

An occasional column, in which Caveman and other troglodytes involved in cell science emerge to share their views on various aspects of life-science research. Messages for Caveman and other contributors can be left at [caveman@biologists.com](mailto:caveman@biologists.com). Any correspondence may be published in forthcoming issues.

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## The alien inside me speaks, and I feel good about myself

It is early in the morning. I am sitting at a big, oblong table. The room is too small for this sized table and all the chairs that surround it. It is also windowless. Soon, it will become cramped, hot and stuffy. I am waiting. Seated at the table are other scientists, arranging their papers, sipping coffee, also waiting. I finish my coffee. A few stragglers enter the room and quickly take their assigned seats. The Chair calls the meeting to order. The chatter dies down, and everyone turns to the head of the table. There is a short welcome, an apology for taking us away from whatever we would normally be doing at this time, and the perfunctory, "Why don't we go around the room and introduce ourselves." So far, so good. But then she adds the dreaded words that assuage the apparent indifference of the previous statement, "And, please say a few words about what you work on and what's really hot in your lab."

I brace myself for the onslaught of pithy, self-important snobbery that will follow. Each person will describe his or her purpose in science, and I know that it will, finally and irrevocably, be my turn. The executioner's blade will rest upon

my scrawny neck, and I will have to answer. The spotlight will be concentrated on me. People will listen, compare and judge. But, how will the description of my science match up with everyone else's? Will my statement garner any respect? Will I be judged as being worthy of a place at this table? Will my words be enough that when I want my opinion to be heard later others will listen, or will they switch off, get up for another cup of coffee or consider their options for elective surgery? Or, will I be accepted, and the executioner's blade will pass by and spare me?

The person next to the Chair smiles and prepares to speak. There is a hush in the room, people lean forward to listen, judges weighing the coming statements. The name. Is it recognized? Yes, nods of appreciation of the person's work, to which a face can now be placed. Mental notes that this is someone to talk to at the breaks, someone whose opinion will be important in the discussions around the table. The area of work? A 'developmental neurophysiologist'. Again, nods around the table. Clearly a smart person who is working in a difficult and very important area of research of great relevance to mankind. And, what is hot in the lab? He starts on the description of some complex wiring process in the embryonic brain, how they have worked out that cells crawl towards their target along a specialized

protein matrix and how this process is defective in Booby Syndrome, a terrible brain malformation in children. We swoon in awe of this god. The speaker sits back, satisfied, basking in the warm glow of our collective adulation. The executioner's blade passes on.

Is it me, or has the room quickly gotten hot and stuffy? But, everyone else seems comfortable. Goodness, someone is even wearing an overcoat!

I have time. There are at least ten more before me. I begin to go over the words I will use when it is my turn. "I am C. A. Veman." Hm! Definitely a weak start, one hardly likely to inspire confidence, let alone awe. But, that's who I am. "I work at C.A.V.E." This is not getting any better. I know the person sitting next to me. She will speak before me, and she comes from Oxford, or is it Dundee – it doesn't matter which one, either way I will appear small and insignificant in comparison. OK, there is nothing I can do about this – I am stuck with who I am and where I work. But, what about my field of study? "I am a cell biologist." It doesn't have the same ring to it as some of the other descriptions that I hear around the table: "cognitive neuropharmacologist", "biophysicist", "molecular cardiologist", "developmental neurobiologist", "systems neurologist", "nanotechnologist". And always someone who is working in genomics (in the context it is used, didn't that used to be pathology?) or proteomics (didn't that used to be biochemistry?). How can I, a cell biologist, possibly be considered an equal partner in this august group of brilliant scientists, each of whom has morphed into a veritable 'Einstein' in some amazing cross-over discipline involving all that is of mind-boggling complexity and importance. "Cell biologist?" I am interested in the biology of the cell. Of course, that is really what the first speaker was

interested in too – how neurons work their way to a target, interact and become functional. But, he called himself a 'developmental neurophysiologist'. Hm?

Five more to go before my turn. Never mind. What's really hot in the lab? What would grab their attention? Would they be interested to hear that we have finally identified a protein that binds to the cytoskeleton and contributes to its organization in cells? No, maybe not. OK, how about a description of how we have expressed a protein in cells that allows us to watch cells respond to their movement over different streaks of partially purified extracellular matrix proteins? Wait a minute; isn't that what the first person was doing, and didn't we also note that 'our' protein was something to do with Booby Syndrome?

The person next to me is speaking. A fairly well-known scientist from Oxford whom I have known for some time as a straight biochemist working on some arcane enzymatic pathway involving a kinase cascade. But wait a minute. The description I am hearing is for someone else. I hear that she is in fact a "chemical biologist working on signaling pathways involved in the control of cell proliferation, apoptosis and tumorigenesis." Her lab has "identified out of a chemical library a class of compounds that block a kinase-substrate interaction and cause [some nasty tumor] to shrink in animals, and are now in a Stage II clinical trial." What? Say that again? I look at my neighbor again. Who are you? Do I know you? What happened to the simple biochemist that I had known? Who is this imposter, this alien sitting next to me?

The executioner's blade has passed her by, and it is now pricking the back of my neck. I am next. The judges look expectantly at me.

I speak. "I am C. A. Veman, and I work out of C.A.V.E." I say it quickly, and my impression is that the words hardly register with others. I take a deep breath and prepare to state that I am a cell biologist. Then, quite suddenly and without any prior warning, a foreign entity takes over my brain and vocal cords. It speaks with my voice. "I am interested in the molecular biology of human disease." Who said that? Where did that come from? But, I see some heads nodding around the table and a few smiles (is that recognition, a sign of sleepiness or a decision about elective surgery?). The alien inside me continues. "My laboratory works on how cells integrate complex extracellular patterning commands during development with intracellular signaling pathways that control cell architecture and differentiation." Sounds fantastic! Wish I worked on that. But, wait a minute: I do! It's not so far from the truth! I like it! Now, I, together with the rest of the table apparently(!), want to hear more. The alien inside me continues, "We have discovered quite recently, actually I should say two of my first-year graduate students discovered, a protein that is key to a ubiquitous signaling pathway that controls microtubule dynamics in such a way that defines how cells respond to extracellular matrix patterns. Although we are at the beginning of these studies, we note that this protein is defective in Booby Syndrome and may contribute to the neurophysiology of that terrible disease."

I look around the table. I see no blood. My head is not rolling around on the table in front of me. Everyone looks interested, even respectful. The executioner's blade passes on. I smile. I feel pretty good about myself and being a cell biologist.

Caveman