Science is the drug

On a recent trip to the USA I had my usual awkward encounter at passport control. The iris and fingerprinting software had crashed: even the networked passport reader didn't seem to be working. My admission to the United States thus depended entirely on the immigration officer's personal discretion, like in the olden days. A temporary disabling of the government's database of troublemakers and undesirables isn't necessarily a good thing when you look like an undesirable but aren't. 'Why are you visiting the United States?' he asked.

'I'm attending a conference on mitochondrial biology'.

'Oh yeah. So what do you do for a living?'

My public communication skills momentarily deserted me.

'I'm a mitochondrial biologist,' was all I could muster.

Immediately I realized that I'd made a bit of a mistake, seeming to poke fun at my interrogator. I remembered the many previous occasions when things had not gone well. Like after waiting in line for over two hours in stifling heat, without water or even a toilet break and surrounded by crying babies in Chicago ORD international terminal. When the immigration officer on that occasion asked me how I was doing today, I just blurted out, in exasperation, that this was a stupid question. Or the time I objected indignantly, when asked if my relationship with the professor who was hosting me was 'of a purely professional nature'. I duly awaited the humiliation of the secondary inspection.

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Drugs come in many forms. A simple definition would say that a drug is something that produces a desirable physiological change. Such a definition embraces medications designed to correct, mitigate or prevent a pathological state, as well as those agents

that purport to enhance the body or mind to a state 'beyond the normal'.

Depending on one's viewpoint, modern society is blessed or plagued with a cornucopia of drugs of both types. In western countries, those above a certain age typically devour a daily cocktail of potions designed to regulate their blood pressure, modify their circulating lipoprotein profile, relieve or delay the onset of symptoms of neurodegeneration, promote kidney function and address many other bodily defects linked to the passage of the years. Physicians prescribe vast quantities of anxiolytics, antidepressants, antibiotics and miscellaneous placebos, whilst we consume even larger amounts of pain-killers, anti-inflammatories and anti-allergy medications sold over the counter. Our collective behaviour in regard to all these looks alarmingly like a classic addiction.

On top of these are all the highly addictive social, performance-enhancing or pleasure-inducing drugs to which most people are prone. I for one cannot start the day without drinking about a litre of navy-strength tea, for which being British is my only excuse. This need complicates my visits to the USA even more than stressful encounters with immigration officers.

The accompanying editorial sketches out the ground we plan to cover in the next year or so, addressing both the scientific and the social dimensions of this collective need to modify our physiology, and the perspectives for accomplishing it ever more effectively. But addictive behaviour is not confined to medications and pleasure-conferring substances. In some form it characterizes the daily lives of all of us. At one end of the spectrum, it is classed as obsessive-compulsive neurosis and considered a disease. At the other, it consists of nothing more harmful than an irrational attachment to a particular sports team, TV series, musical work or video-game. I'll refrain from tediously listing

my own personal obsessions of this type: my purpose here is to confess to one that will be common to most readers of *EMBO reports*: my ineffable passion for science.

In most walks of life, people complain incessantly about their work situation: about their arrogant boss, about the lazy, incompetent juniors they supervise, about the daft rules and procedures they have to abide by, about the paltry rewards and onerous conditions of service, about the whole 'system'. Scientists are not immune to this tendency. But we have one over-riding advantage that enables us to soar above these daily irritations. Someone pays us to do something we love, and to which we are addicted. We feel a sense of uplift every day when we open our workstations, read or write a scientific article, chat with a colleague about our latest crazy idea that will probably crash in flames by lunchtime. There are very few people on this planet who experience such joy in the workplace; even if we also suffer the frustrations and lows that are the product of those same addictive cravings, and are often so wrapped up in our scientific obsessions that we are unable to explain them to outsiders, such as immigration officers.

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Now back to that encounter with US immigration. The officer showed absolutely no interest in mitochondrial biology. 'On your way buddy, have a good one', was his only response, whilst stamping my passport and waving me past the non-functional ID scanners. Perhaps, for once, he was just happy to be experiencing the same kind of job satisfaction that is the daily lot of scientists. Luckily he did not pause to ask me if I was an addict, or else I'd have risked getting into much deeper waters.

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