

# Staphylococcus Aureus

- Chronic Mastitis -

An Emergency everywhere  
in Dairy Cows

Presented by Andy Roesti, DVM

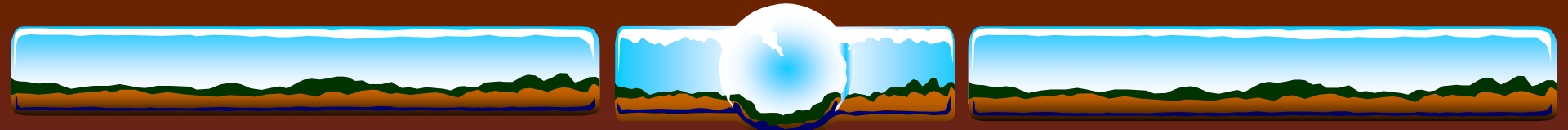


# Staphylococcus Aureus

## The Demon in Dairy Cows

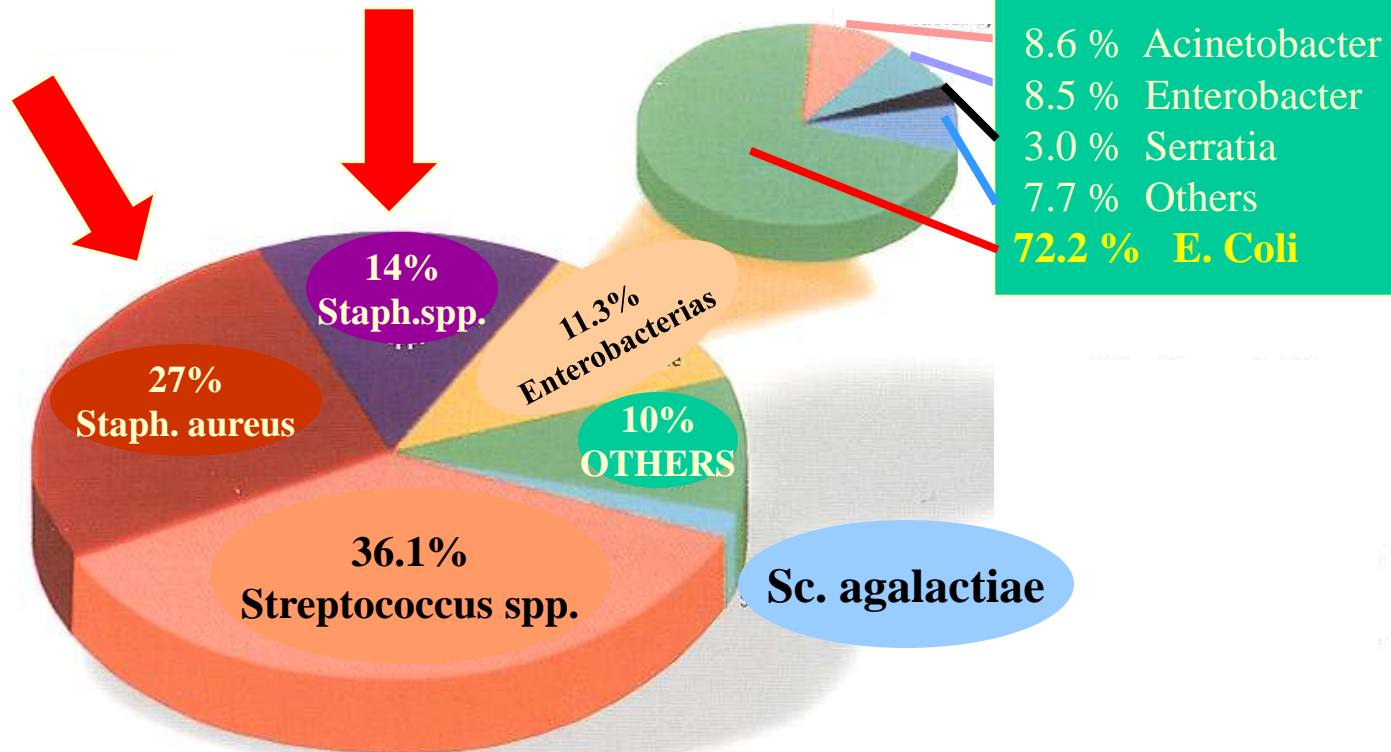
- ❖ Which Antibiotic is the best one ?
- ❖ Against which one does not yet exist resistance ?
- ❖ How long do we have to administer AB ?
- ❖ How many days do we have to impose a ban over the milk dedicated for consumption ?



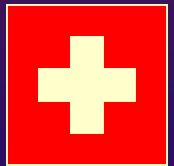
- 
- ❖ Do we succeed by making good use of complicated, time consuming hygienic procedures ?
  - ❖ Are we morally allowed to impose the dairy farmers dozens of expensive Laboratory analysis ?
  - ❖ Should we solve the problem with a vaccine ?
  - ❖ Should we eliminate positive cows by radical slaughtering ?



# Spectrum of pathogen Germs in clinical Mastitis



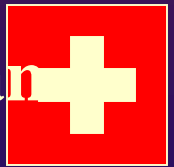
Schaällibaum 1996





# Status in Switzerland: Magic Formula: 5474 of the Dairy Health Organisation

- ❖ Every **5<sup>th</sup> Cow** has during the lactation period one acute mastitis
- ❖ Every **4<sup>th</sup> Cow** suffers at least at one quarter from a chronic mastitis (>100`000 cells per ml); 68%
- ❖ Every **7<sup>th</sup> Cow** is eliminated on the basis of an incurable mastitis
- ❖ Every **4<sup>th</sup> Milk-Tank** is contaminated with *Staphylococcus aureus*



