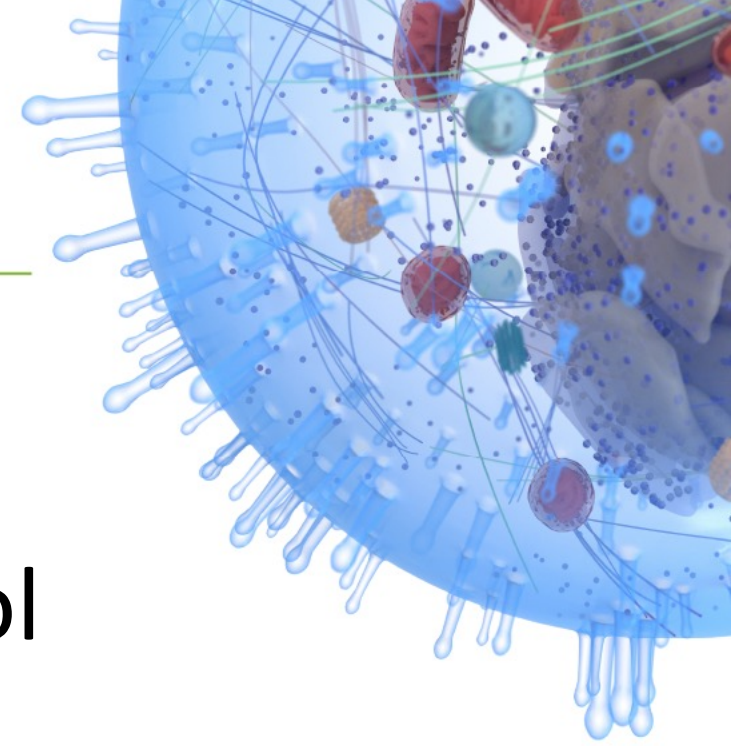


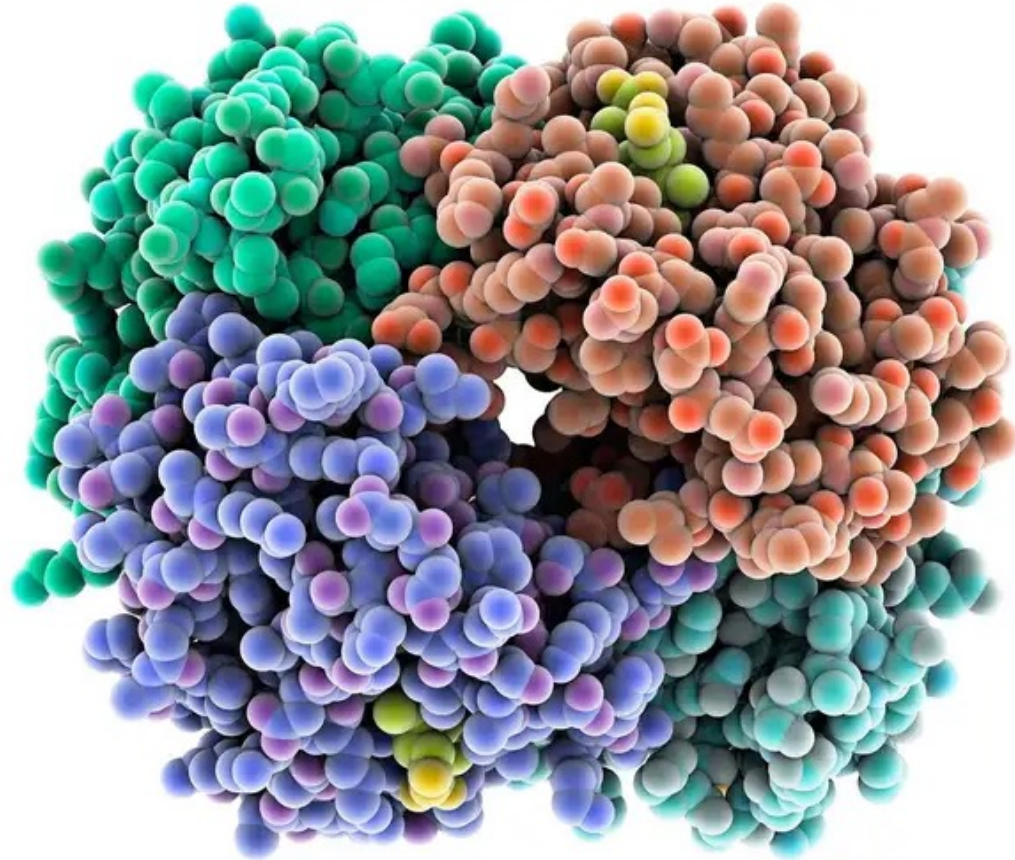


PROTEOMIS profile as a diagnostic tool for immunometabolism

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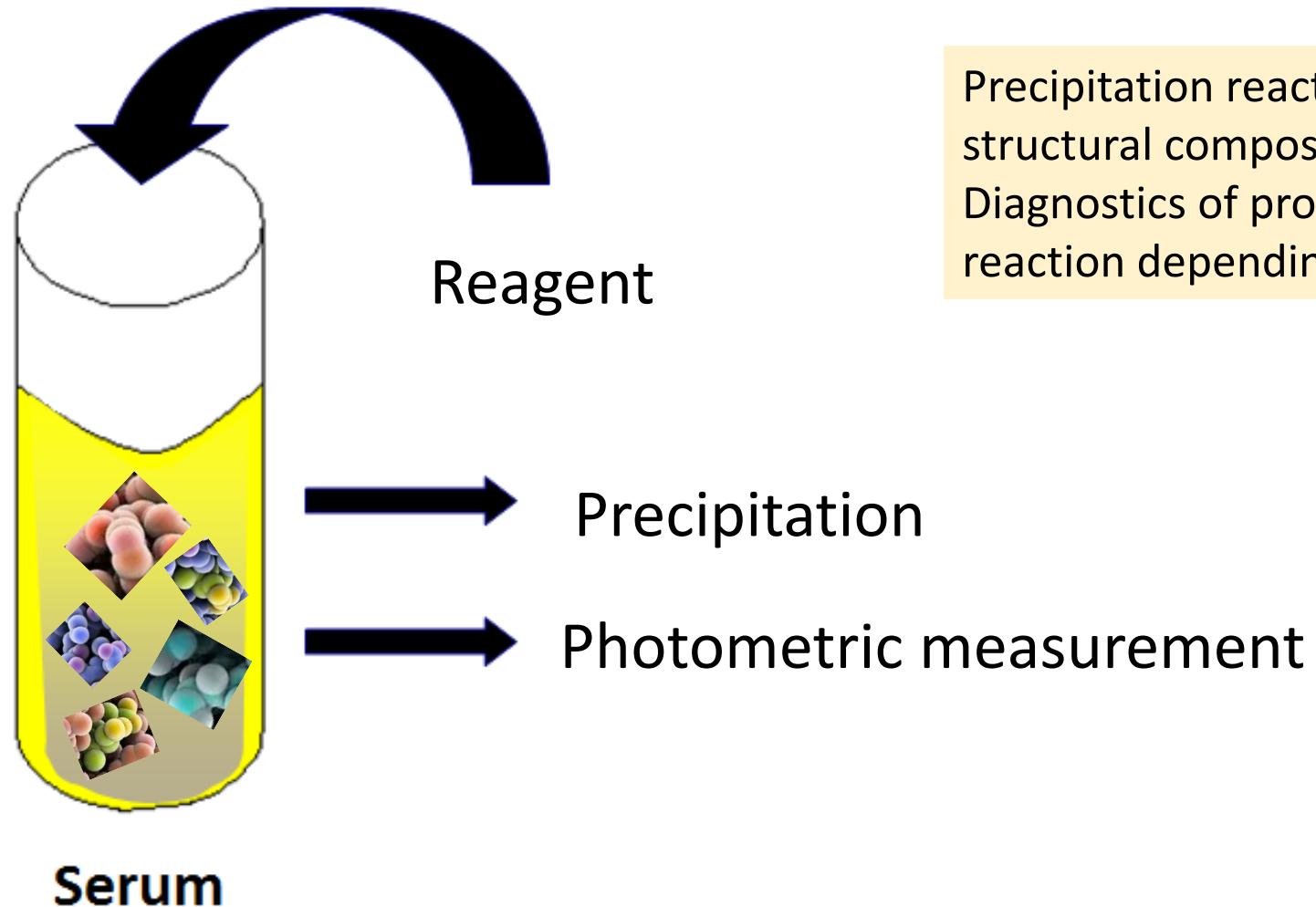
Functional PROTEOMICS = protein analysis via precipitation



- Folded structure of the proteins is in colloidal solution stable
- Temperature change, pH-displacement or chemical reagents destabilize structure

