

# **Workshop: Case studies**

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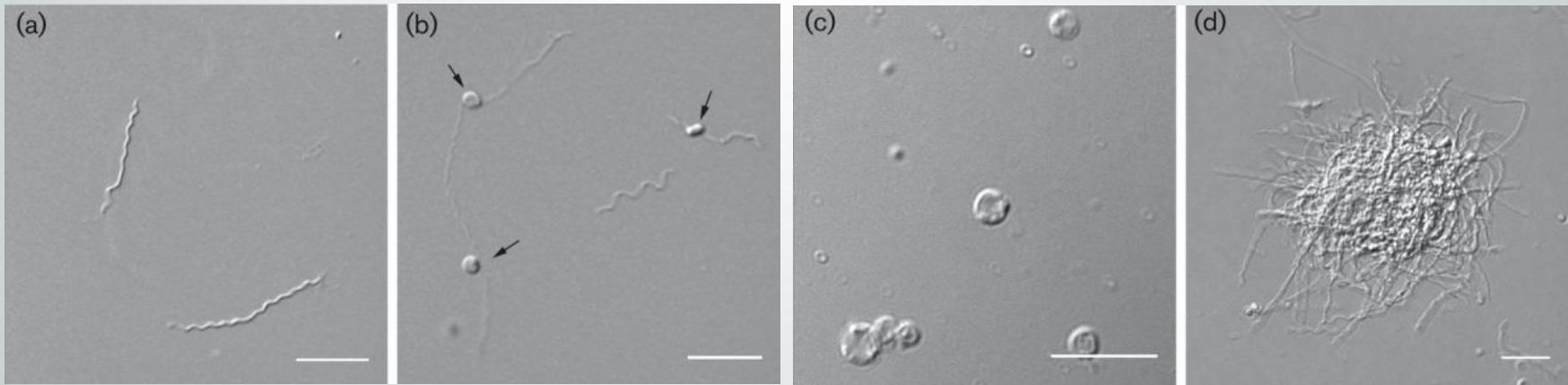
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# Why is borrelia so hard to kill?

## Because it ...

- enters cells and hard to get to places like collagen, eye and heart in the spirochete form (a)
- sheds blebs (b) - a tool to confuse the immune system and for transfection of DNA
- morphs to round-bodies (c) that resist antibiotics
- forms biofilm-like colonies (d) to survive unfavorable conditions



**Meriläinen L1, Herranen A2, Schwarzbach A3, Gilbert L2.** Morphological and biochemical features of *Borrelia burgdorferi* pleomorphic forms. *Microbiology*. 2015 Mar;161(Pt 3):516-27. doi: 10.1099/mic.0.000027. Epub 2015 Jan 6.



# ... and even harder to kill because it also

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- has a stealth mode: it mutates its gene structure and outer surface proteins based on host immune system
- disrupts the immune system (T, B, NK)
- causes inflammation -> cytokines
- suppresses detoxification
- causes problems with hormone balance
- causes often gut hyperpermeability leading to allergies
- causes Herxheimer reactions



# New research showing abx produces round bodies and biofilm colonies

Varying degrees of susceptibility of different forms of *B. burgdorferi* to commonly used Lyme antibiotics.

	Percentage of different forms of <i>B. burgdorferi</i> <sup>a</sup>			Percentage of residual viable cells <sup>b, c</sup>			<i>E. coli</i> control <sup>e</sup>	
	Spirochete	Round body form	Microcolony	Doxycycline	Amoxicillin	Ceftriaxone	Persister frequency <sup>f</sup>	Persister frequency <sup>g</sup>
3 day log phase culture <sup>d</sup>	96%	4%	0%	8% (6.4%)	23% (9.6%)	6% (5.8%)	4.4%	0.9%
7 day stationary phase culture	38%	23%	39%	71% (24%)	80% (25%)	47% (16%)	-	-
10 day stationary phase culture	20%	16%	64%	80% (~25%)	83% (~27%)	70% (~25%)	-	-

Feng et al. Mar 25 PLoS One. 2015; 10(3): e0117207.



