

Disclosure slide

(potentiële) belangenverstrengeling	Geen of zie hieronder
Voor bijeenkomst mogelijk relevante relaties met bedrijven	Bedrijven:
<ul style="list-style-type: none">• Sponsoring of onderzoeksgeld• Honorarium of andere (financiële) vergoeding• Aandeelhouder• Andere relatie, namelijk ...	<ul style="list-style-type: none">• geen• geen• geen• geen

Pathophysiology of pain & fatigue

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case

Patient A.

- female
- 14 years
- JIA
- Affected joints: knees/ankles
- Rx methotrexate

case

decursus

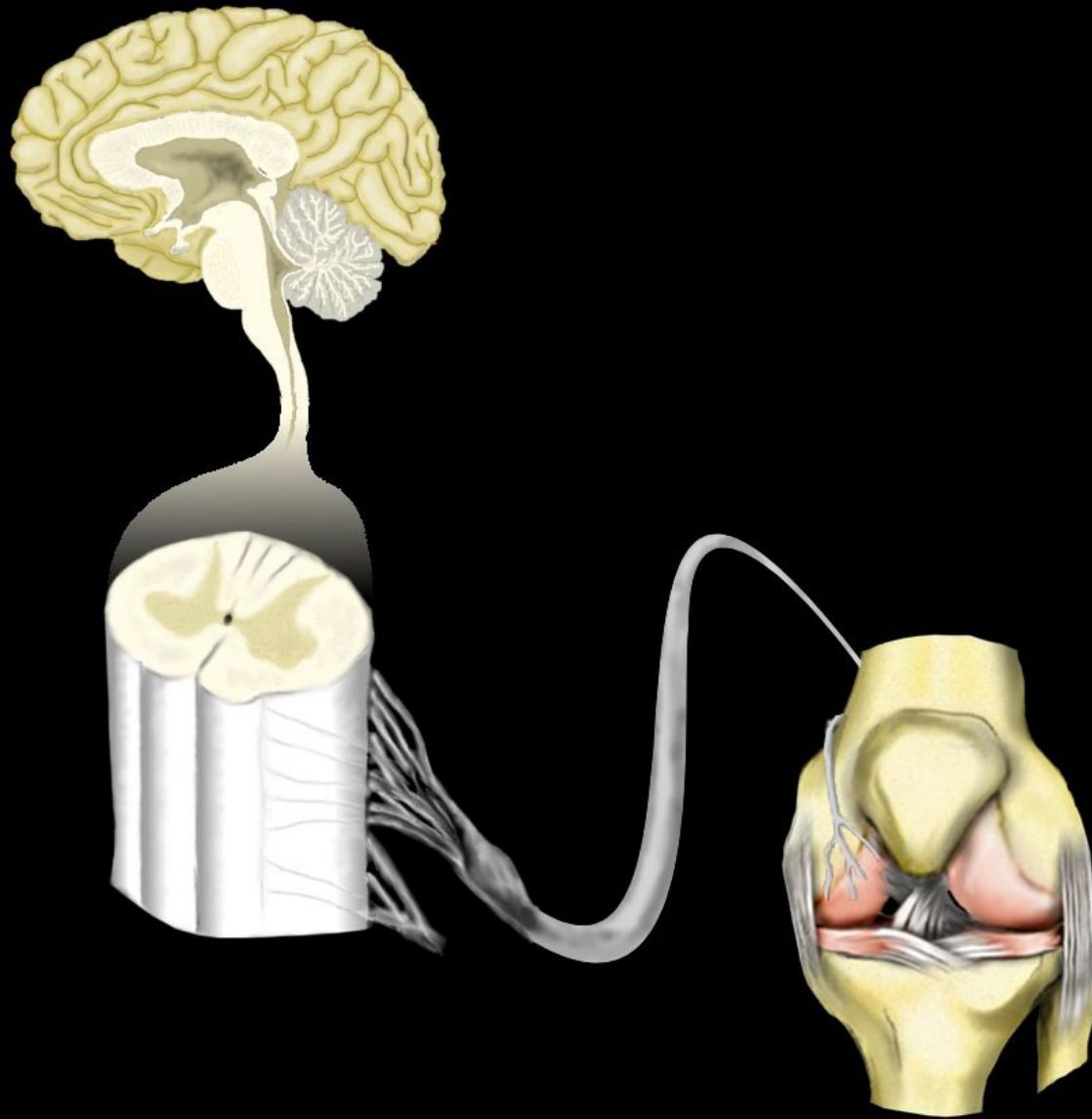
- Good inflammatory respons
- No signs of inflammation
- High pain scores (NRS 6-8)
- Fatigue, disturbed sleeping pattern
- Mother:
*“Usually doesn't complain about pain,
so yes, I'm verry worried.”*

pain anatomy

keywords:

- Soma
- Nerve
- Spinal cord
- Brain

pain anatomy

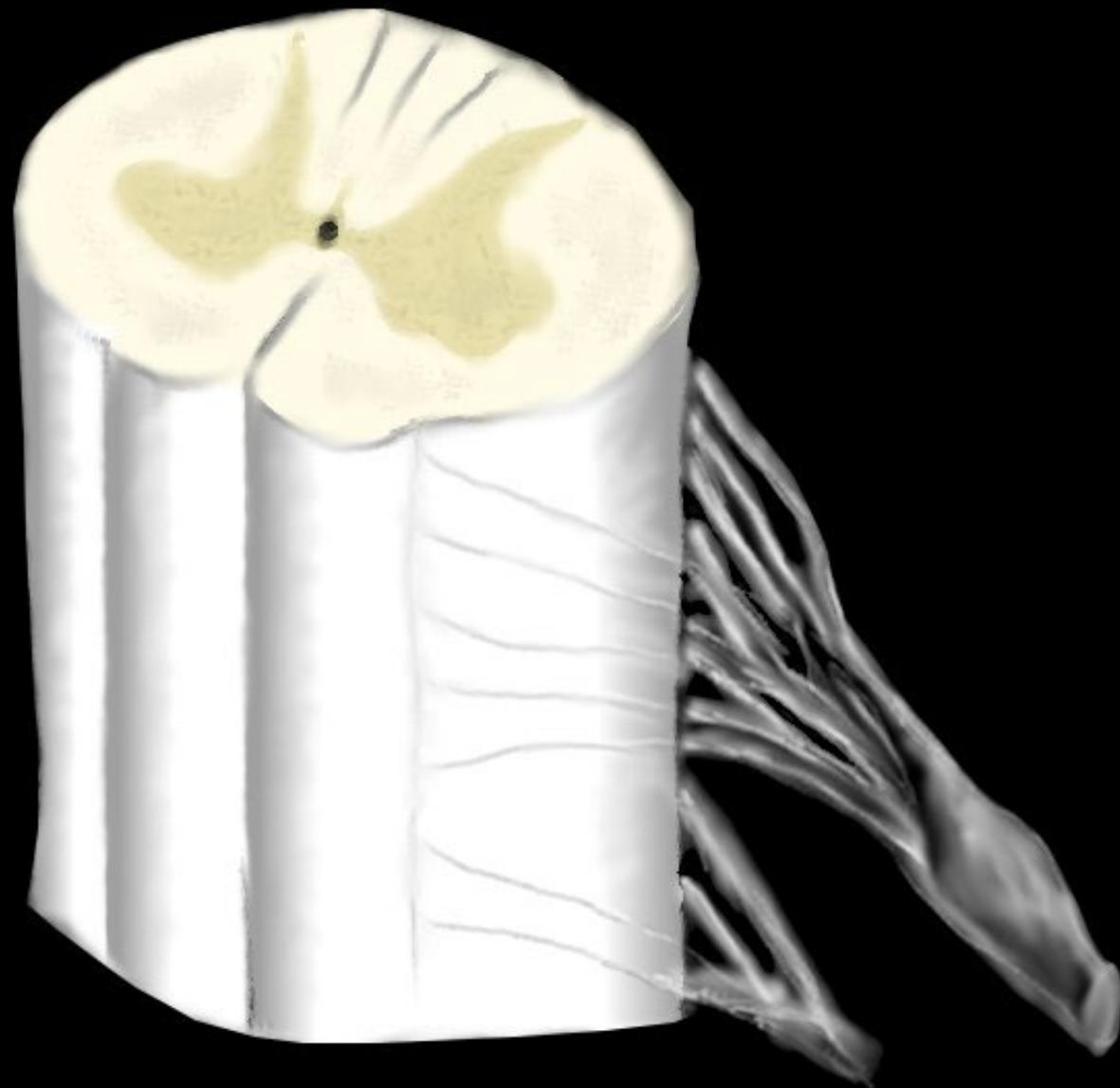


pain anatomy

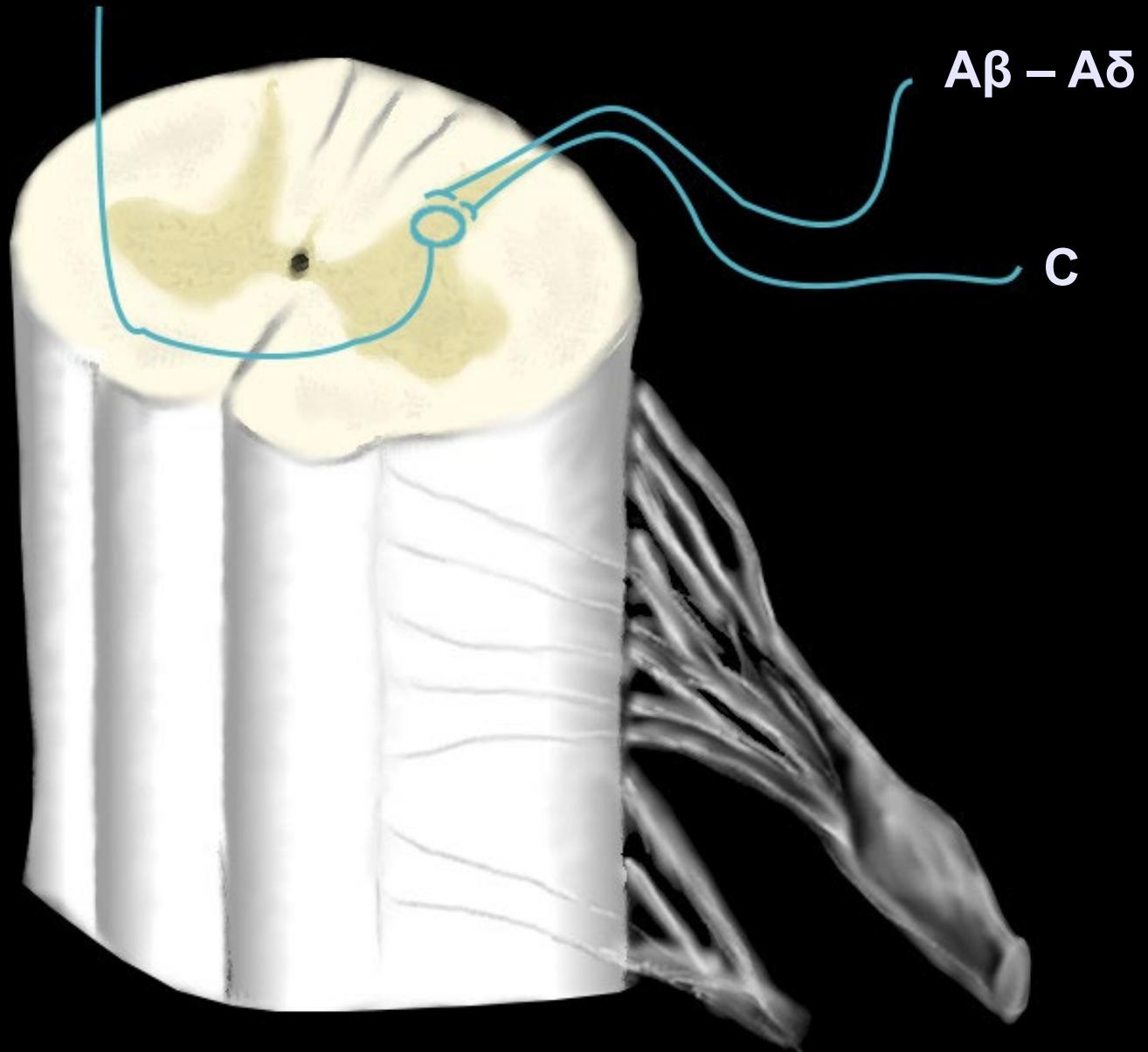


axon type	Aα	Aβ	Aδ	C
Diameter (μm)	13-20	6-12	1-5	0.2-1.5
Speed (m/s)	80-120	35-75	5-35	0.5-2