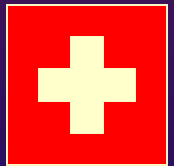
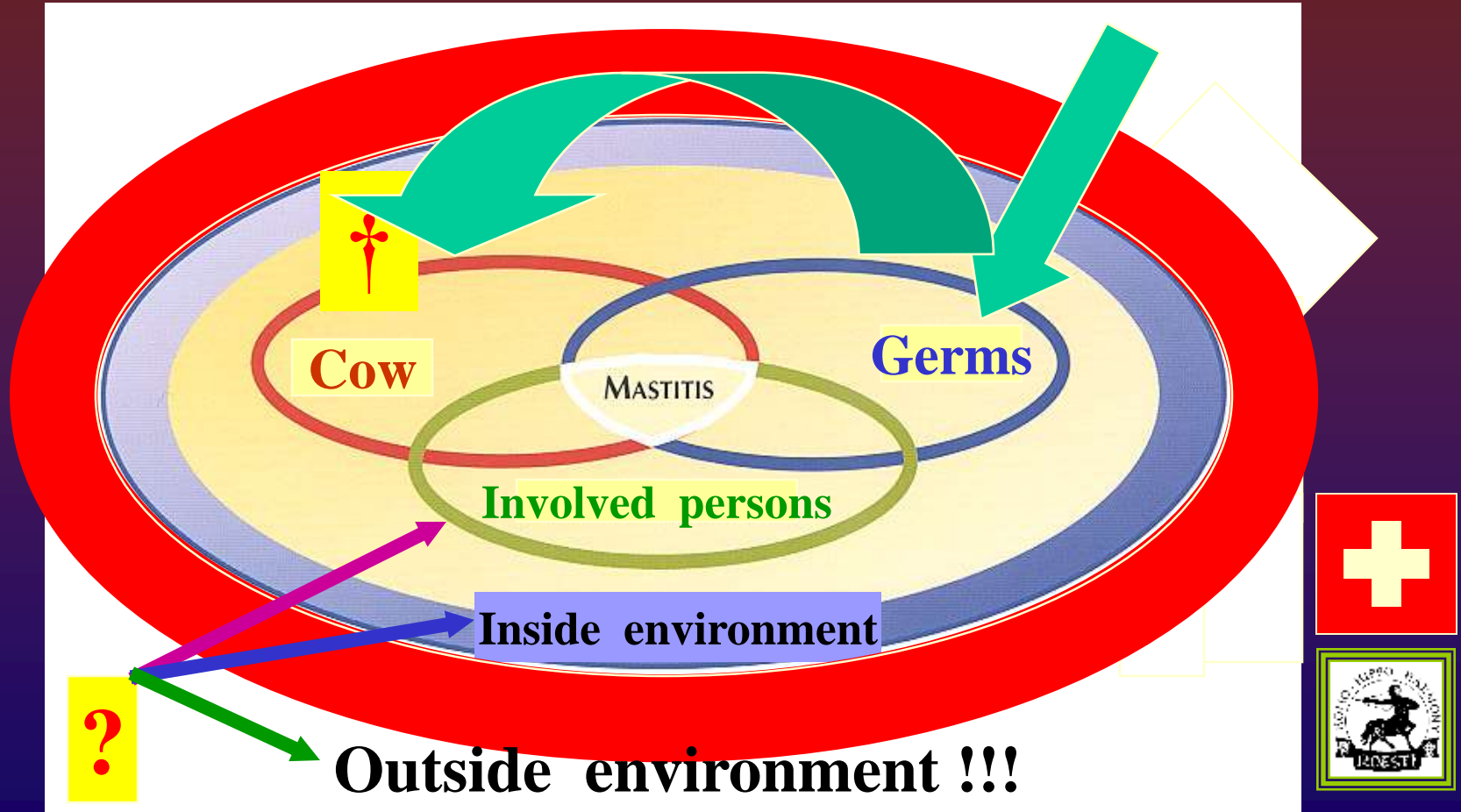


# Computer Forecast proves

- ❖ Every Cow causes a loss of § 300.- per year and cow (Good business for Pharma Industry, Dealers and Vets)
- ❖ Projected onto Switzerland, totally a loss of § 200 Millions (Prof. Rüesch 2000)
- ❖ Projected onto Germany, totally a loss of § 1.75 Milliarden (Prof. Hamann 1998)



# Mastitis is a multifactorial sickness



# Dairy Farm with Staph. Aureus Problems

Healthy Cows	Suspicious Cows	Incurable Cows
Cell count ( $<150\cdot000$ )	Cell count ( $>150\cdot000$ )	Cell count <small>several times</small> ( $>>150\cdot000$ )
CM-Test neg.	CM-Test pos.	CM-Test <small>several times</small> pos.
No clinical mastitis	Clinical mastitis	Chronic-recidiv.M.
Supervision: 1 <sup>st</sup> lactation, Neg. bact. Results Treated cows: 3xneg. Bact.	No neg. Bact. Results Once Stph. aureus positive St. aureus pos. → Treated Cows Teat injuries	Several times St. aureus positive, Hardening or abscess
Milking order	<Neg./ Bacteriolog. Test II / Pos.>	<b>Slaughtering</b>

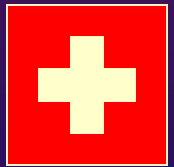


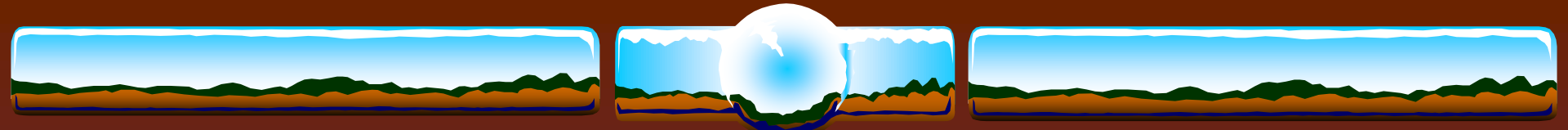




# What is Staphylococcus aureus ?

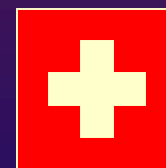
- ❖ Staph. Aureus is a CVD germ (Cell Wall Deficient), very contagious and cow specific
- ❖ Staph. Aureus may pass the milk-blood barrier !!!
- ❖ Staph. Aureus can survive in Leucocytes, Erythrocytes and even Macrophages !!!
- ❖ CVD`s are acting as Haptenes, which stimulate the synthesis of haemolytic Antibodies, withdraw and evade from the Immune System
- ❖ CWD`s are serophil and like hypertonic alcalic milieu (pH 7.8 –8.0)



- 
- ❖ **Staph. Aureus enters the udder through injuries, the blood or the teat channel**
  - ❖ **Livestock breeders are longing for very short and tiny teats, which promote an insufficient spincter of the teat**
  - ❖ **Milk machine problems transmit germs from one cow to the other**
  - ❖ **The reservoir is the udder, its nodules and abcesses. This explains the cyclic elimination**
  - ❖ **Even 1<sup>st</sup> lactating heifers may carry Staph. aureus !!!**



# Hypocalcaemia, unbalanced stable conditions



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Switzerland

# Badly demolished teat



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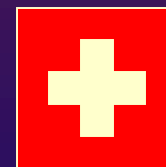
# Chronical clinical- / acute traumatic Mastitis



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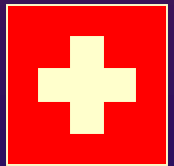


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# California-Mastitis-Test



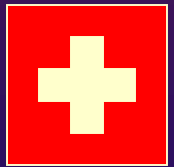
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# Classical Therapy

- ❖ Antibiotics help during lactation in a rate of about 16% - 30 % !?
- ❖ Every cow with Staph. Aureus Mastitis should be treated with a high quality, penicillinase-resistant drying up AB
- ❖ If after calving the cow is yet eliminating CWD`s, it will be slaughtered



