Great British Bake Off finalist discusses the parallels between chemistry and baking

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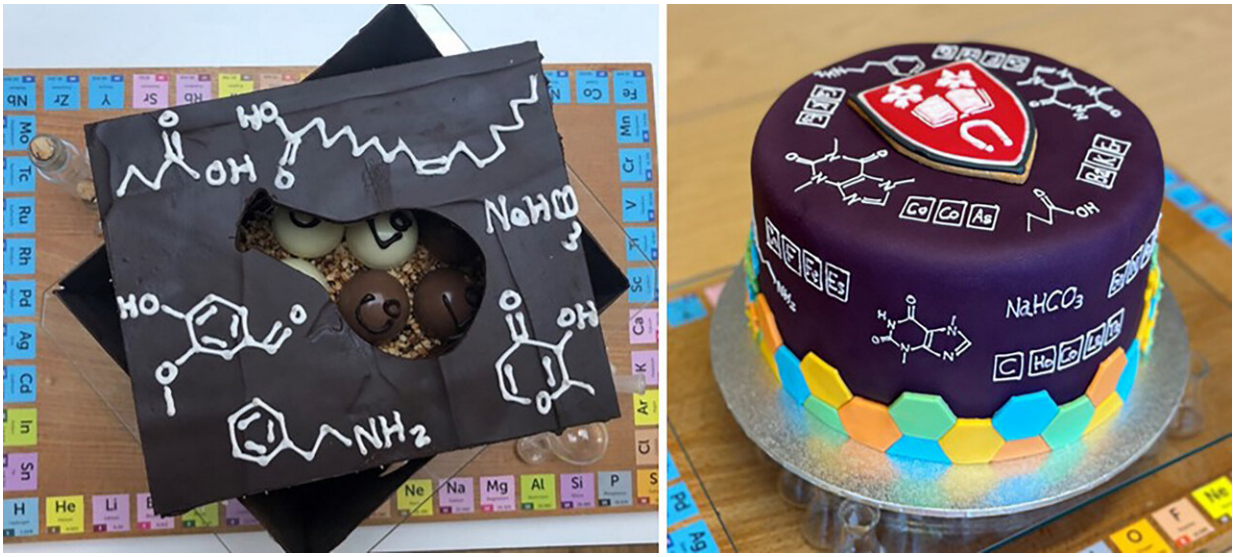

Smalley's chemistry-themed celebration chocolate box for Chocolate Week on The Great British Bake Off (left) and his chemistry-themed, mocha flavored showstopper cake for the School of Chemistry at the University of Leicester (right). Credit: *Cell Chemical Biology* / Smalley

Last year on a Friday evening, chemical biology researcher Josh Smalley was in the lab when he received a call inviting him to appear on the 14th and latest season of "The Great British Bake Off." Starting as one of a group of 12 amateur bakers, Smalley made it all the way to the final round, where the top three contestants compete for the winning spot.

In an essay published in the journal *Cell Chemical Biology* on June 20, Smalley describes the overlap between chemistry and baking and how his training in one has improved his performance in the other, and vice versa.

"Baking and science have always been my two great passions," says Smalley. "I find immense joy in combining my culinary creations with an insight into the science behind them just as much as I love to translate my methodical approach and precision from a chemistry research lab to the kitchen."

Just a few months before Smalley received the call to be on the show, he finished his Ph.D. at the University of Leicester developing proteolysis targeting chimeras (PROTACs) for the selective degradation of histone deacetylase enzymes. Now post-"Bake Off," he's a postdoctoral research associate there where he develops peptidomimetic sulfinamide foldamers.

Smalley says that his training in the lab is what helped him handle the pressure of baking in the tent. He was determined to showcase his interests in his bakes, like in his chemistry-themed chocolate celebration box.

"Some of my proudest moments from the whole experience were when an issue occurred during a bake and I was able to find a way to overcome it without getting flustered or allowing it to compromise my performance," he says.

Smalley also speaks of the transferable skills between the two areas. "I have come to learn over the years in both scenarios how things like temperatures and clean glassware are essential for perfect results and that the order of addition can have big implications on the product," he says.

Now that he is progressing in his career as a baker, he sees himself specializing just like he has as a researcher. "I have evolved from a baker that tried their hand at everything to honing my skills and finding my own unique style in the decoration, presentation, and storytelling of my bakes," he says.

"Moving forward, I am looking to continue in academia as a chemical biology researcher but divide my time between research and a public-facing role, promoting science through the art of baking and hopefully inspiring the next generation of scientists."

More information: The culinary chemist: Out of the lab and into the tent, *Cell Chemical Biology* (2024). DOI: 10.1016/j.chembiol.2024.05.011

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