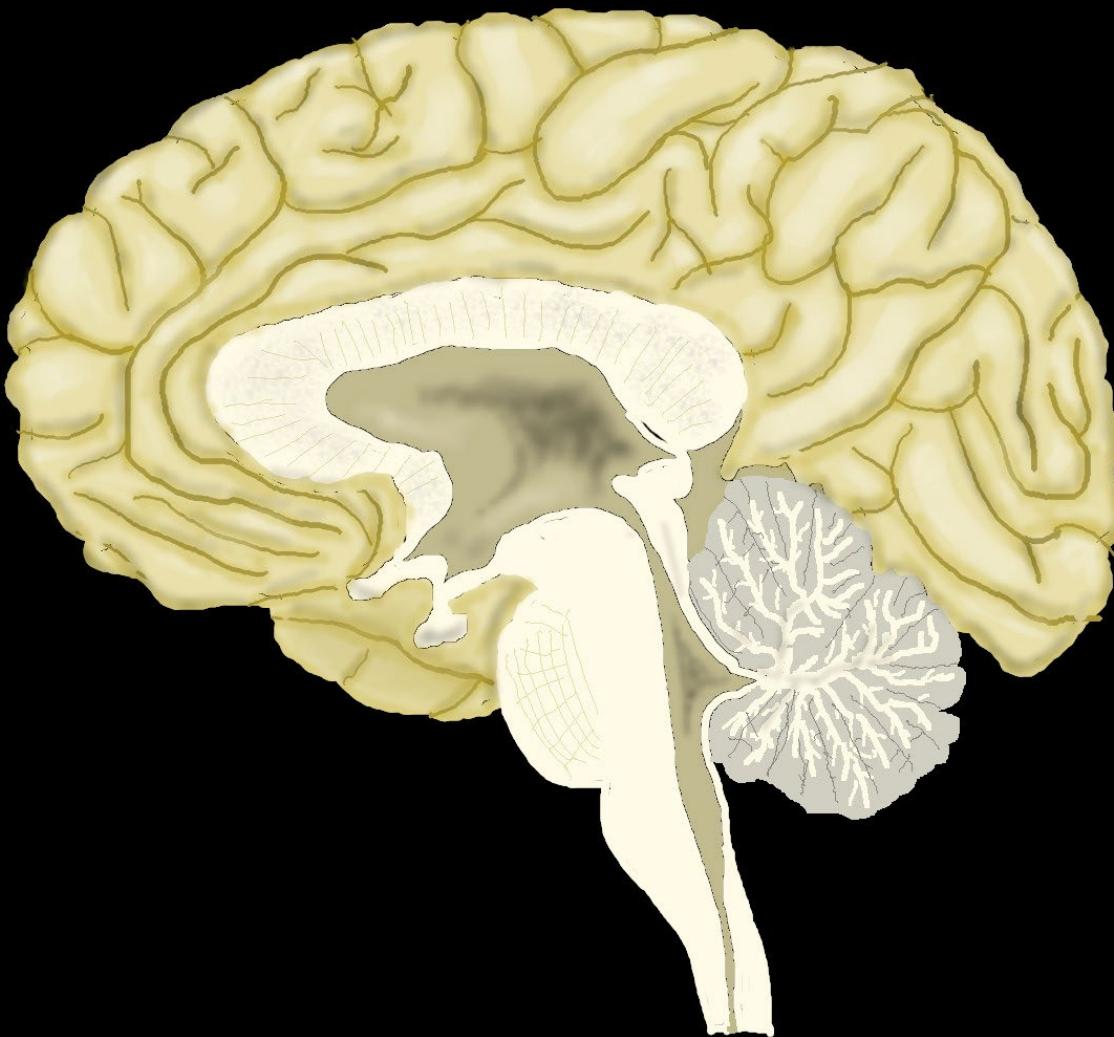
pain anatomy



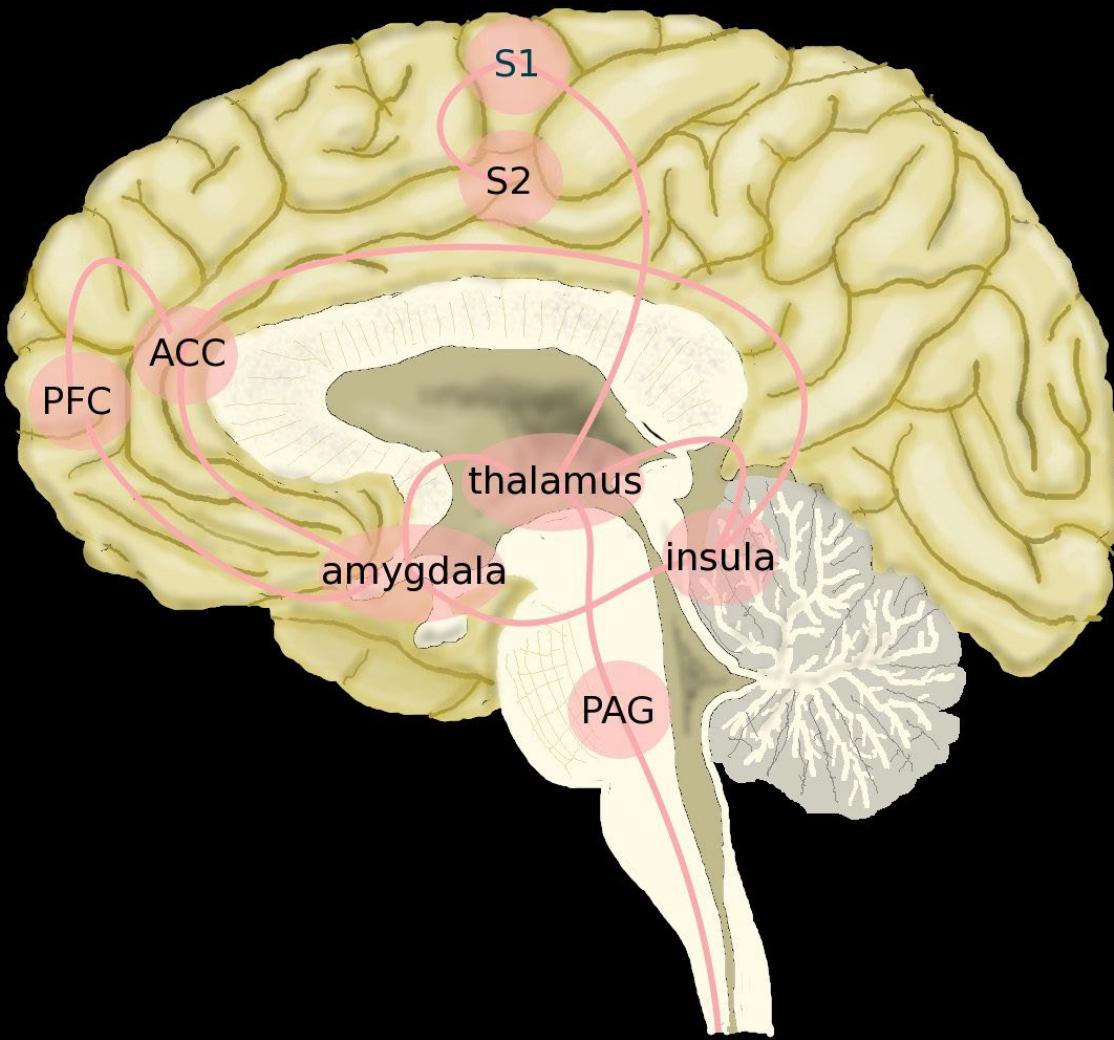
pain anatomy



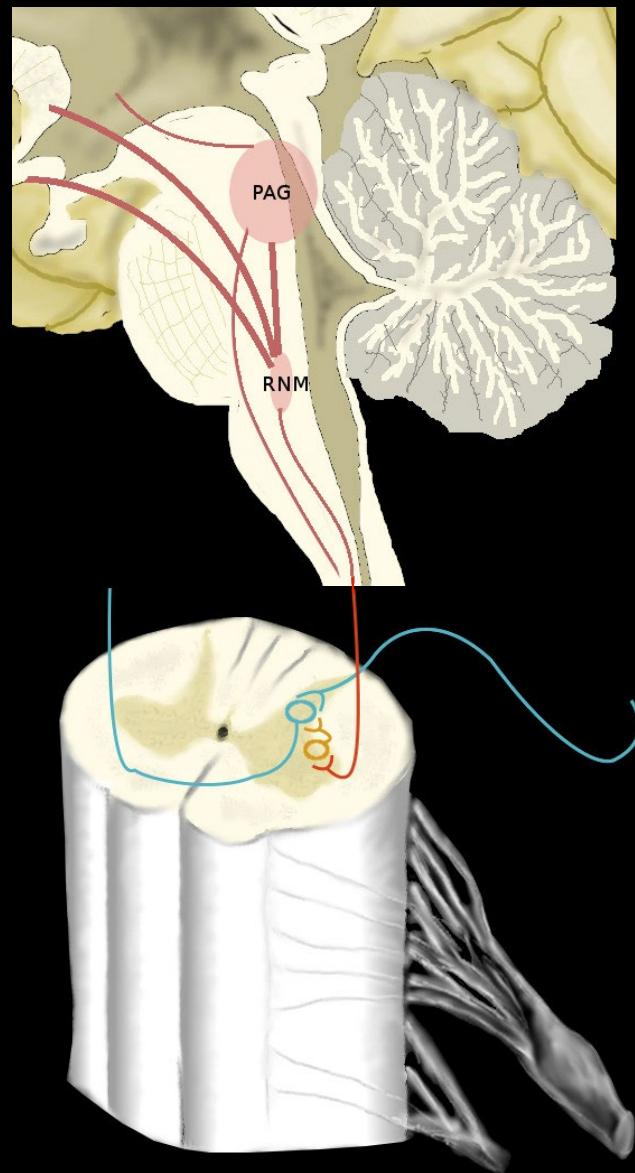
pain anatomy



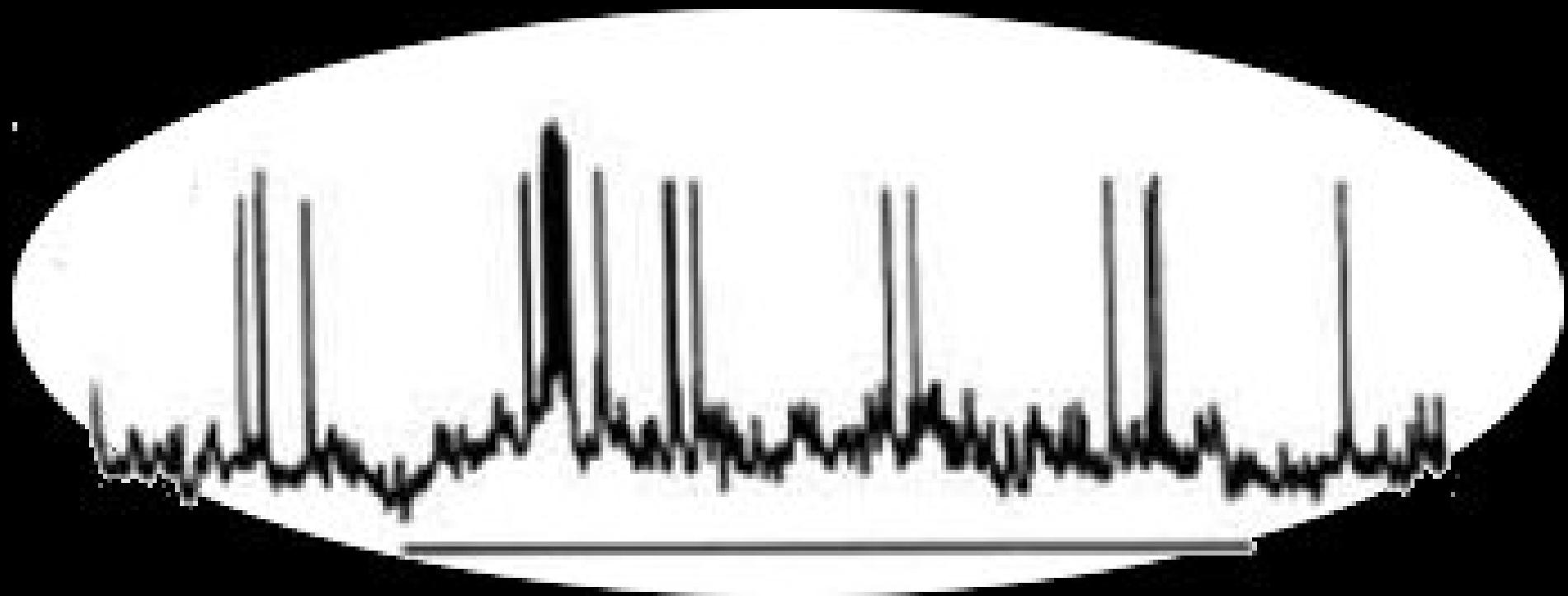