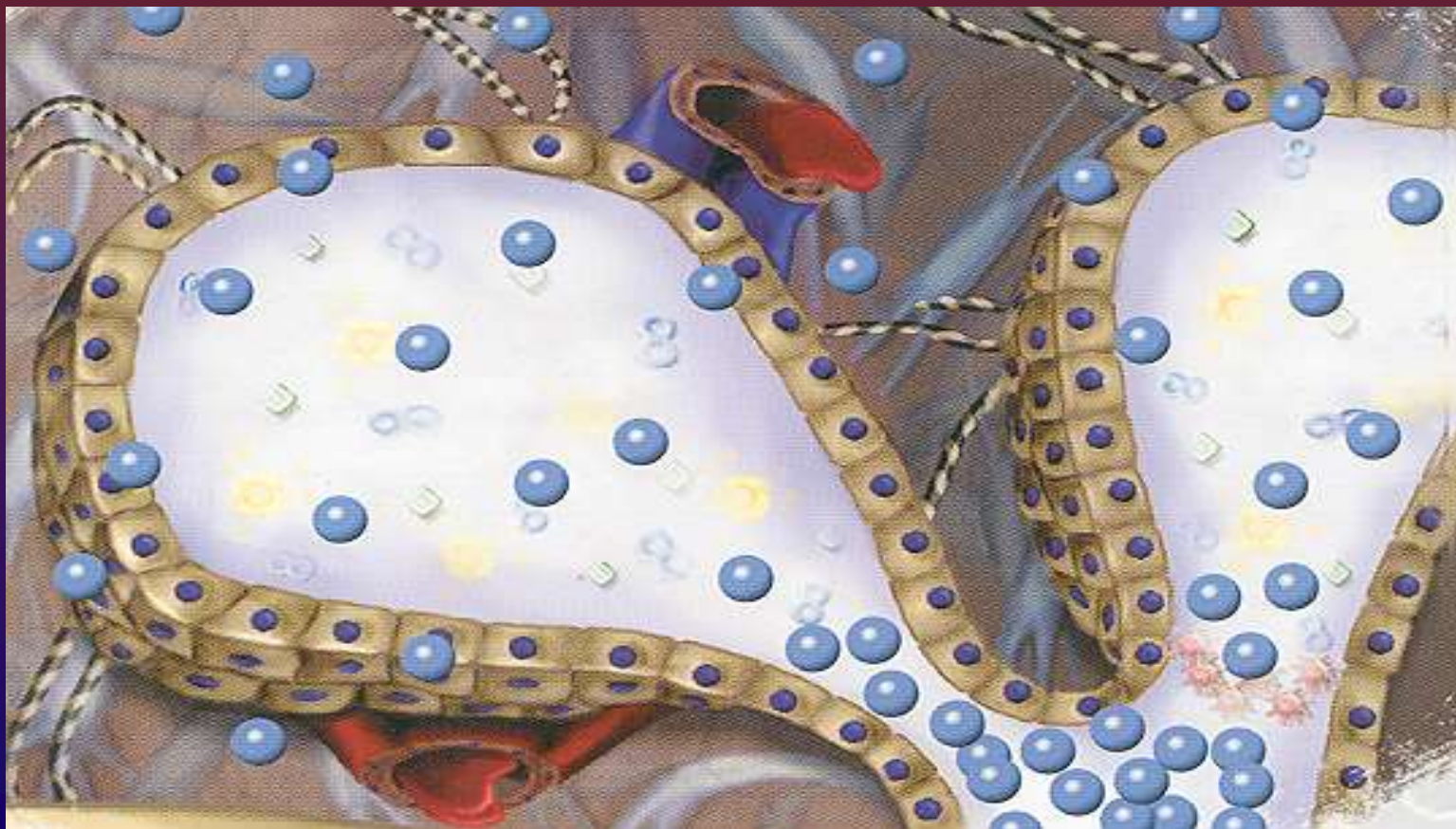
# Actual Antibiotics

## Speed of Diffusion of different AB in the Udder

Active Substance	Proteinbinding Capacity	Non Ionised Share %, pH 6.8	Active Share %	Lipid Solubility	Speed of Diffusion
Benzylopenicillin	40 – 50	0,01	0,005	low	0,62
Ampicillin	15 – 20	0,63	5	medium	1,43
Cloxacillin	70 – 80	0,01	0,002	high	1,25
Cephalexin	10 – 15	36	30,6	high	4,54
Neomycin	40 – 45	11	6,6	very low	< 0,12
Erythromycin	20 – 25	1	0,8	medium	0,45
Spiramycin	40	13,7	8,4	medium	0,15
Colistin	50 – 60	10	4	very low	< 0,12



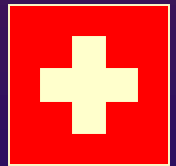
**AB, little bound to Proteins, high lipid solubility  
and high share of non ionised particles**



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# AB Instillation





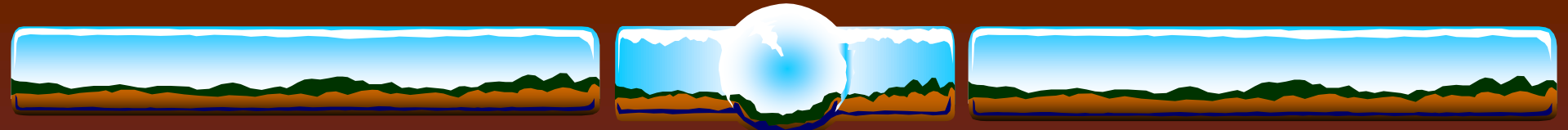
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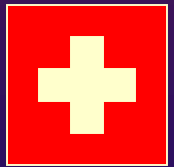
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# Possible Reasons

- ❖ Heavy metal- and environmental pollution: cars, incinerators etc. Mercury, Cadmium, Plumbum, Formaldehyde, Stannum, Palladium, Dioxine, Poly-Cl-F-Hydro-carbonates, Ammonia, Fertilizers, mud, slik
- ❖ Vaccinations (Conservatives, Adjuvantia) 
- ❖ Antiparasitic drugs: Poor-on, Injectables 