Lyme disease is **NOT**



**An Antibiotic  
Deficiency Syndrome**

# Why herbs work

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- Mycoplasma is about 600 million years old
- These pathogens were here before us!
- And well before the first antibiotic (1928)
- Plants have been here as long as bacteria, parasites and viruses
- All that time they have had to develop ways to survive
- One plant can contain hundreds of "chemical weapons" against enemies -> much harder to become resistant, multiple attack vectors



# Case study 1

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- 64 year old male
- Very active physically before, still working
- Been very healthy, first antibiotic treatment at the age of 30
- Few bronchitis, suspected of having liquid in the lungs at the age of 11. Mild psoriasis
- No allergies known
- Later in life retinitis, lost vision – cause unknown



# Anamnesis

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- Fatigue for 9 months
- 6 months ago pneumonia. Fever, wrist and knee-pain
- 3 different antibiotic courses for pneumonia
- Joint pain and swelling persisted and got a diagnosis: seropositive rheumatoid arthritis
- Mycoplasma ab neg, chlamydia pn ab neg
- ANA, ENA ab neg, HLA-B27 neg





# Anamnesis

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- Medication: Predisolon, Oxiklorin, Trexan, Salazopyrin. Medication for hypertension
- Despite of medication pains and swelling of joints, fatigue persists. Shivering and fever alternating
- Sometimes difficulty breathing
- Tinnitus
- Insomnia, wakes up constantly



# Status

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- Weight 76kg, dropped 8kg during the course of illness
- Slight phlegmatic sound when listening to the lungs
- No amalgam fillings
- Swollen wrists and knees



# Tests

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- More tests to find possible chronic infections
- Measurements of vitamins and minerals
- While waiting for these results got instructions about diet: glutenfree, dairy-free, no nightshade veggies, no sugar or preservatives



# Supplement plan

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- High quality multivitamin
- Vitamin C in natural form or liposomal
- Vitamin D 50 – 100ug daily
- Magnesiummalate 400mg 3 -4 daily
- Zinc on top of multivitamin (15mg) 30mg
- Krebbsplus: Acetyl-L-carnitine + alphas-lipoic acid+Q10
- B12
- Probiotic
- Iodine supplement
- Fish oil / Udo's oil



# 2.visit

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- Results:
- Borrelia western blot neg
- Borrelia Elispot OSP-Mix +2 (< 2)
- Chlamydia pneumoniae Elispot +3 (< 2)
- Coxsackie virus antibodies IgG + 1:320, IgA + 1:10
- Ehrlichia elispot +2 (< 2)
- CD 57: 142 (100-360)



# More results

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- D 3-25 55 = deficiency
- Also magnesium, zinc, iron are too low (whole blood measurements taken into account the erythrocyte count)
- Omega 3s low (ALA, EPA, DHA)
- Omega 6 GLA low



# Treatment

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- I had suggested a treatment protocol and warned that it might be difficult with all the other medications
- After 2 months of this diet change and basic supplement plan my patient had a surprise for me:



# Control visit 1

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- No pains, no fatigue (!)
- Stopped all medications and still doing fine
- Bloodpressure good without medication
- 😊
- New treatment plan: herbal protocol to make sure the infections are beaten. Wanted capsule form herbals





# Follow up

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- Still feeling good, no symptoms from joints
- Infections: Elispots on all already  $< 2$  but Coxsackie still positive -> added transfer factors, olive oil extract and reishi to the basic herbal protocol
- Keeping the protocol simpler than for most, he wasn't that motivated
- Rheumatologist still doesn't believe he is symptomfree, wants him back on Trexal



# Follow up 4 months

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- Still feeling good, no pains BUT
- Borr burgd Elispot risen to +22, mix +24
- Chlamydia pneumoniae +2 (< 2)
- Coxsackie IgG and IgA still elevated