pain anatomy



pain anatomy

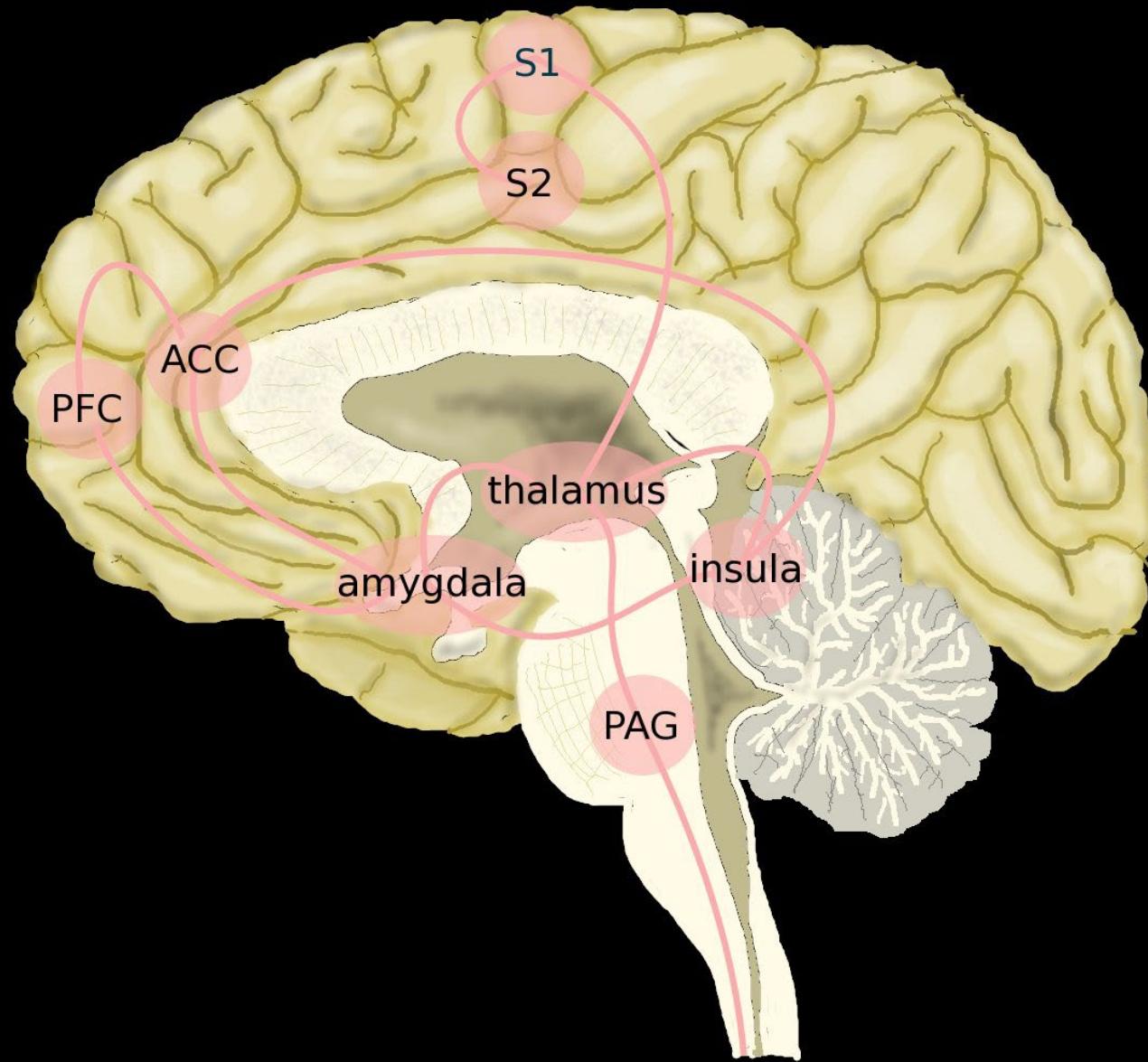


pain in action

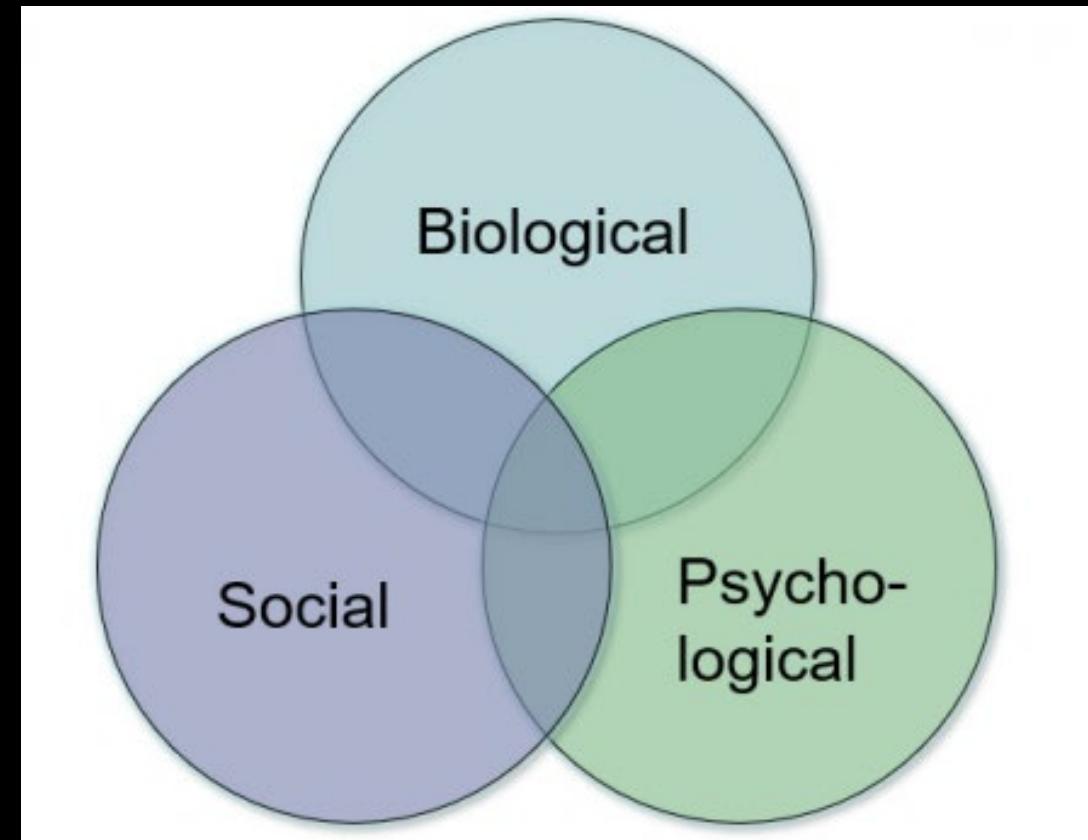
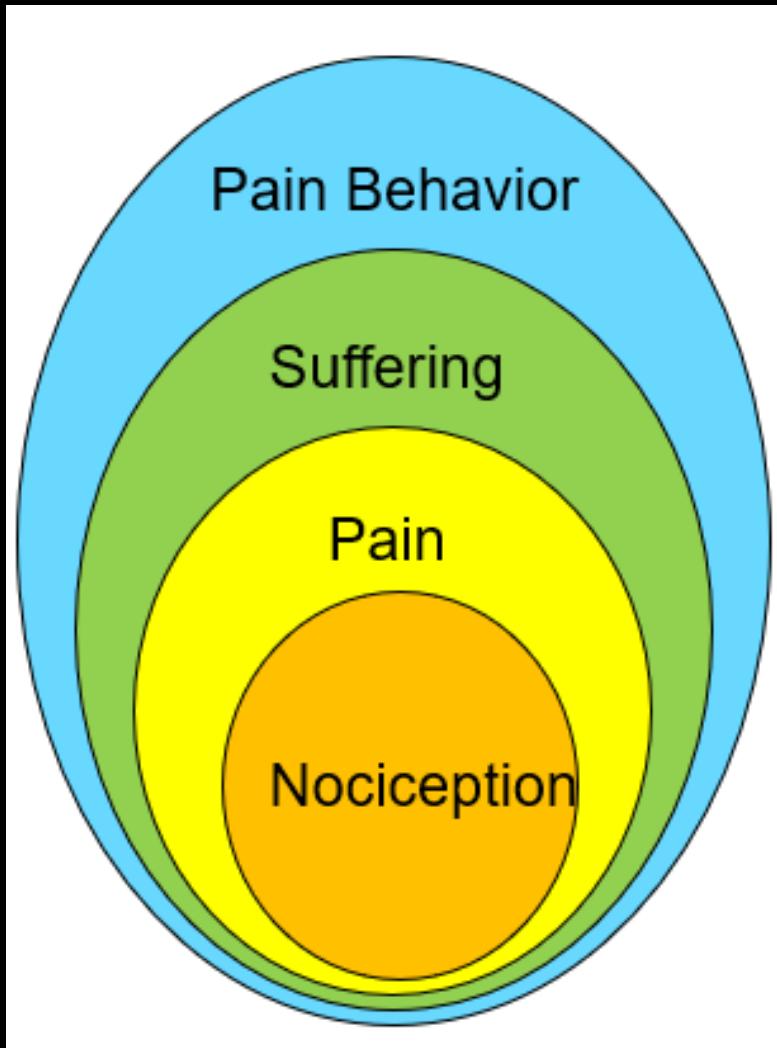


