Of Lab Rats and Men

By ANNE JOLIS

Over the last decade, neurobiologists have established a strong link between seemingly disparate psychiatric and neurodegenerative diseases, and our nerve synapses. Mutations in our nervous system's communication network—roughly a quadrillion webs of proteins shooting signals between cells—have now been implicated in everything from Huntington's to autism, schizophrenia and Alzheimer's, Parkinson's, bipolar disorder and prions.

"It's a subject that is really changing our understanding of brain disease," explains Michela Matteoli, a 52-year-old researcher and professor of medical pharmacology at the University of Milan. On the phone from her lab, the Yale-educated Ph.D. describes the tantalizing goal of drugs that might arrest neuron destruction in Alzheimer's patients, or avoid the synaptic dysfunctions apparent in autism. That's what Ms. Matteoli and her colleagues had been working toward, anyway, before their lab was destroyed by activists last weekend.

They were targeted because their work, like just about every other medical advance and effort of our time, involves mice. Hundreds of small, cute, furry mice, which in this case had been genetically modified for protein mutations meant to model, as Ms. Matteoli puts it, "what goes wrong in the synapse."

The animal-rights crowd decided it had better plans for the mice. So on Saturday five members of Italy's "Stop Green Hill" group (initially formed to protest a nearby dog-breeding facility) broke into the Milanese lab and "occupied" the area housing 800 animals, mostly mice and also some rabbits. By chaining their own necks to the doors of the facility, Ms. Matteoli says, the activists ensured that any attempt at forced entry by the police could "harm them really seriously. They could kill them, break their necks."

They wound up negotiating. The occupiers left eventually with 100 or so mice and their necks intact, whereupon they went home and posted video of the exploit online. The university plans to press charges.

Meanwhile, Ms. Matteoli and her colleagues in other research groups using the lab were left to comfort weeping graduate students and inspect the damage. "We were

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Sorry, mouse: Society will always care more about people.

astonished," she says. "We found cages completely upside-down in the corridors. Everything was a mess. And the problem is—all the mice they left here, they mixed them all up. They took the identifying cards from their cages. People are now completely unable to identify the animals that are left. They also freed lots of them—so now people are trying to catch these poor scared mice running around the animal house."

She adds that "something like 20-25 different mouse lines have been really completely trashed." Ms. Matteoli estimates it will take "more or less" a year to rebuild the colony she had been working with.

The episode sounds awfully retro—a throwback to the 1970s, before radical chicsters discovered how hard it is to hustle sympathy for lab animals when sick humans are at stake. A small fringe has stuck around—protesters spent a decade trying to put Huntingdon Life Sciences in the U.K. out of business, and nearly succeeded. In February 2008, activists torched a biomedical research facility in Belgium.

But for the most part, today's extreme activists are busy agitating for the release of Bradley Manning or hacking some bank's website. Ms. Matteoli points out that her own area of animal research is a particularly easy sell in aging Western societies, since it seeks to address the neurodegenerative ailments that accompany ever-longer lifespans. The European Commission, among other public bodies, funds her group and more than a dozen others across Europe doing similar work, as part of a €11.9 million initiative to unlock the mysteries of synapses.

"What do they think, that an action like this is just going to stop the research?" she says. The university in Milan is still tallying the damages; Ms. Matteoli guesses them at hundreds of thousands of euros or more. "No. That is not going to happen."

Rather, more money will be allocated and more mice bred and mutated. Eventually, Ms. Matteoli and her graduate students will resume their meticulous work of documenting what happens when they play with synapse proteins.

"We're always trying to find ways to avoid or reduce the use of animals," Ms. Matte-

oli says. "I can study the molecular mechanism in the protein involved in a synapse, I can try to study the structure, do some work with cell cultures—but at a certain point I need to see what happens in a living being when a protein is missing, to try to correct the defect using a drug or a specific treatment. Otherwise the research will not go on, how can it proceed?"

I suggest an open call to activists who might volunteer to take the place of the mice. "No!" laughs Ms. Matteoli. I press the case: Could there be some synaptic pathology involved in radical animal-rights militancy? Some misfiring loop, preventing the mind from accepting that societies will never care more about mice than they do about people?

Ms. Matteoli laughs again. "Uh . . . maybe?" She counters that "perhaps we've not been clear enough in talking to laypeople," in explaining the implications of their work and the extensive ethics regimes that govern animal testing. "As researchers," she adds, "we have a responsibility that we should probably take more seriously, to communicate more with people."

That's a worthy goal. But considering the zealousness of the people who actually have a problem with their work, Ms. Matteoli and her colleagues may hit on the cure for Alzheimer's before they convince any "Stop Green Hill" types that the caged mice and bunnies are worth it. Even Ms. Matteoli, polite to a fault, admits that she's been "impressed" with some of the "really completely crazy" online responses to articles about the lab attack.

"One guy wrote that you should only study mice if you're developing medicine for mice—I mean, this is the level of—it's very hard to understand." Here's hoping she doesn't try too hard, and gets back to her regular work soon.

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