ACROSS
1. Initial plurality of Einstein’s spooky action at a distance as described by yours truly: the answer illustrates itself! (6,9)
11. Rennie shows you beautiful microbial intelligence in what basically looks like this (3)
12. A technical term for a concoction of cannabinoids? (3)
13. The kind of moon that is far, far away (7)
15. Kinks and folds in this can cause phase transitions (Woo) (7)
17. Einstein treated reported experimental errors in relativity with this (5)
18. Two words, in sequence, that describe the kind of writers Hartnett and Klarreich are (3,4)
21. Seems overly sentimental, but it’s a quantum philosopher who says our gut intuitions about time are right (Musser) (7)
24. Locklear writes that we need to go to the mountains to find the kind of species that some retroviruses jump to (4)
26. Philosophical argument about consciousness, imagining a brain in a container? (4,2,3)
29. Cumulative frequency graph exhorting us to donate to charity? (5)/(1,4)
31. Obtain laugh, or sound sleep on a latex foam mattress from Malaysia? (3,2)/(5)
33. Gene portions that give rise to mature RNA have disoriented ex-son (5)
36. The place in the lab where the PCR machines are kept might well be called this (4,2,3)
39. Song in a new musical about a visiting band recalls a dashing film star (4)
40. Cepelewicz explains how these have played a crucial role in the evolution of species (7)
44. X marks the unknown in this discipline, whose connection to a monster is elucidated by Honner (7)
46. Evolution of this fast-running species can run slowly over long time periods, writes Arnold (5)
47. Re-created one-turn party stars, lately appearing in articles by Sokol, Moskvitch and Wolchover (7)
50. Photic artificial intelligence required to reveal a not-too-heavy sloth? (5,2)
53. Confusedly ate a beverage containing polyphenols? (3)
54. Finished without 5 Romans, poetically (3)
55. Telling the toaster-sounding Eugene to take the wheel? Borel warns that it may result in species extinction! (6,4,5)

DOWN
1. Can she simultaneously fix Schrödinger’s car and break it too? Yes, just much faster than her regular counterparts! (7,8)
2. Gave a try a long time previously (1,2)/(3)
3. Piggin phrase describing what heat doesn’t do to most proteins before cell death. Greenwood describes it better (2,3)
4. The hallux is the biggest one (3)
5. Quanta Magazine physics writer who is a mixed-chow lover (9)
6. A rare Mac bug that confesses who it is, Apple style (5)
7. Abbreviated measure of resolution (3)
8. Atheist’s declaration, or theist’s remonstrance (2,3)
9. Greek letter to show how high they fly! (1,5)
10. What Quanta is to readers (7,8)
14. Something queens and workers have but drones lack, no matter how high they fly! (1,5)
16. This genetic material may not have been so important to life ages ago, but bacteria today give it the highest priority (Cepelewicz both times) (3)
19. Writers may wield it mightily to create an enclosure (3)
20. A lithium salt is required to contain the greatest (3)
22. This flyer is a mystery. But don’t worry, the Pentagon is on it (3)
23. You get a flower garland for unscrambling a mathematical group (3)
25. A journey from sodium to oxygen? (2,2,1)
27. I’d call it this when it exceeds 75 dB (3)
28. Quanta editor to reorganize lion’s math! (6,3)
30. Chopped-up fig makes for a moving internet picture (3)
32. A mother solves a mixed mathematical group, something that would require a man to be steeped in artificial intelligence (1,2,3)
34. A round globe; add it, and it usually becomes elliptical (3)
35. It’s classical, and it could become a class by itself if you add something that sounds generous (3)
37. It’s usually a nonprofit: an addition would situate it in a church (3)
38. Someone else will speak for you if you stand up, bud (3)
41. Measures of change may transmute to lacrimation (5)
42. Half light, half heavy water (3)
43. Boy, there’s silver: therefore annoy me (3,2)/(2,3)
45. It was once said to fill the universe. No more. But it can still knock you out! (5)
48. Frequency might be a cause of this urological diagnosis (3)
49. Equality turned upside down gives rhythmic fast talk (3)
52. It takes three similar atoms in a molecule to sound like they’re making an effort (3)