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RNA VACCINES FOR COVID-19:

Technology and a new vision
for the pharmaceutical market


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by
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ABSTRACT:
Most leading candidates for COVID-19 vaccines embody a new design with major potential advantages in terms of safety, efficacy, speed of development, simplicity of manufacture, and seamless adaptation to new diseases. Unlike conventional viral vaccines, which deliver purified viral antigens, inactivated virus particles, or live attenuated virus, the new vaccines consist of messenger RNAs for viral protein antigens—the Spike protein in the case of coronaviruses—incorporated into artificial lipid nanoparticles (LNPs). When injected into muscle, the LNPs are taken up by muscle cells (and perhaps other cells), where the RNA is translated into the viral protein to initiate a virus-specific protective immune response. The chaotic race for a vaccine to combat the current pandemic underscores the many dire deficiencies of the private pharmaceutical industry and the patent monopolies that fund it. I will summarize a hopeful new vision for the marketplace being put forward by a number of economists.

L'exposé sera donné en anglais par vidéoconférence, transmis en direct à *Beit al-Hikma* à Carthage, et diffusé simultanément sur les réseaux sociaux de l'Académie :

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