Consequence: Precipitation

PROTEOMIS profile - diagnostic principle



Precipitation reaction is defined by the structural composition of the protein: Diagnostics of proteins via their different reaction depending on their microstructure

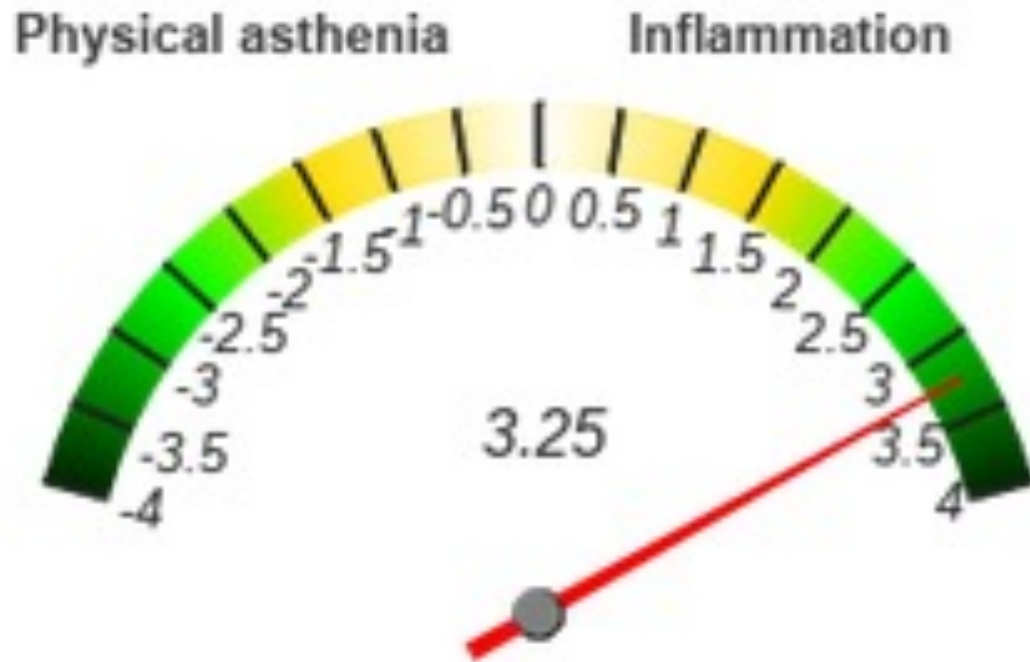
Protein groups in the PROTEOMIS profile

- **acidic glycoproteins** (pHi 3.5 -6.5)
Responsiveness of cellular immunity
- **neutral lipoproteins** (pHi 7)
Responsiveness of the nervous system
- **basic immunoglobulins** (pHi 7.5-9.5)
Responsiveness of humoral immunity under endocrine control
- **Immunoglobulins** (pHi 3.5 - 9.5)
Responsiveness of humoral immunity under influence of mucous membranes

Molecular weight



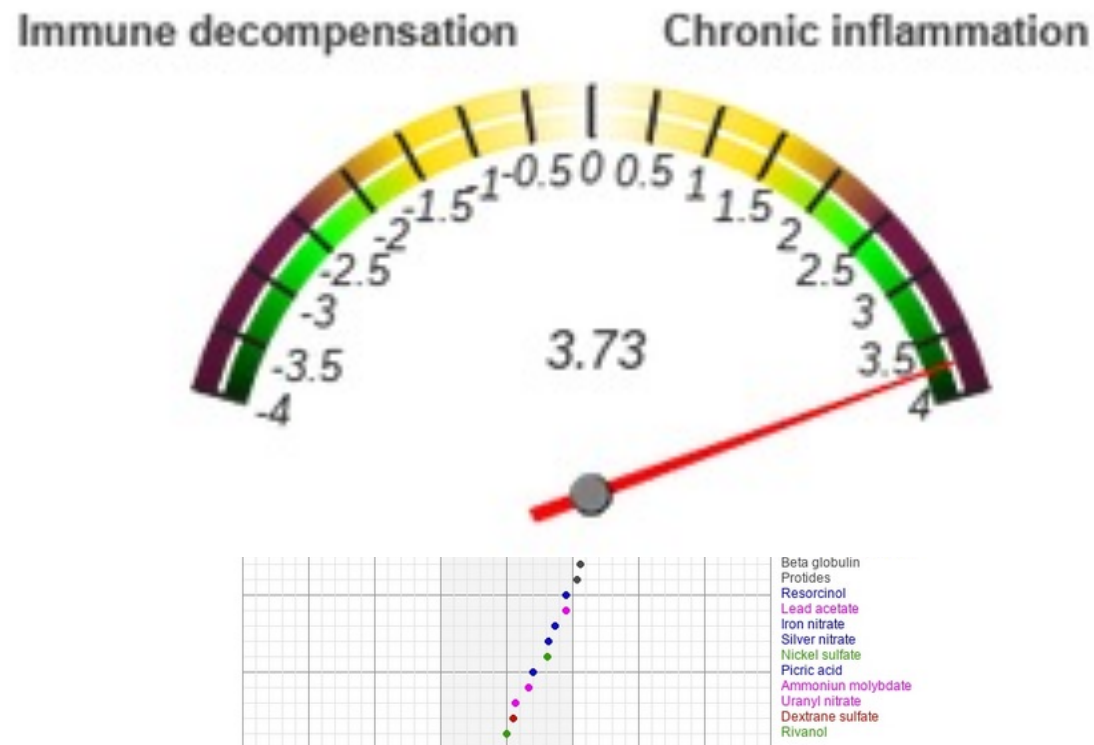
Strong activation of inflammatory glycoprotein reactions on the ground of hyperalimentation – onset of insulin resistance