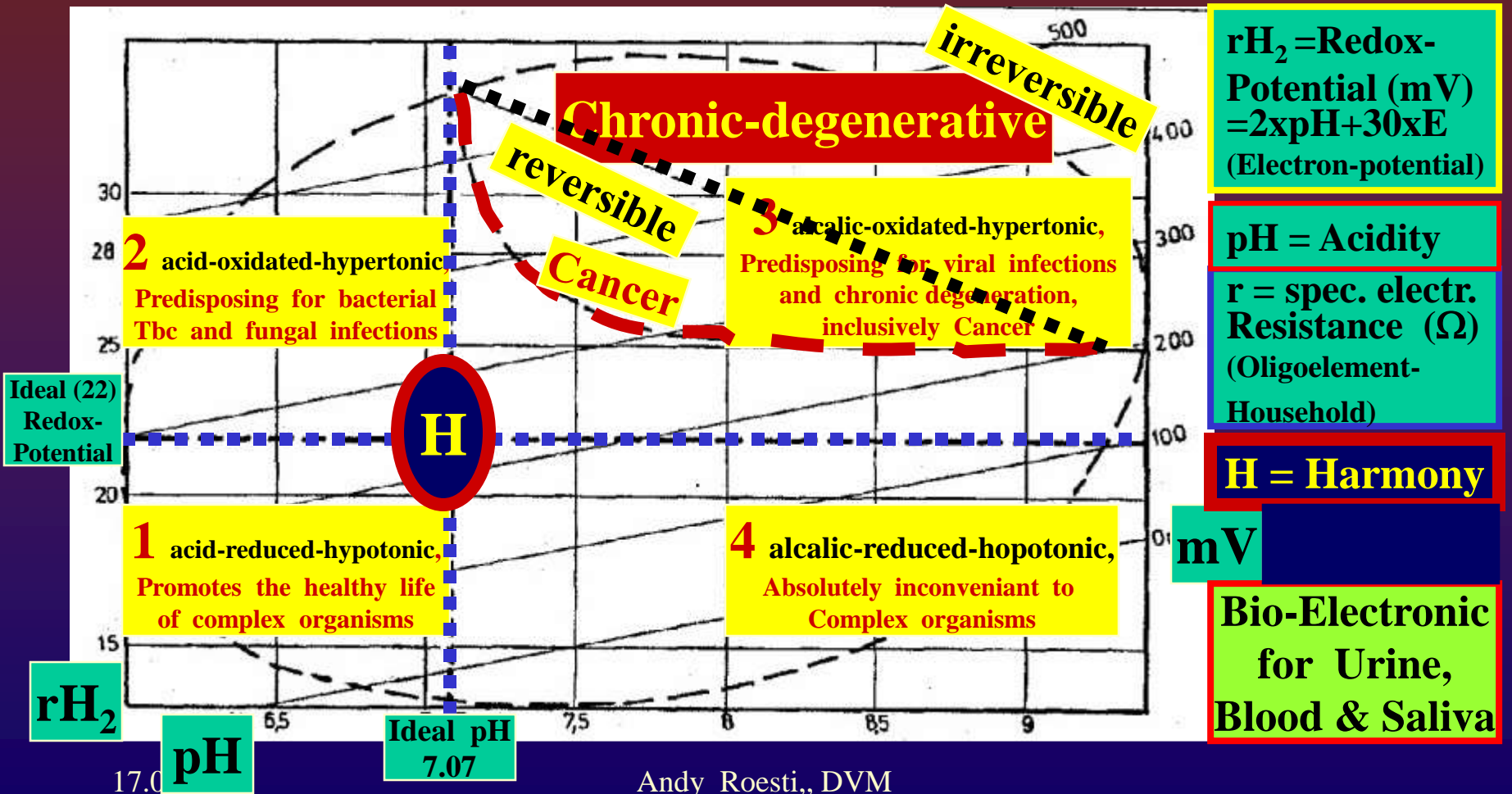
- 
- ❖ **Immundeficiency, Imbalance, Dysregulation and Dysfunction of the Cell-Milieu**
  - ❖ **Fungus like very much AB and heavy metals**
  - ❖ **Fooder and Additives  $\leftrightarrow$  Milkjield (30-40-50 kg / day)**
  - ❖ **Udder-, Teat- Desinfection and Milk-maschine problems**
  - ❖ **Stable problems, dehorning (LIV), clawing (LIV)**





# Bio-Electronic, The Terrain (Vincent)

Hydrogen-Ion-Concentration formulated as negative Logarithm



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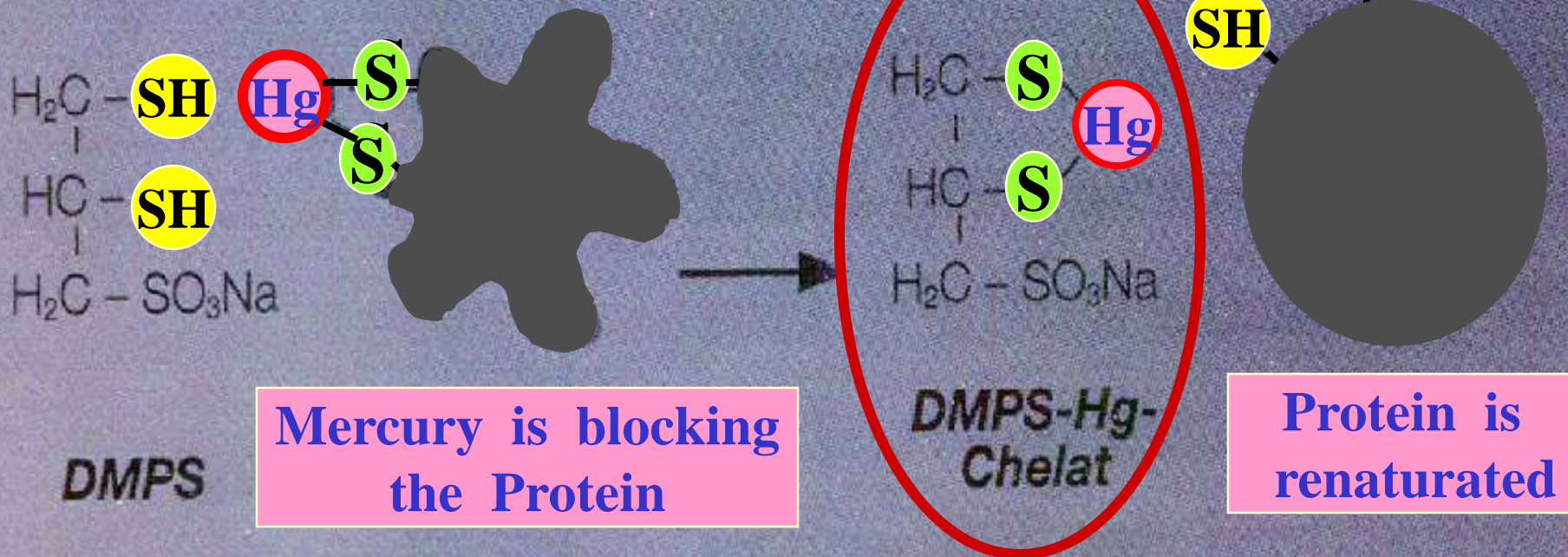
# Complementary Options

