Biofilms of Borrelia burgdorferi:

Communities of Borrelia (usually Non-Spiral Borrelia) Which are enveloped by a self-produced Extracellular Matrix layer [slime layer] which is produced from The outer surface protein layer, glycoproteins, Lipopolysaccharides, and Extracellular DNA: all of these Elements once resided inside a once living Borrelia Burgdorferi organism. Death of individual members in The borrelia burgdorferi biofilm community results In the release of these constituents from once living but now Dead microbes.

The image below illustrates the structural relationship Between the “slime layer” [Extracellular Matrix] and The Specialized non-spiral living forms of Borrelia Burgdorferi which are protected INSIDE the surrounding Extracellular Matrix.
Photo Credit: Alan B. MacDonald MD
copyright 2006 all rights reserved

Biofilm of Borrelia burgdorferi
Granular borrelia forms predominate in the biofilm community
--Extracellular Matrix=green
Viable organisms=red--
Note: partial segmentation of spiral borrelia at 7 o’clock.
DNA segmentation is a precursor to the emergence of Granular (round/coccoid)
Viable forms of borrelia burgdorferi