

Dear Colleagues and Members!

Please let me tell You my opinion based on my morphological practice since 1986.

There are no cyst-forms as all ball-like morphology has always some material in them. They could be differentiate according to the following :

1. **Gemma**⁺ has DNA and could be further cultivated. This possibility was never proved by Garon and Dorward – Personal communication. If yes, it is the spore, until it is a sporoid structure.

2. **Macromolecular immunocomplexes (blebs)** contain Antigen-Antibody-Complement beside different extracellular material and Osp-s.

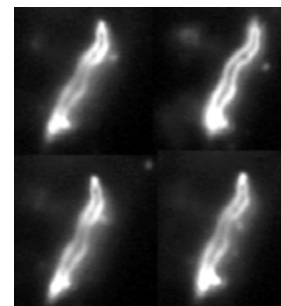
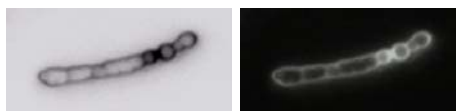
and they never could be used for cultivations. These forms could be developed during cultivation as leading character of *B.burgdorferi* as other *Borrelia*s do. They are shedding both in the body and in the cultivation media.

3. So-called **Spheroplasts** or **L-forms** are developing during the effect of cell-wall-damaging antibiotics, and L-forms are caused by a process of herniation. They could also have DNA, but there is no hypothetical possibility of cultivation.

4. Further **damaged structures** could be detected, which are the final product of protoplasma fragmentation inside of the Spirochetes – that is the **granulation**. It is hard to prove their extracellular presence as the so-called coccoid forms, except DNA hybridization.

5. Different forms of the **intact B.burgdorferi** were demonstrated in cultivation by Aberer and Duray and those of dividing Spirochete by me.

5. **Ghost** could be appeared as a final state of the reorganization process of *B.burgdorferi* after lytic damage.



⁺ (Do not forget the Dictionaries:

Gemma \Gem"ma\, n.; pl. **Gemm**[ae]. [L., a bud.]

1. (Bot.) A leaf bud, as distinguished from a flower bud.

2. (Biol.) A bud spore; one of the small spores or buds in the reproduction of certain Protozoa, which separate one at a time from the parent cell.

1. **Gemma** - small asexual reproductive structure in e.g. liverworts and mosses that detaches from the parent and develops into a new individual, reproductive structure - the parts of a plant involved in its reproduction)

Detailed you can find in my lectures hold at the Anniversary Congress of Lyme Borreliosis Foundation in Budapest in 2000 about the DualDur[®] reagent and method and the Hypothesis based on the results got with this method. The complete summary could be downloaded at www.lymenet.hu (letoltheto anyagok) and further information from now <http://lymerick.net/videomicroscopy.htm> All of my investigation was made in native human blood samples with Dark-field microscopy.

Yours sincerely

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PS: I have never prescribed as I am a retired pathologist, but proposed to use and our colleagues are using **tinidazol** with our combined treatment schedule with better effect than without it to be demolish Gemma-s.

I wish to know your proposal for patients with sensitivity to "azols". Alinia? Plaquenil? Have you practice with it?

Crossreaction with other antibiotics?

Thanks You in advance, Bela