Wei F, Zhuo M. J Physiol, 2001

pain in action



pain in action



Pain chronification



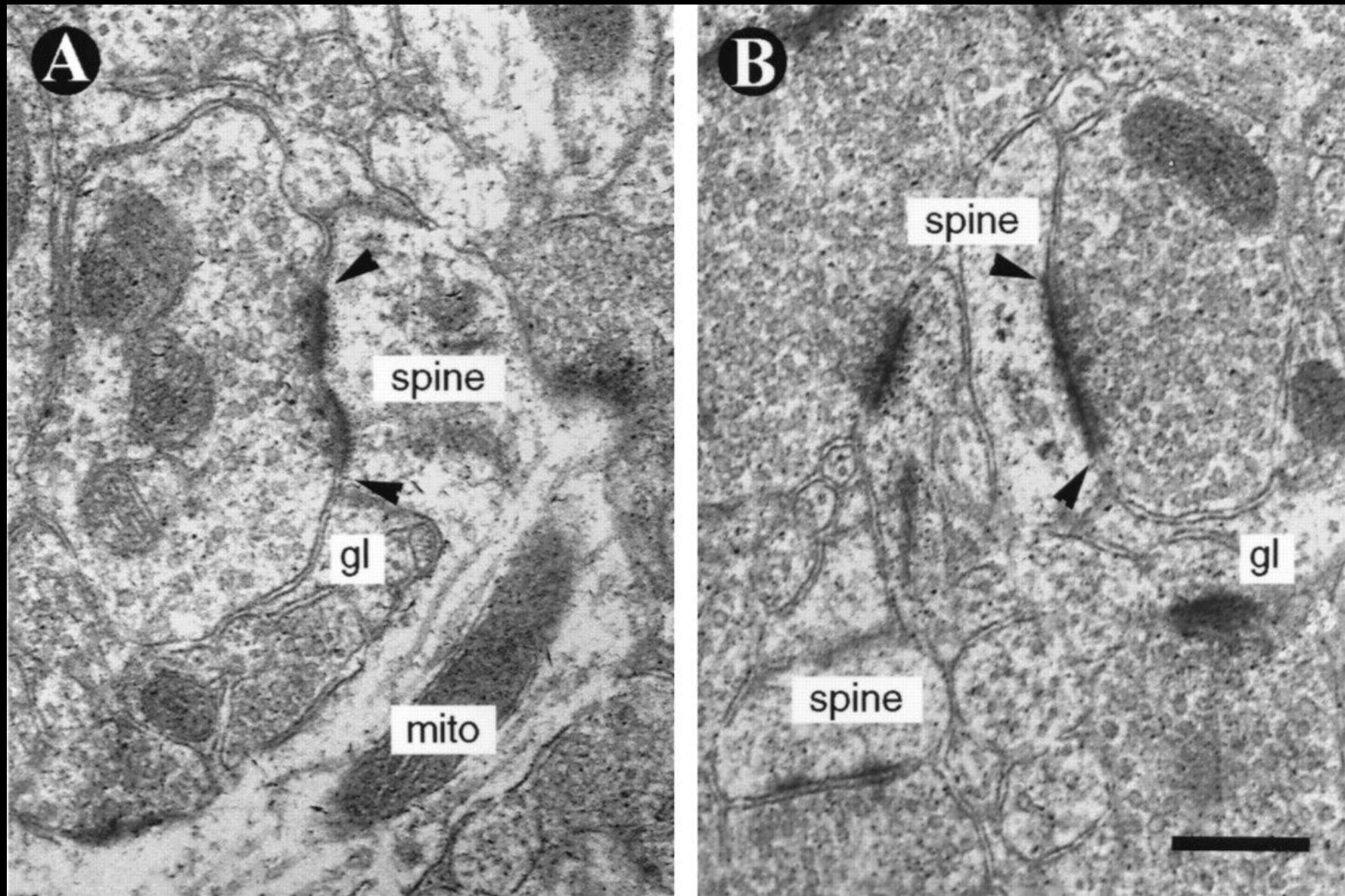
Wei F, Zhuo M. J Physiol, 2001

Pain chronification

keywords:

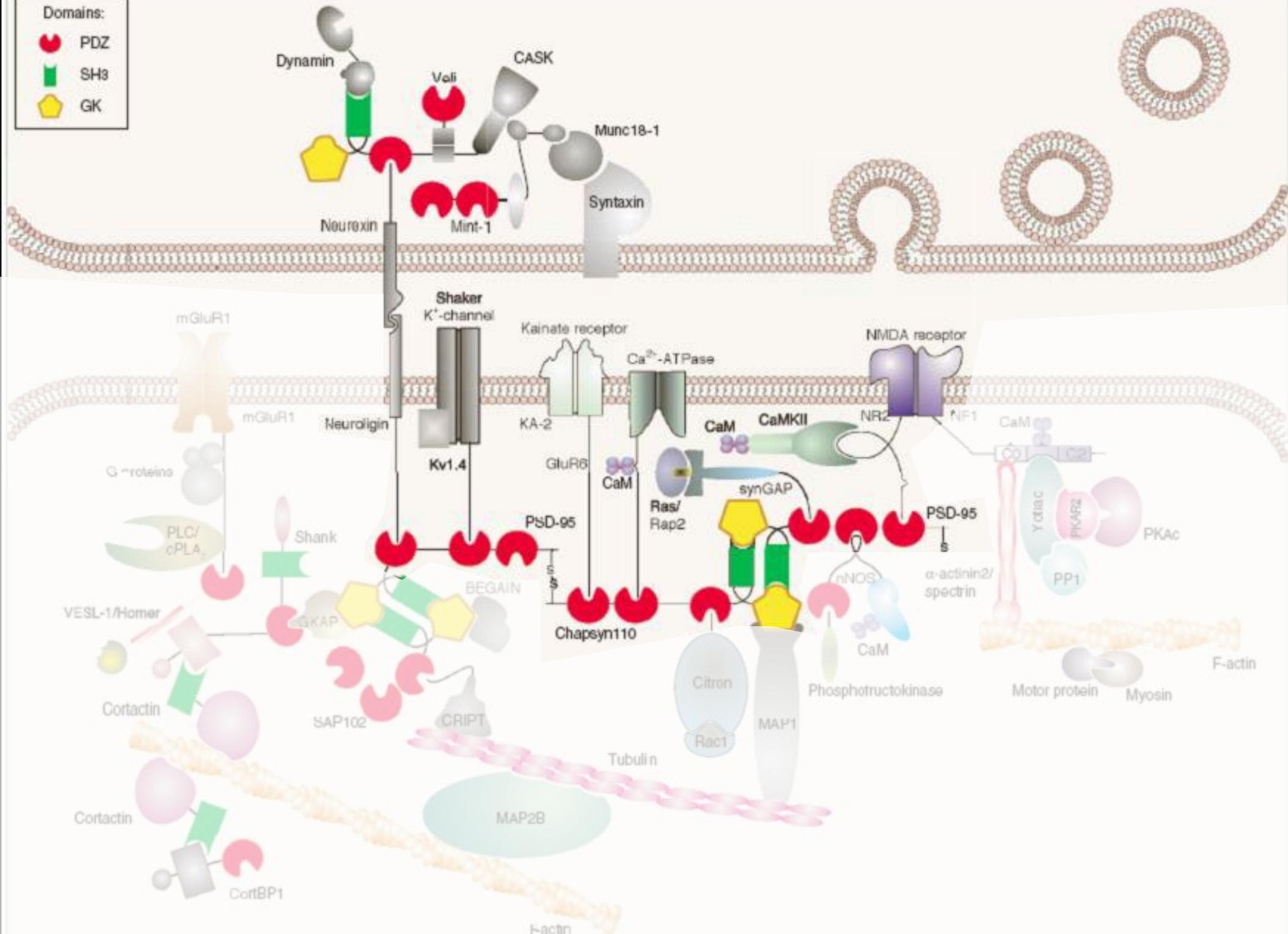
- NMDA-receptor
- Long Term Potentiation (LTP)
- Neuro-inflammatory activation
- Central sensitisation
- Sickness behaviour

Pain chronification

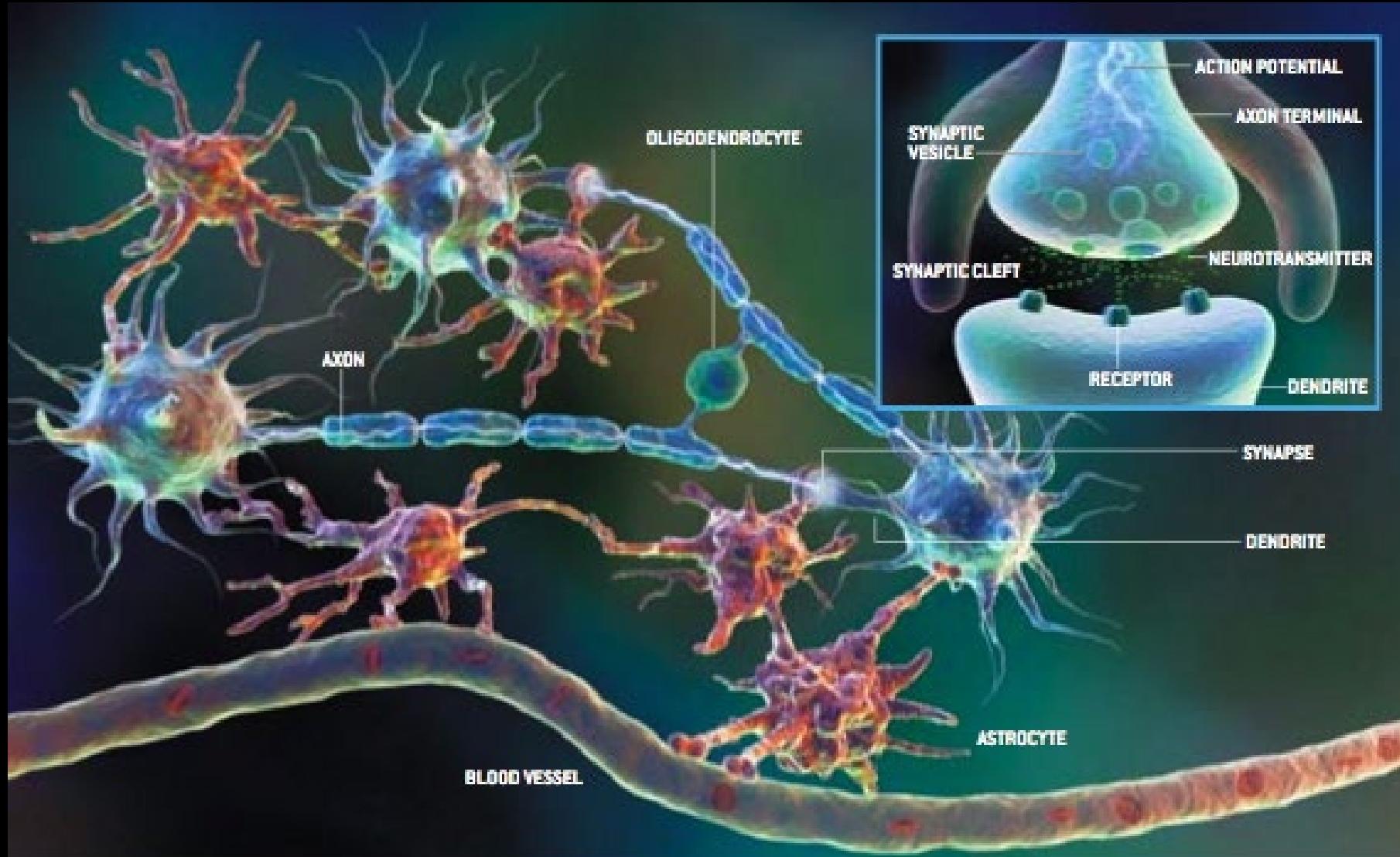


Domains:

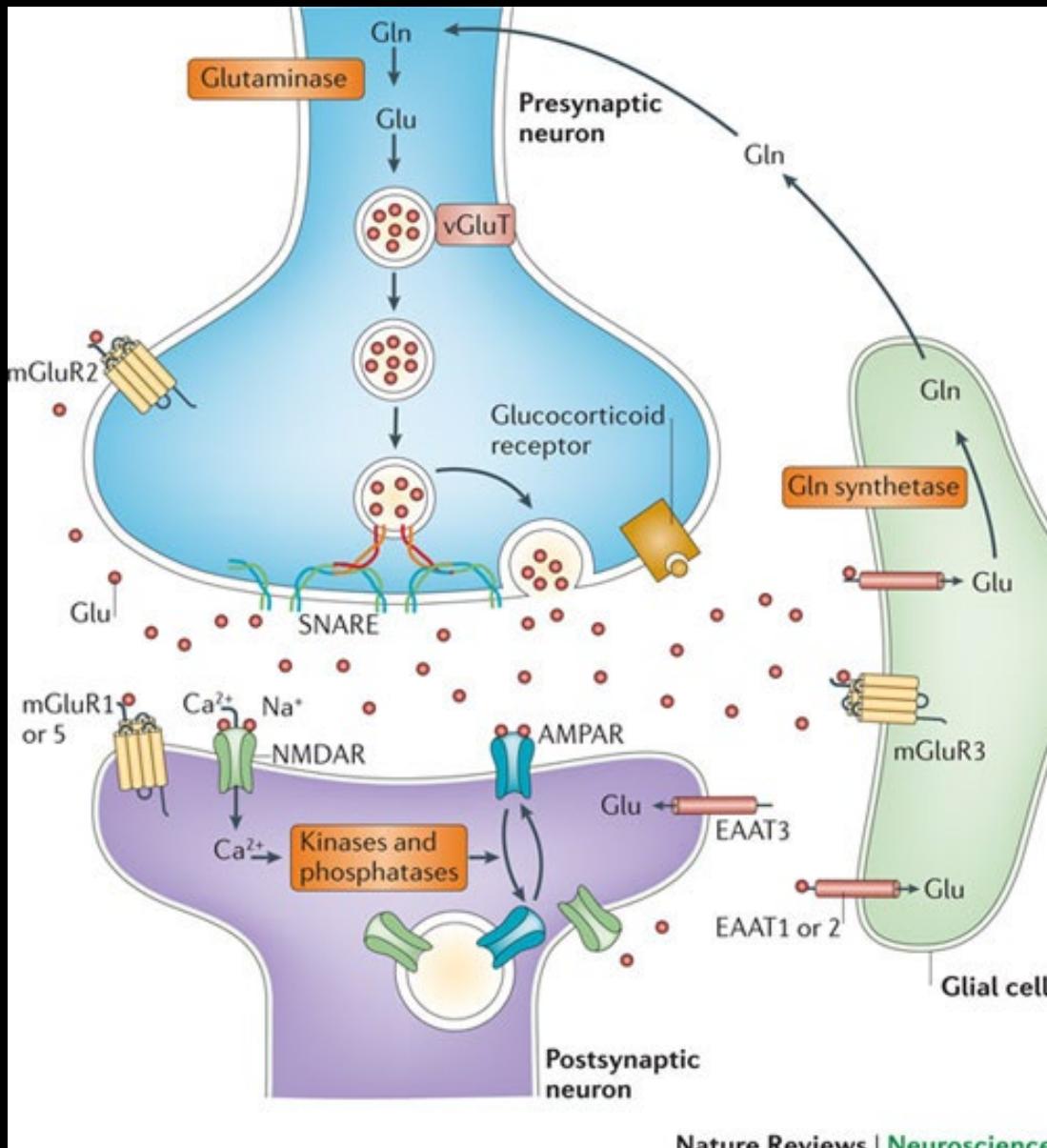
- PDZ
- SH3
- ◆ GK



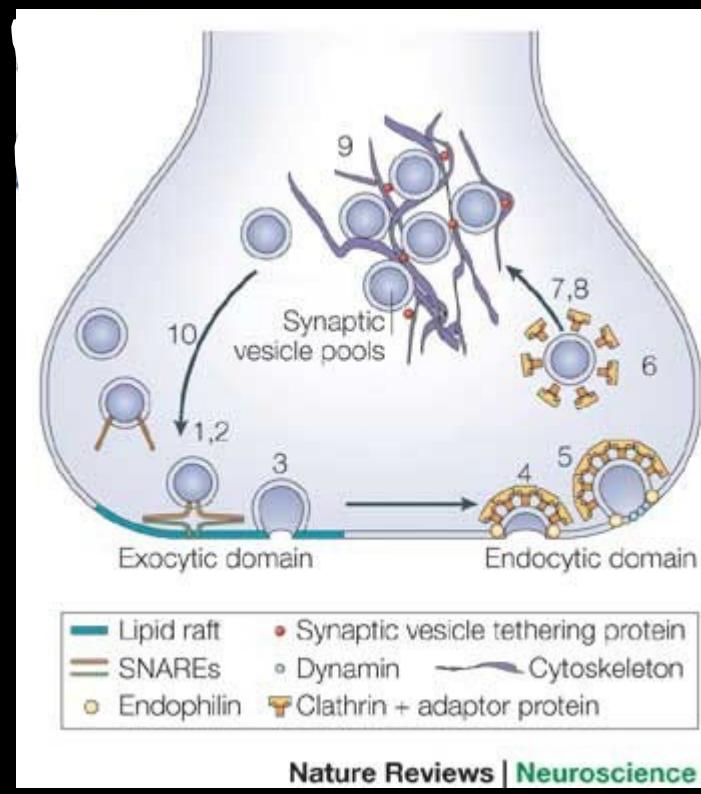
Pain chronification



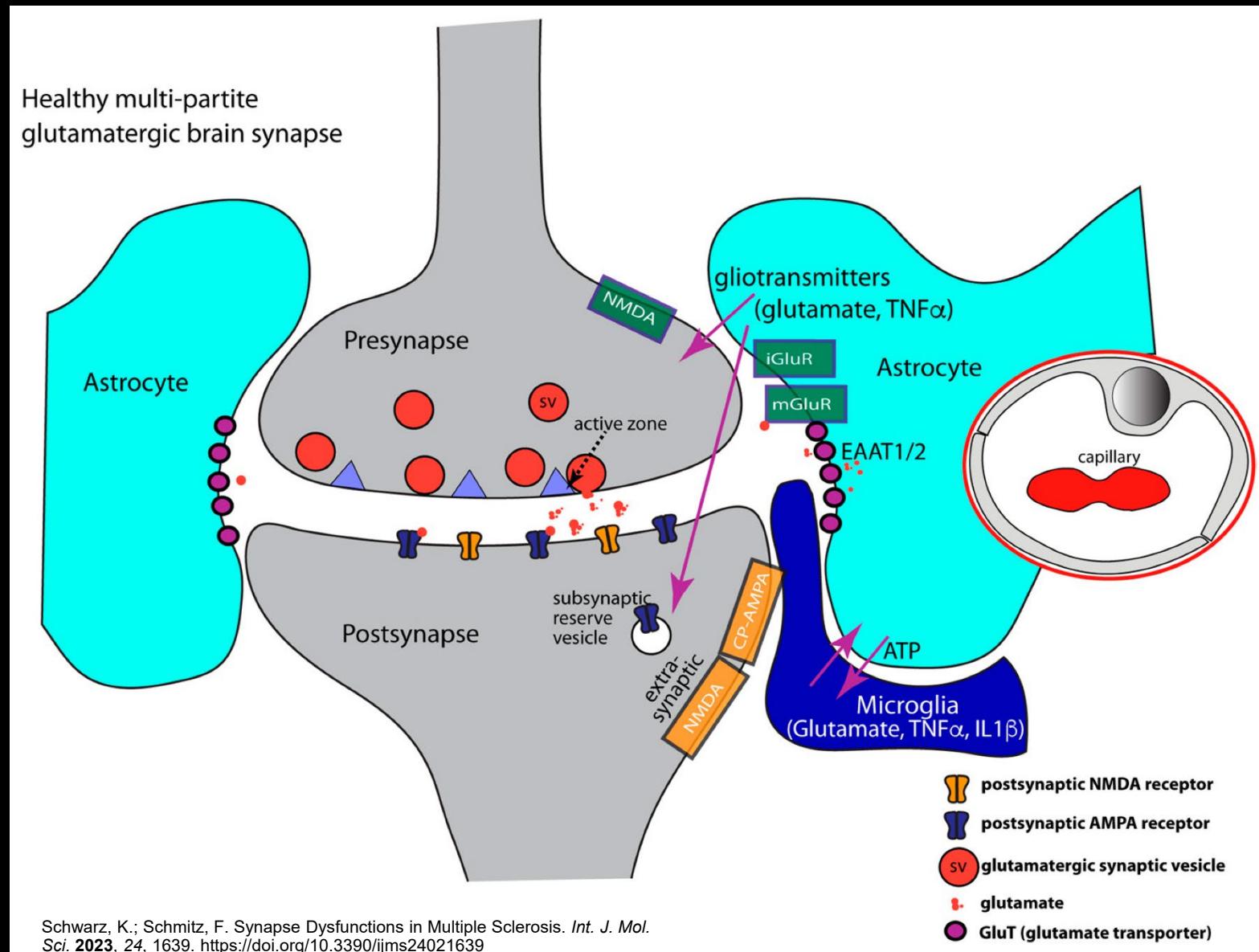
Pain chronification



Pain chronification



Pain chronification



Pain chronification

- Central sensitisation:
 - Restructuring of synapses
 - learning:
 - memory
 - anticipation

fatigue

- Sickness behaviour:
 - Fatigue
 - Social withdrawal
 - Inhibited motor activity
 - Inhibited reward system
 - Anorexia

fatigue

- Lack of energy
- Disturbed sleep