# New treatment plan

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- Wife and I gave him no option – has to go on tincture-protocol:
- Cowden protocol
- Takuna 30 drops twice a day for viruses
- Avea (curcumin) 10 drops x 4 for inflammation
- Amantilla 15 drops in the evening for insomnia



# After 6 months

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- Borr burd elispot: <2 (< 2), mixed: < 2 (< 2)
- Chlamydia pneumoniae < 2 (< 2)
- Coxsackie IgA and IgG neg
- CD57: 350 (100 – 360)



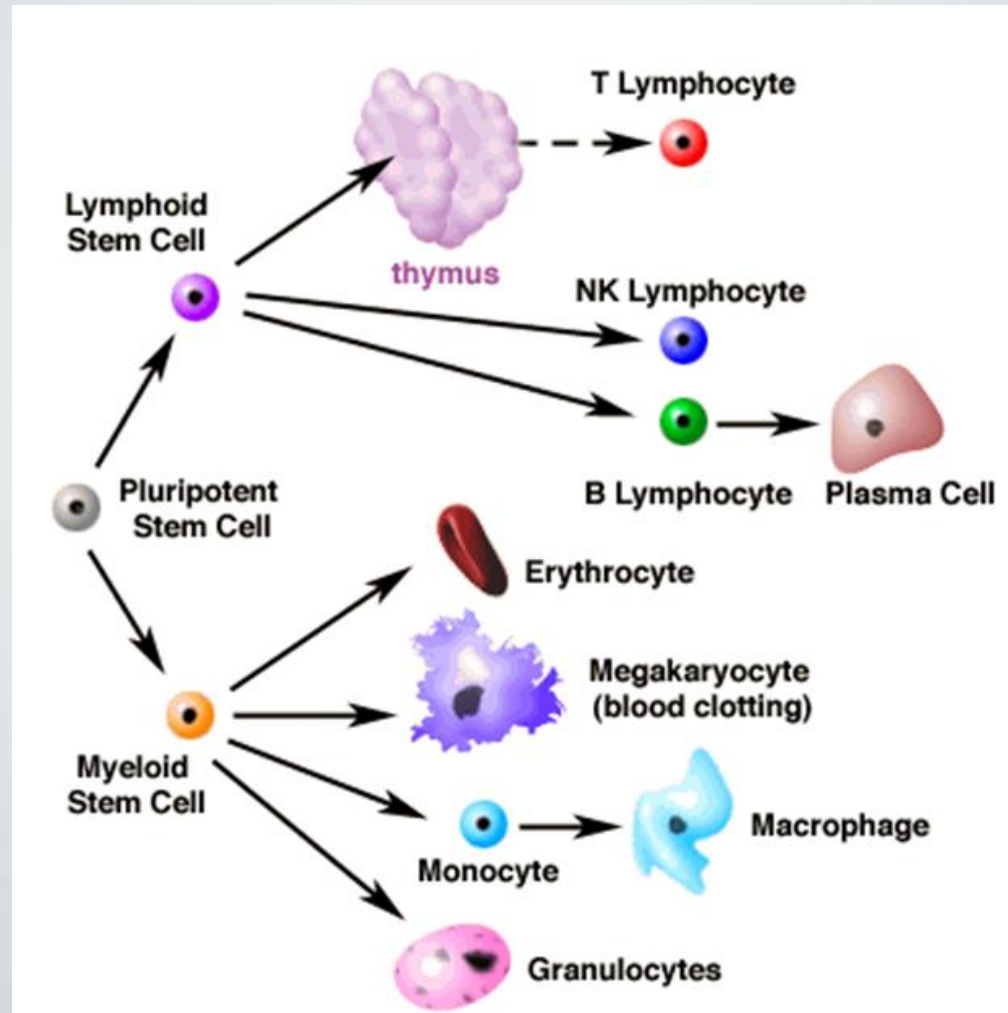
# Plan

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- Wife and I leave him be if he promises to take basic vitamins
- Avea to keep inflammation down
- Healthy diet
- Adrenal support – doesn't only support adrenals but also resistance to infections
- Wants to try now Libido Support drops