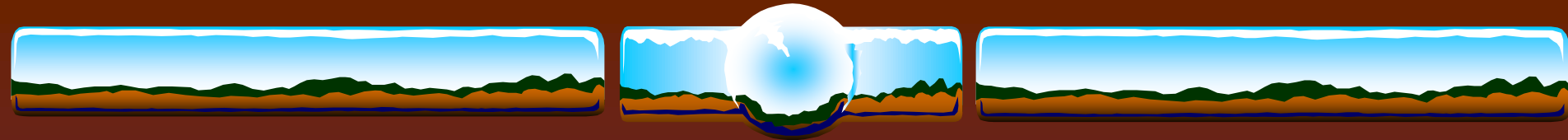
- ❖ 1. **Mobilise** out of the bodies reservoir (Yin Organs, fatty tissue, connective tissue, the brain, the udder, intracellular and intercellular) heavy metals and environmental pllutions by means of Coriandrum off. Ø and Allium ursinum Ø
- ❖ 2. **Eliminate** them with NAC (N-Acetylcystein) to chelate those insoluble Complexes





# Mechanism of Detoxification

e.g. Mercury - Pollution





- ❖ 3. **Stop the enterohepatic rebound circuit** by means of fresh water alges or Clinofeed®  
(Na,K)<sub>6</sub>(Al<sub>6</sub>Si<sub>30</sub>O<sub>72</sub>)<sub>20</sub>H<sub>2</sub>O, pH 6.9-7.1, 1-2%
- ❖ 4. **Substitute** chelated (bound to AA) bioavailable Oligoelements: e.g. Taiyin-Shaoyin-Jueyin ®, which act cybernetic-chronobiological
- ❖ 5. **Stabilise** the Middle of the Body by means of highly unsaturated fatty acids (EFA`s) 
- ❖ 6. Administer **YIN Fodder** (grass, hay, silage) and all the products growing in the earth 





# Homœopathy - Isopathy

- ❖ If you are a classical Homœopath, you may give each single cow her Constitutional globules
- ❖ You can also administer each single cow her own isopathic dynamised milk (Korsakov X potency)

With this method you need no Lab and you are antidoting all different germs of her

- ❖ You can administer, according to the Lab-results, isopathically e.g. Staph. aureus, Strept. haemolyticus, Corynebacterium bovis, Bacillium, E. Coli, etc. C200 and XM potency

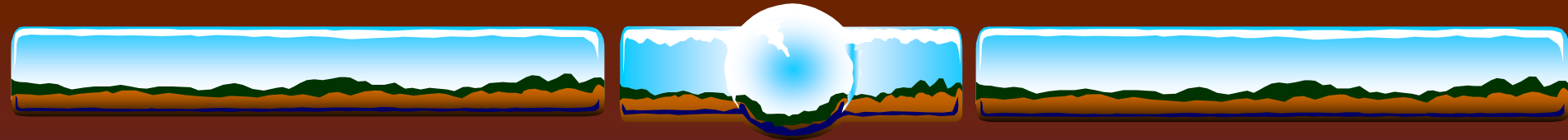




# Acupuncture for Mastitis ? !

- ❖ LI 4      Hegu      Thalamus, Analgesic-Pt.
- ❖ LI 11     Quchi      Tonification Pt. of LI
- ❖ ST 36     Zusanli    Balances the Middle: SP-ST
- ❖ LU 7      Lieque     Cardinalpoint, the Lung itsef
- ❖ TH 5      Waiguan   Thymus, Immunstimulation
- ❖ GB 41     Zulinqi    Prostaglandin E1,  
Anti-Inflammation





❖ TH 8

❖ ST 18/SP 13

❖ KI 10/SP 12

❖ ST 29-02

❖ TH 3

❖ BL 23

❖ GV 4

❖ LIV 13

❖ SP 21

❖ GV 14

Sanyangluo

Rugen/Fushe

Yingu/Chongmen

aside the ST Ch.

Zhongzhu

Shenshu

Mingmen

Zhangmen

Dabao

Dazhui

Mamma

Milkbowl / Front Quarters Cow

Hind Quarters (caud./lat.)

Teats (Kotbauer)

Cortison Pt.

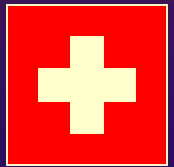
Corticotropic Pt.

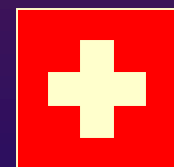
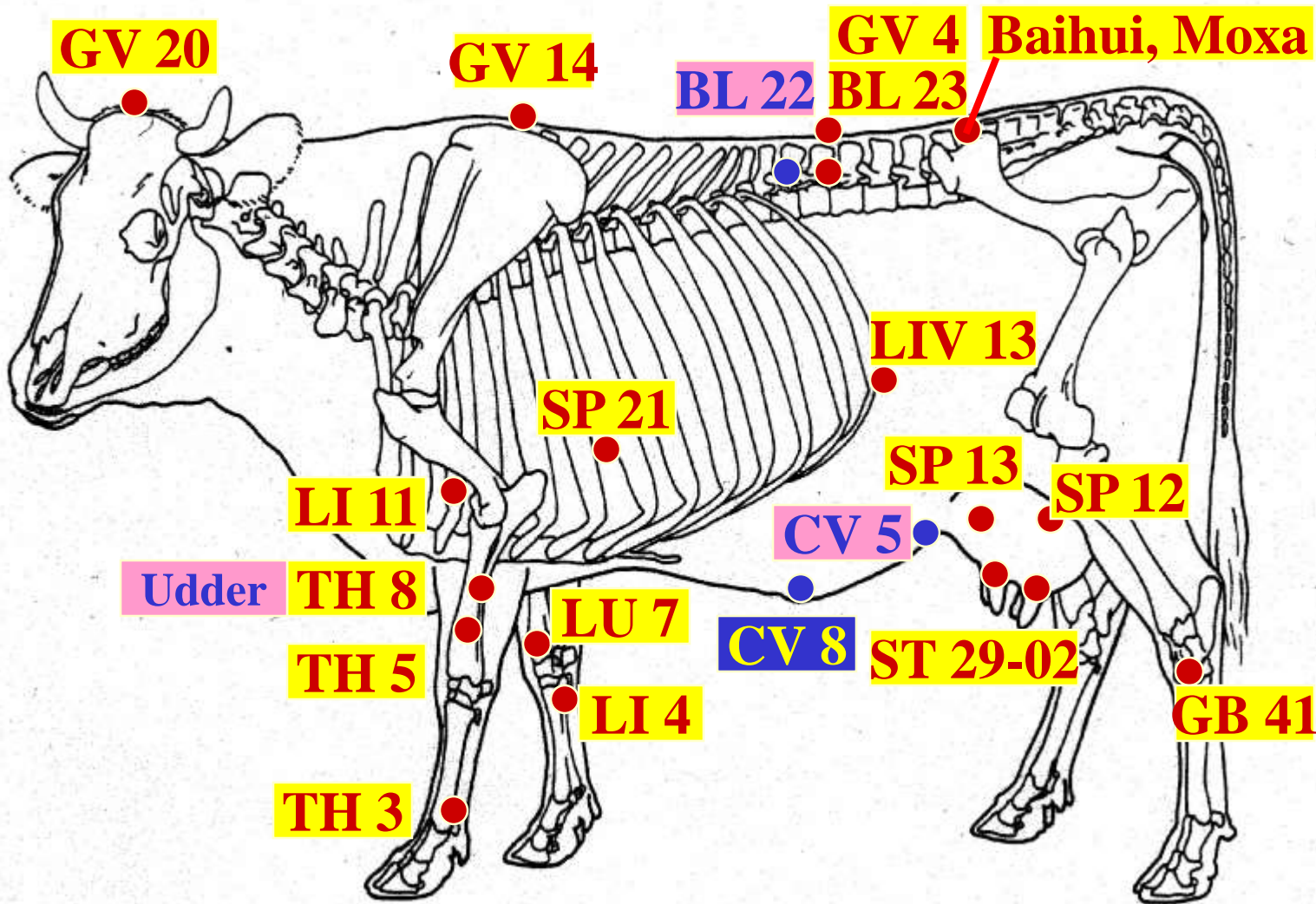
Adrenal Infl. Pt.

