine that you are very grateful to Andy Weyer, Kate Zappia, Cheryl Stucky, Stacy Strandberg, and Scott Fleischmann for inspiring you to be the next generation of scientists, inventors, and teachers.

As a token of our appreciation and friendship, we are enclosing a group photo, together with a few copies of our original paper reporting the discovery of TRPV1. Also enclosed are copies of our latest paper describing the 3D structure of the TRPA1 channel (a.k.a. the wasabi receptor). So, if you folks are looking for a new project ...

All the best,

A handwritten signature in blue ink, appearing to read 'David Julius'.

David Julius
Morris Herzstein Chair in Molecular Biology and Medicine
Professor and Chair of Physiology