# Our immune cells



# Best army in the world

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- Sentry system guarding borders, walls, hydrochlorid acid sea etc
- Rapid response unit within minutes after injury
- Messengers sent to every corner to alert more attack units
- Units with long memory about enemies to ensure even faster attack next time
- Direct attack, flagging the enemy to be easier to spot, chemical and biological weapons to enhance attack
- Training camps (thymus etc) – when training doesn't succeed-> allergies, autoimmune diseases



# Feed your army

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- Keep the supplies coming: healthy food, vitamins, minerals, oxygen, pure water
- Don't overwork them: diminish stress, learn stress management, no marathon runs
- Support them with herbs – adaptogenic herbs to strengthen you. Anti-inflammatory herbs to stop the overenthusiastic soldiers causing "friendly fire"





# Case study 2

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- 49 year old woman, mother of 5
- Last giving birth 2002, lost 4 l of blood – got bloodtransfusions. Fatigued ever since
- Got dg: depression, medication hasn't helped
- 2006 dg: hypothyreosis
- Pain in all the muscles, fatigue, shivering, loss of hair, dry skin. Diarrhea, palpitations, insomnia, poor memory and lack of concentration. No strength to exercise
- Muscles weakness, change in the sense of touch
- High stress levels, very anxious



# Previous treatments

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- In another clinic diagnosed with borrelia burgd.  
Elispot +15 (<2)+ Chlamydia pneumoniae –  
Elispot + 7 (< 2)
- Given i.v. Azithromycin for 6 months
- Oral Artemisin + doxicyclin
- Rifampicin 2 months
- No improvement in health
- Constant sinus infections despite antibiotics



# Lab results

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- Borrelia Burgd western blot: neg
- Borrelia Burgd. Elispot: +42 (< 2), peptide mix: +16 (< 2)
- Chlamydia pneumoniae Elispot: +12 (< 2)
- Anaplasma Elispot: +3 (< 2)
- Mykoplasma ab: IgG + 0,83, IgM ja IgA: neg
- Coxsackie virus ab IgA +1:100, IgG +1:100
- CD57: 30 (100 – 360)



# Continued

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- PCR Stool analysis showed elevated pH consistent with diarrhea, elevated E.coli, Klebsiella, Clostridium and Enterococcus species
- Problems with digestion: elevated protein and fat in stool
- Diminished resistance and heightened risk for IgG food intolerances: stool IgA low
- Suggested herbs for treatment, was very sceptical
- B12 injections for fatigue and pains



# First step

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- Already eating a healthy and gluten free diet
- nutritionist made small changes and advised an alkalising diet, "basic supplements"



# Treatment plan

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- Diet changes according to IgG test-results
- Cowden protocol supported with other herbs and nutritional supplements
- Other treatment focuses:
  - Detox (long antibiotic treatments)
  - Mitochondrial repair
  - Supporting immune system and immunomodulation
  - Healing gut lining and aiding digestion
  - Repairing hormonal balances



# Supplements

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- Cowden, aiming for double doses on antimicrobials if needed
- Mapalo 1 – 30 drops x 2
- Resveratrol, andrographis, artemisin (high quality !)
- Takuna 30 drops x 2
- Avea 10 drops x 4
- Adrenal support
- Babuna or Amantilla drops when anxious



# Supplements

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- Multivitamin
- Bio-active B-complex
- Fosfolipids
- Vitamin C (natural or liposomal)
- Vitamin D + E
- Magnesium
- Mitochondrial repair program + detox (ATPFuel, Energy Multi-plex, liposomal glutathione, NAC, chlorella / Algas etc.)