ACTH Pt.

Big YIN Luo !

Big YANG Luo





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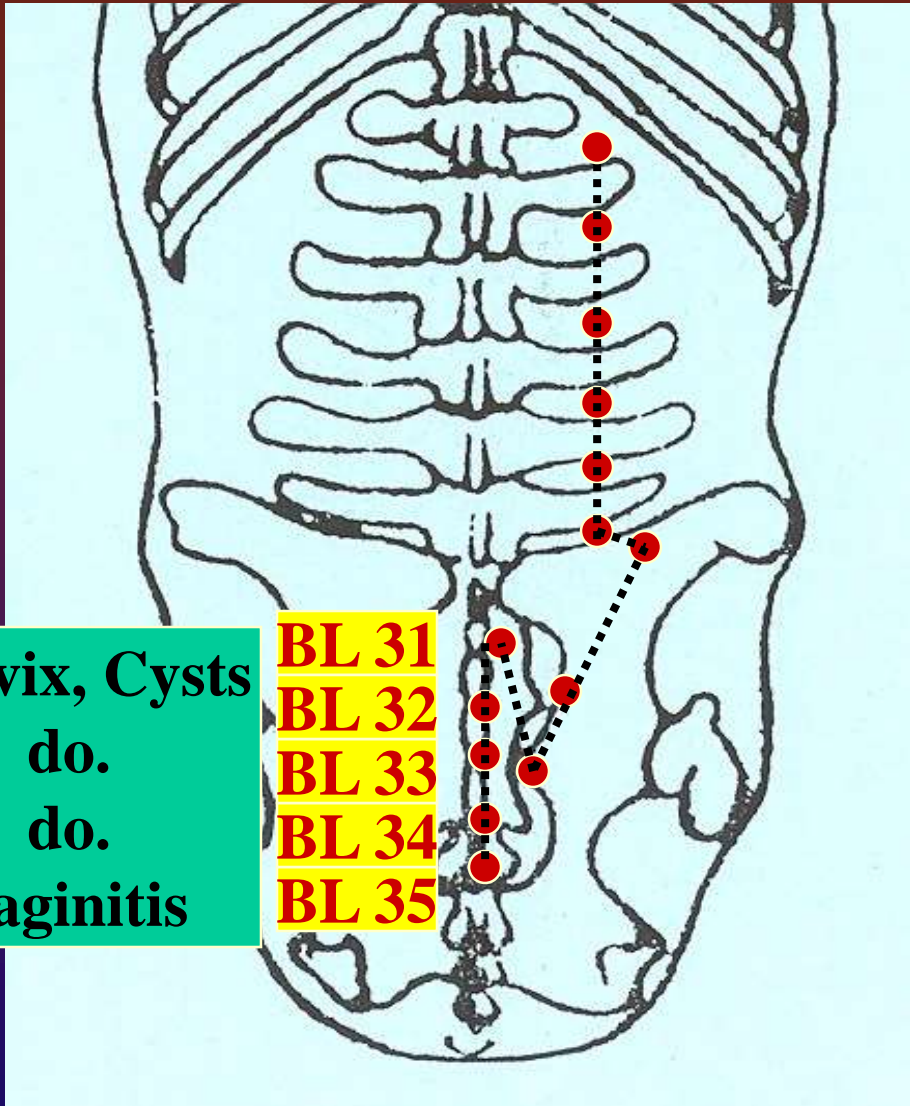
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# Delivery - Ovaries - Uterus - Mastitis

- ❖ 1. Delivery Induction with hormonal drugs
- ❖ 2. Difficult delivery with obstetrics
- ❖ 3. Retentio secundinarum
- ❖ 4. Chronic Endometritis, **BL 24** (Chi Hai Shu) (oviduct), **BL 26** (Guan Yuan Shu) (uterus), **BL 31** → **BL 34 = Ba Liao** **BL 31** (Shang Liao) (cervix), **BL 32** (Ci Liao), **BL 33** (Zhong Liao), **BL 34** (Xia Liao)
- ❖ 5. Cysts, **BL 23**, **BL 26**, **BL 31** (Ovaries)
- ❖ 6. Chronic subclinical Mastitis, **BL 30**





Cervix, Cysts  
do.  
do.  
Vaginitis

BL 31  
BL 32  
BL 33  
BL 34  
BL 35

BL 22  
BL 23  
BL 24  
BL 25  
BL 26  
BL 27  
BL 28  
BL 29  
BL 30

SHU TH  
Adrenals  
Oviduct  
SHU LI  
Uterus  
Endo-, Metritis  
Endo-, Metritis  
COW: SHU BL  
Cervix, Ovaries

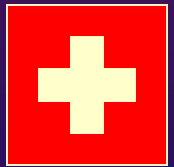




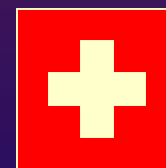


# Milkingmachine - Dipping

- ❖ Cheque the different Milk machines, roboters:  
Air rebound is not allowed, nor at the beginning, neither at the end of the milking
- ❖ Cheque the sequence of milking
- ❖ Cleaning of the teats / udder
- ❖ Cheque for teat injuries
- ❖ Dipping, not spraying (0,3 % Jodin, Loraso)