Female patient, 30 years:

- Weight 108 kg/ BMI 33,33kg/m², 40 % body fat percentage
- Glucose 113mg%; insulin basal 12.7mU/l, HbA1_c 5.8
- no leukocytosis, no CRP
- Frustration eater: predominantly quickly absorbable carbohydrates
- known gestational diabetes

Excessive humoral immune response (autoimmune) together with strong inflammatory glycoprotein activation – extreme mitochondrial stress



Female patient, 81 years:

Multimorbidity:

- a) Arterial hypertension
- b) Diabetes mellitus type II
- c) Aortic aneurysm
- d) Polyarthrosis
- e) Immobility

Massive general deterioration, night sweats, abdominal pain, loss of appetite, weight loss.

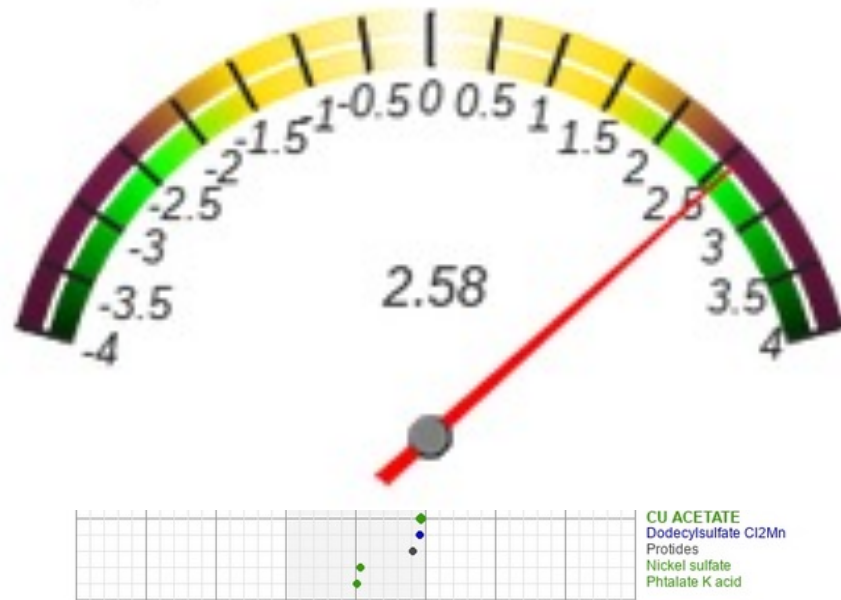
Massive increase in liver enzymes; ANA 1:5120; CRP 3.5

Working Diagnosis:

Severe hepatopathy in autoimmune disease with development of cachexia

Consolidation of an acute inflammatory episode of an autoimmune rheumatic disease with the use of a dietary change

Immune decompensation Chronic inflammation



Female patient, 51 years: rheumatoid arthritis with pain exacerbation

Correction of macronutrients as a basic therapeutic measure:

- Reduction of carbohydrate content to approx. 25%, no rapidly absorbable carbohydrates, no grains.
- Increasing the fat content to approx. 60% from saturated and monounsaturated fatty acids
- Approx. 15% protein from animals from sustainable cultivation (no cow's milk products because of autoimmunity)

Immune decompensation Chronic inflammation

