

# The Amygdaloids

**Stephen Ornes**

Science Writer

In 2006, Joseph LeDoux received an invitation to deliver a lecture to the November meeting of the Secret Science Club, a monthly event series in Brooklyn, NY, that brings people together for lectures and performances in the name of science. LeDoux, a neuroscientist at New York University (NYU) whose laboratory focuses on understanding the neural basis of emotional memory, was game—but he didn't go alone. He knew the series paired lectures with performances, and he decided to bring the entertainment himself.

That event marked the birth of the Amygdaloids, a band made up entirely of scientists who largely sing songs inspired by neuroscience

research. At that first show, LeDoux—who writes, sings, and plays a white Stratocaster—recruited a few fellow musician-scientists and recalls that after his lecture, “we did songs about the mind and brain and mental disorders. We put together a set that had songs like ‘19th Nervous Breakdown,’ ‘Manic Depression,’ and ‘Mother’s Little Helper.’”

The current lineup of the band includes original members such as lead guitarist Tyler Volk, a biologist and environmental scientist at NYU, and drummer Daniela Schiller, a neuropsychologist at the Icahn School of Medicine at Mount Sinai School of Medicine. Either Amanda Thorpe, who studied neuro-

psychology but now works in advertising, or Colin Dempsey, who is not a scientist, plays bass.

LeDoux says his laboratory research inspires him to write songs. The band's name comes from the amygdala, the Greek word for “almond” and the name of the almond-shaped region of the brain often said to be responsible for much of a person's emotional processing. One of their first songs, “All in a Nut,” characterizes the amygdala as the seat of fear; however, LeDoux has challenged this idea in his Inaugural Article in PNAS (1).

The band performs “songs about love and life peppered with insights drawn from research about mind and brain and mental disorders,” according to their Web site. The band's first album, 2007's *Heavy Mental*, included songs like “Memory Pill,” which invoked research on a drug that could wash away “birth trauma and childhood stress,” and “Mind Body Problem,” which laments that “my body wants you, but my mind says no” and “holy dualism couldn't solve my schism.”

The Amygdaloids released their second full-length album, *Theory of my Mind*, in October 2010, with Rosanne Cash singing backing vocals on two tracks, and an EP, *All in Our Minds*, in January 2012. In the fall of 2013, the band returned to the studio to record three new songs for a new EP, due out in early 2014.

Many Amygdaloid performances, in the tradition of their debut, combine entertainment with a minilesson about the science behind the song; they've been invited to numerous scientific conferences and meetings. Last May 18 at the New York Psychoanalytic Institute in New York City, for example, they performed original pieces on mind/brain topics, each preceded by LeDoux giving a 3-minute lecture on the song's scientific or philosophic underpinnings.



The Amygdaloids posing on the roof of the building where, downstairs, founder Joseph LeDoux conducts neuroscience research. Left to right: Daniela Schiller, Gerald McCollam, Joseph LeDoux, and Tyler Volk. Image courtesy of Noah Hutton.

**1** LeDoux JE (2014) Coming to terms with fear. *Proc Natl Acad Sci USA* 111:2871–2878.