# Dipping, not spraying (sprayshadow)

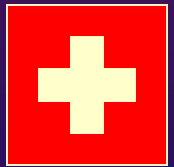
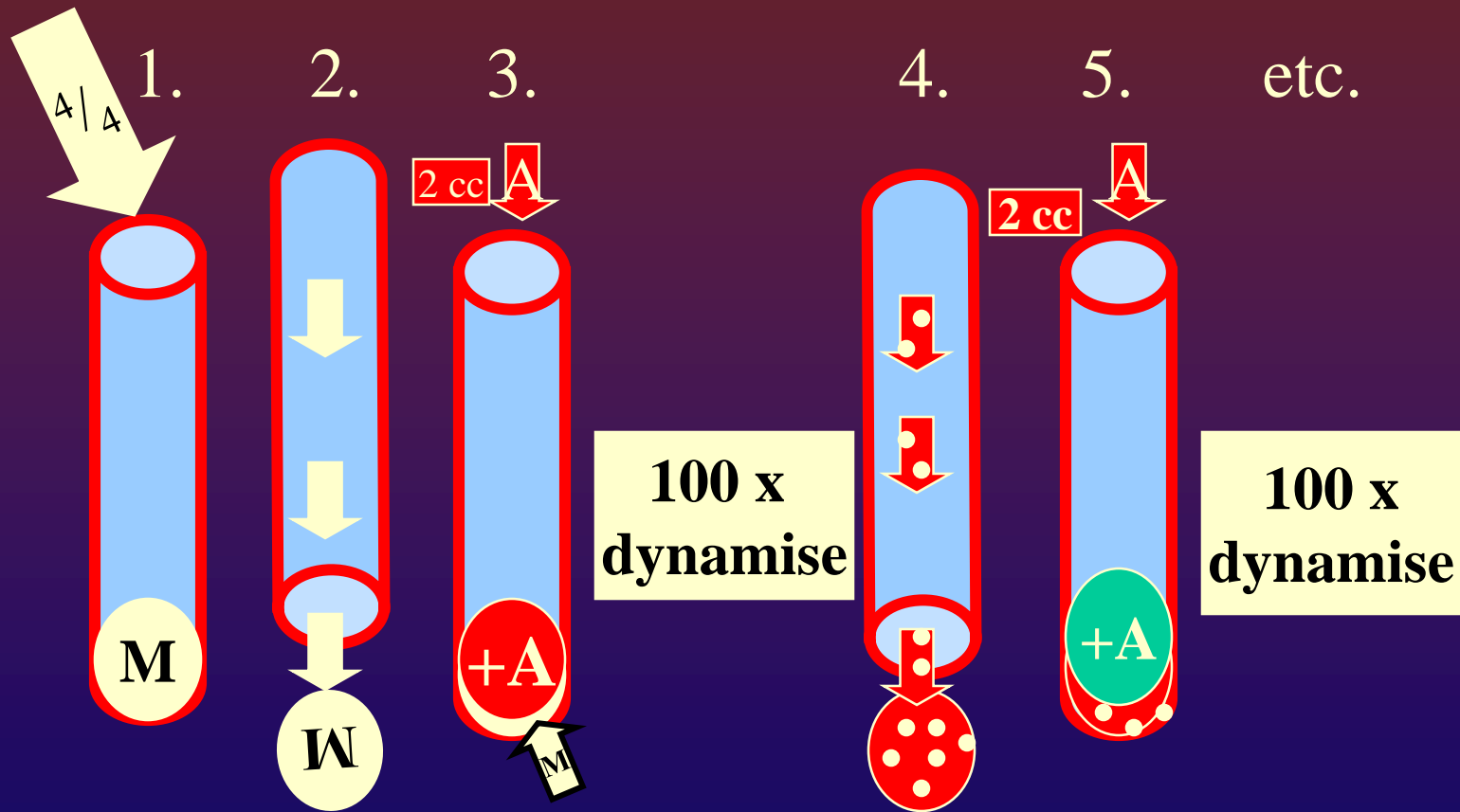


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# Cows - $4/4$ - Nosode acc. to Korsakov

