Thickheaded Somms

EXAMINING THE **NEUROSCIENCE** BEHIND EXPERT WINE TASTING

by Deborah Parker Wong

AMONG OUR MANY activities, wine professionals devote a considerable amount of time to perception: the state of being where we become aware of something through our senses. According to *Neuroenology* author Gordon Shepherd, wine tasting engages a larger portion of our brain than activities like solving complex math and listening to classical music. Given that activation is how we learn things and sharpen our cognitive skills, it's no wonder that tasters who spend hours every day stimulating the neural systems associated with perception make something as difficult as blind-tasting look so easy.

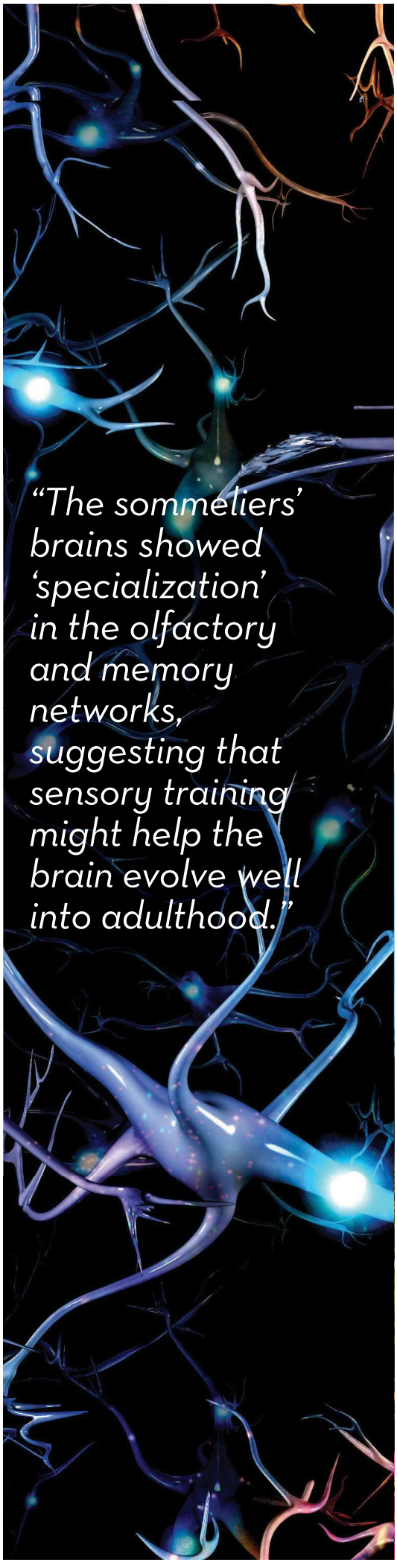
Shepherd, a Professor of Neuroscience at Yale School of Medicine, primarily focuses on biomechanics and how the physical act of tasting wine informs our perceptions. His work has inspired several columns that have appeared here in *The SOMM Journal* on the perception of color and how our brains create perceptions of aroma and taste. Anecdotally, I've seen firsthand that even a basic understanding of the mechanics of sensory physiology gives students an advantage as they learn to taste analytically and objectively.

In my own work with a group of adult wine enthusiasts—many of whom have had formal wine education and hold trade certifications—it's the study of wine faults that opened the doors to a far greater understanding of quality and the molecular world of volatile aromas. Researchers agree that individuals who are adept at naming the flavor descriptors of a wine are better at recalling memories of specific aromas, which makes it possible to recognize wines they've tasted previously.

Because a wine's distinct taste largely relies on volatile aromatic compounds and not on molecules that provide nutrition, Shepherd posits that it's possible for wine drinkers to concentrate exclusively on perceptual details of flavor. Meanwhile, in a 2016 study that compared Master Sommeliers' brains to those of a control group, researchers found that the sommeliers had a "thicker" sensory area. The sommeliers' brains showed "specialization" in the olfactory and memory networks, suggesting that sensory training might help the brain evolve well into adulthood.

When it comes to expanding one's perception of wine faults, Jamie Goode's book *Flawless: Understanding Faults in Wine* is an excellent reference. One of the most challenging aspects of studying the processes that ruin wine is bridging the world of academic research with the firsthand experiences of winemakers, and Goode does this very effectively when unpacking the complex topics of sulfur and oxidation. *Flawless* is one of the textbooks I require for the college classes I'm currently teaching on wine faults, and students seem to find it particularly helpful.

The 19th-century English artist William Blake wrote, "If the doors of perception were cleansed, everything would appear to man as it is: infinite." (Fittingly, Blake's feelings about mankind's limited perception of reality inspired another author, Aldous Huxley, to explore altered consciousness in his book *The Doors of Perception*.) Throughout history, however, wine's effect on perception has been most closely tied to a simple phrase in Latin, *in vino veritas*: "In wine lies the truth." Expert or not, most tasters are inclined to agree. SJ



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