 - IL-1 β → nREM ↓

Diagnosing pain

pain-history:

- pain-nature
- pain-luxerative factors
- pain-time factors
- pain-related factors

diagnosing pain

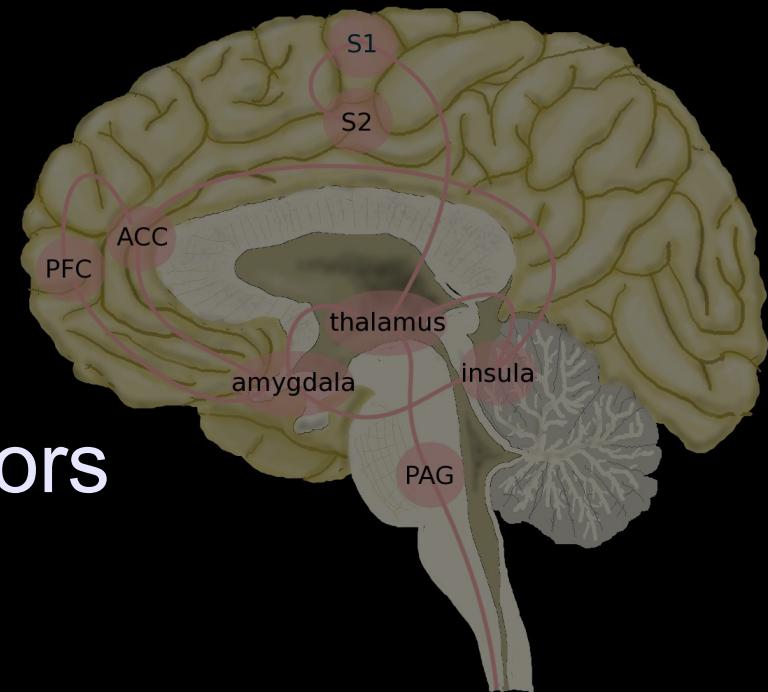
pain-physical examination:

- inspection
- palpate
- neurological examination

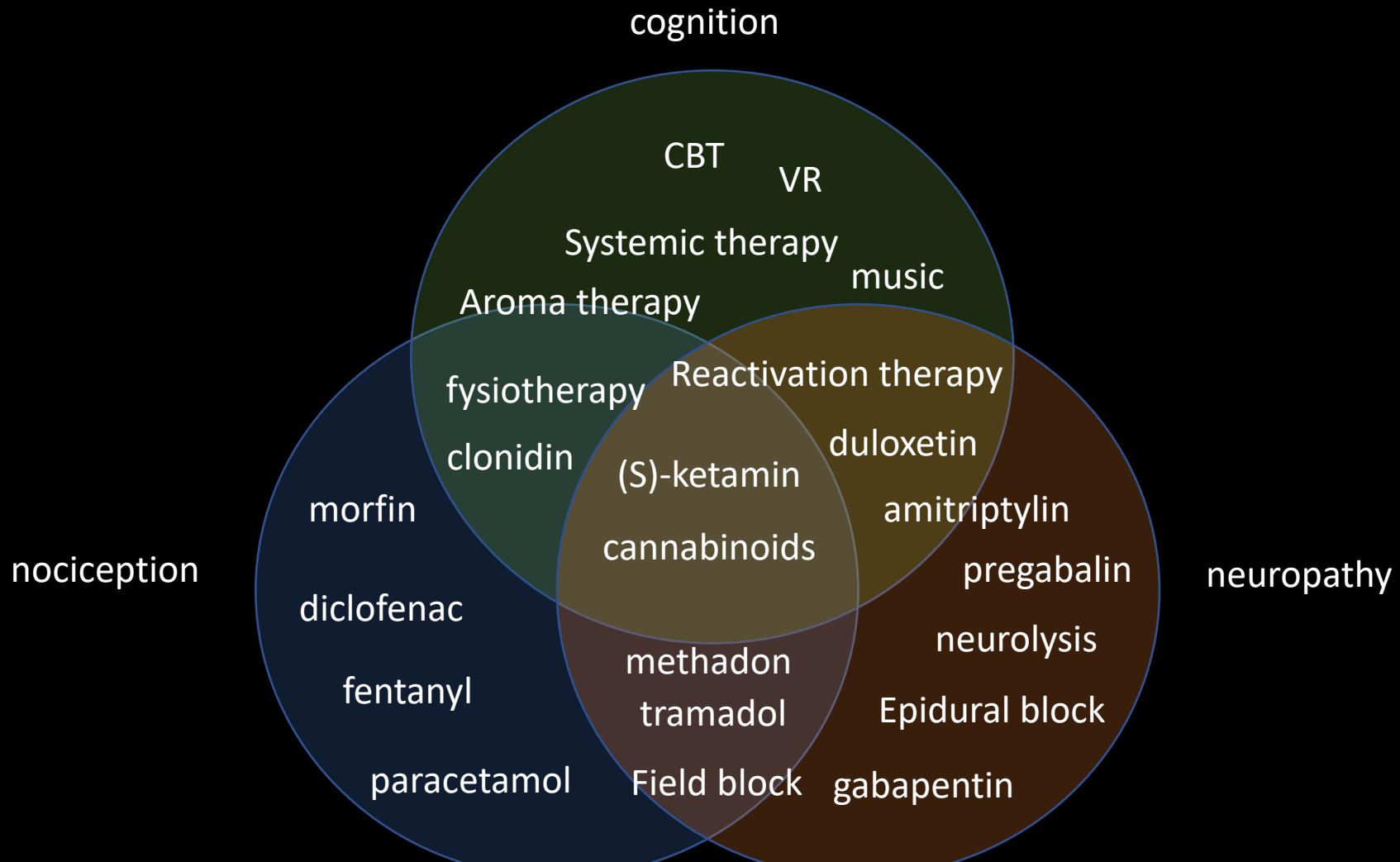
diagnosing pain

integration with system

- fear/vigilance
- cognition
- Parent-child system
- contributing somatic factors



treatment



Thank you

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