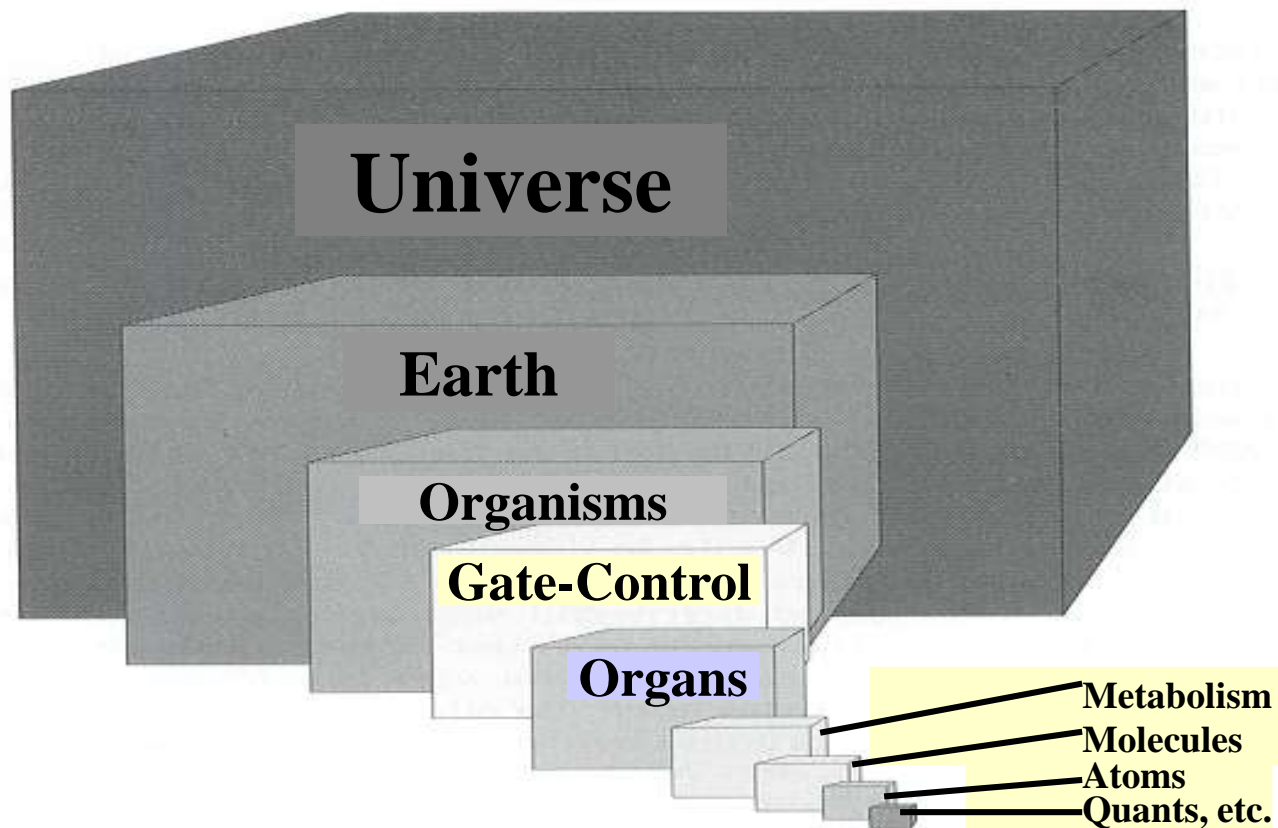


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# Interlocked Quant System

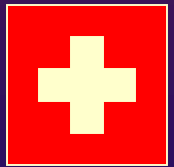
As well in the small - as in the large

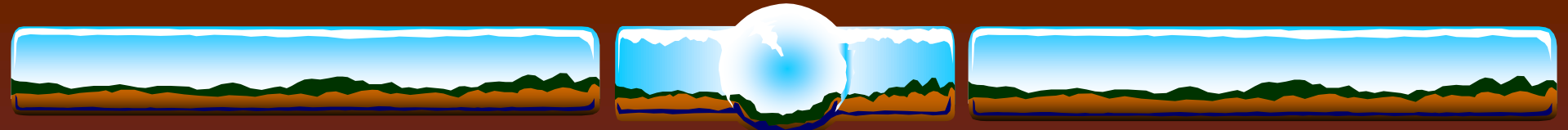


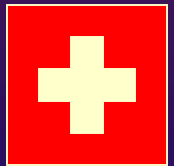


# Bach – Californian – Australian – Swiss-Alpine – Flower Essences

- ❖ Yintang Oscillation, Edelweiss
- ❖ KI 3 M. against Osc., Star Thistle, Blackberry
- ❖ PC 6 Inversion, Quacking Grass
- ❖ TH 5 Thymus, Pine, Snapdragon, Violet
- ❖ GB 41 Protaglandine E1, Red Chesnut,  
Sweet Pea, Rabbitbrush
- ❖ GV 4 Adrenal influencing Pt., Zinnia, Zinc



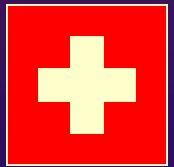
- 
- ❖ CV 8 Navel, Rescue, Saguaro, Fawn Lily, EFA`s
  - ❖ SP 5 Oestrogen, Love-Lies Bleeding, Black Cohosh
  - ❖ SP 7 Progesteron, Iris
  - ❖ LIV 8 Californian Puppy, Milk Thistle
  - ❖ KI 7 Lotus, Goldenrod, Violet

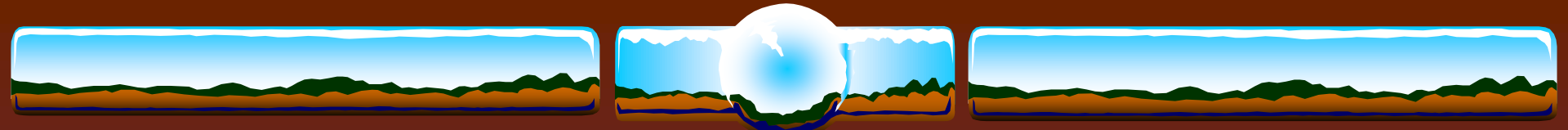


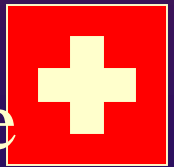


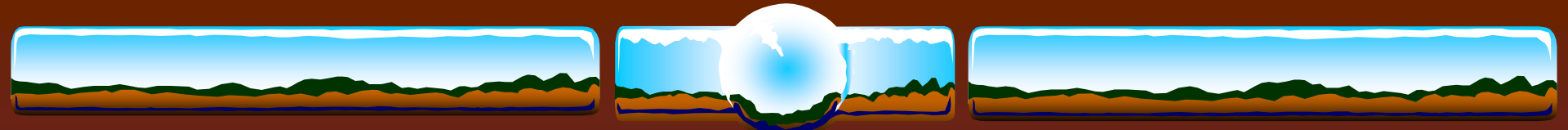
# Phytotherapy in chronic Masitis

- ❖ Liu Jun Zi Tang (**Six Gentlemen Decoct**)  
=Si Jun Zi Tang: (R. Ginseng,  
Rh. Atractyloides, Sclerotium Poriae Cocos,  
R. Glycyrrizae) + Peri. Citri Reticulae and  
Rh. Pinelliae Ternatae
- ❖ Flos Inulae, **Alant**: LU/DI, SP/ST
- ❖ Taraxacum mongolicum, **Dandelion**: LIV/ST



- 
- ❖ R. *Polygala tenuifolia* (Dünnblättrige Kreuzblume), LU/HT/KI
  - ❖ *Polygala alpestris* (Voralpen Kreuzblume)
  - ❖ Citrus *Tangerinae*, **Tangerine peeling**: LIV/GB/ST/SP/LU
  - ❖ Mang Xiao =  **$\text{Na}_2\text{SO}_4$**  externally
  - ❖ *Phytolacca americana*, **Pokeweed**
  - ❖ *Lactuca scariola*, **Prickly lettuce**: Stimulate milk flow



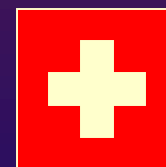
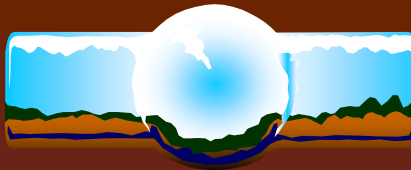
- 
- ❖ *Hemerocallis fulva*, **Daylily**: Poultice for mastitis
  - ❖ *Geranium robertianum*, **Herb Robert**: Poultice to relieve pain in swollen udders
  - ❖ *Pueraria lobata*, **Kudzu**: Stem tea for Mastitis
  - ❖ *Hepatica americana*, **Round-lobed Hepatica**: Wash for swollen udders
  - ❖ *Symphytum officinale*, **Comfrey**: Root or leaf tea for sore udders



- 
- ❖ *Rosa rugosa*, **Wrinkled Rose**: Flower tea for mastitis
  - ❖ *Lonicera japonica*, **Japanese Honeysuckle**: Antiviral, Antibacterial, Tuberculostatic, Anticancerogen
  - ❖ *Pteridium aquilinum*, **Braken Fern**: caked mastitis
  - ❖ *Athyrium filix-femina*, **Lady Fern**: induces milk in caked udders



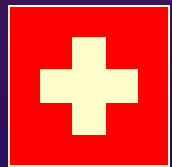




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**Mother Cow with two calves,  
the second one clothed with the cows placenta**



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