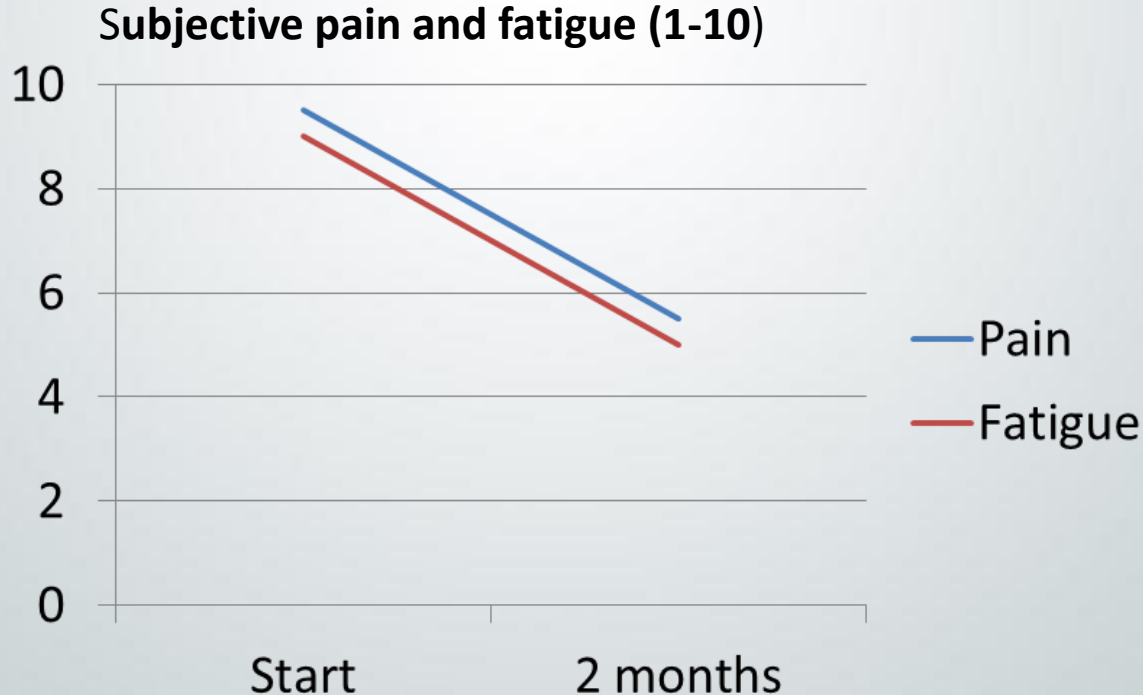




She made me **swear** that I  
would start antibiotics again  
if she didn't get better

# 2 month follow up

- Feeling clearly better, more strength and energy
- Still feverish and sweating at times – babesia?



# 4 month follow up

- Shivering and sweating stopped (Cowden protocol changes at month 3)
- Going back to work 20 hours a week
- Encouraged to do more relaxation or mindfulness exercises to better the stress management skills
- Adaptogenic herbs important for support



# Control tests

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- Borrelia burgd. Elispot: +5 (< 2) *+42 at start*
- Chlamydia pn Elispot: < 2 (< 2)
- Anaplasma Elispot: < 2 (< 2)
- Mycoplasma and coxsackie ab: neg
- CD57: 55 (100 – 360)



# Treatment

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- Good progress, still needs to continue
- Because still pains, adding more cytokine balancing (LDN, autolysated E.coli injections, i.v. ozone and glutathione)



# 6 month follow up

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- Feeling good
- Some of the symptoms were back when ate sugar and milk products at Christmas
- Now sticking to the rules and feeling healthy
- Working full time
- Started light exercise, yoga



# Treatment plan

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- Continues individualised herbal protocol, regular follow ups
- Full protocol until 2 months feeling good + Elispot  $< 2$  and CD57 normalised
- Parasite cleansing if needed – Cowden protocol already has many parasite killing herbs



# When cured?

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- When test results are good AND
- Feeling good, energetic
- Don't be fooled by isolated  $<2$  Elispot results if the patient isn't feeling better
- Behind persistent symptoms can also be other reasons like cytokine-imbalance, mitochondrial damage, IgG food intolerances or toxins when the actual infections have cleared

