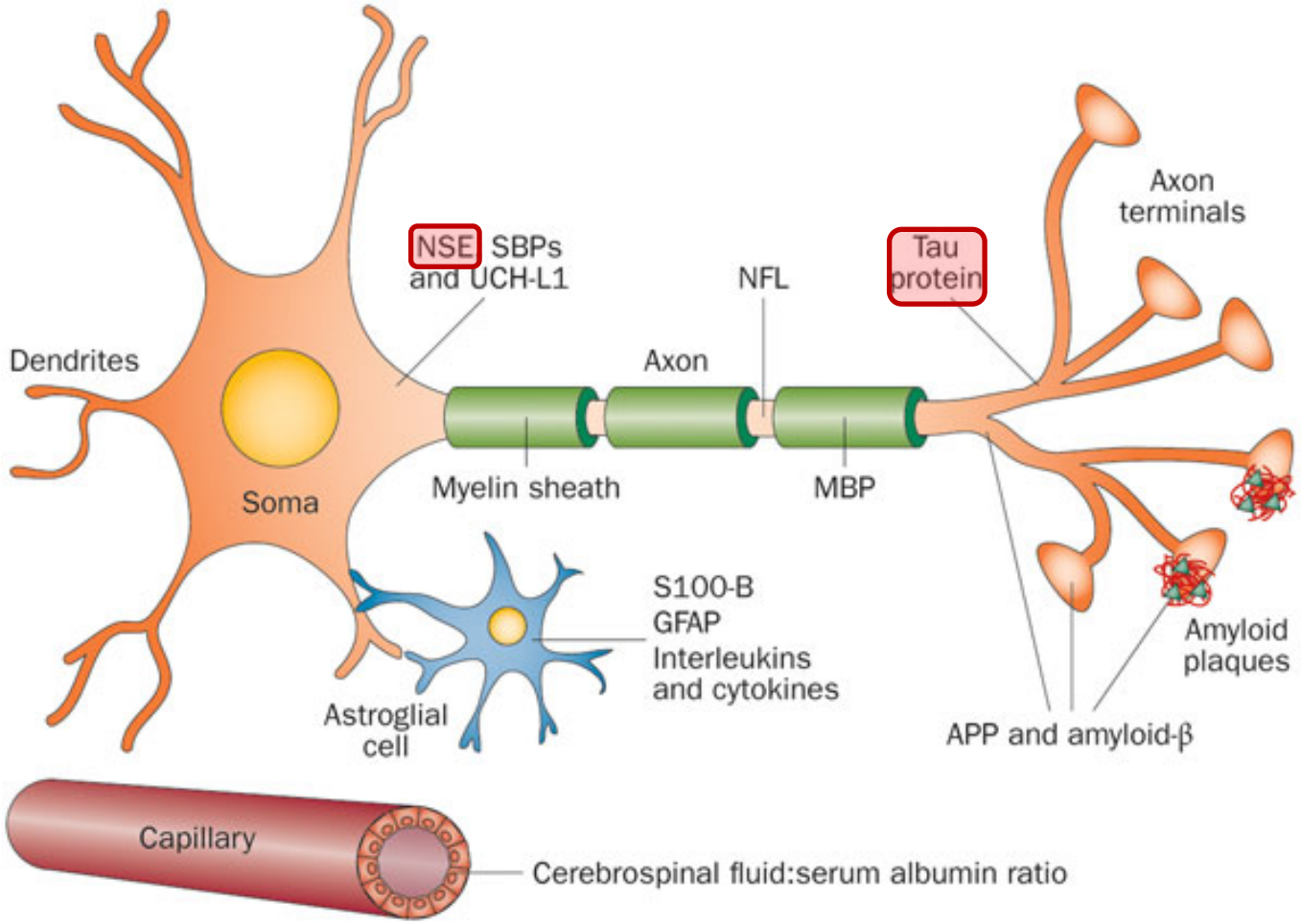
Prognostication methods
Biomarkers

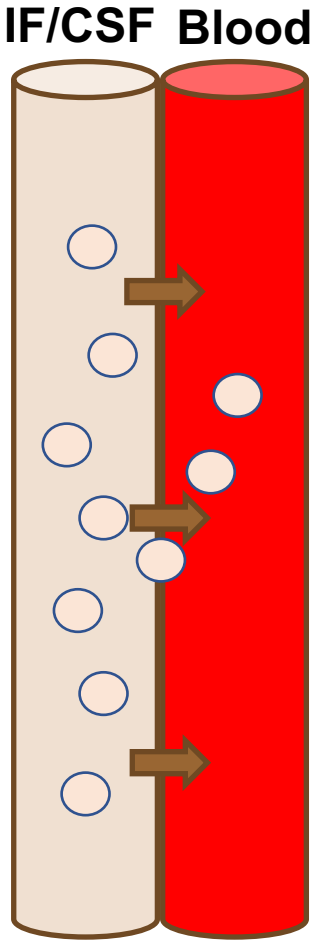
Professor Hans Friberg MD, PhD, EDIC
Assoc professor Niklas Mattsson MD, PhD
Center for Resuscitation Science
Skåne University Hospital
Lund University, Sweden

Blood-based biochemical markers of brain injury

NSE
Tau

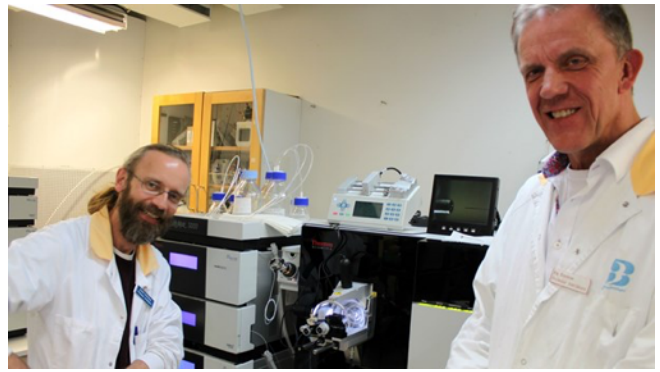
S100B
GFAP
NFL





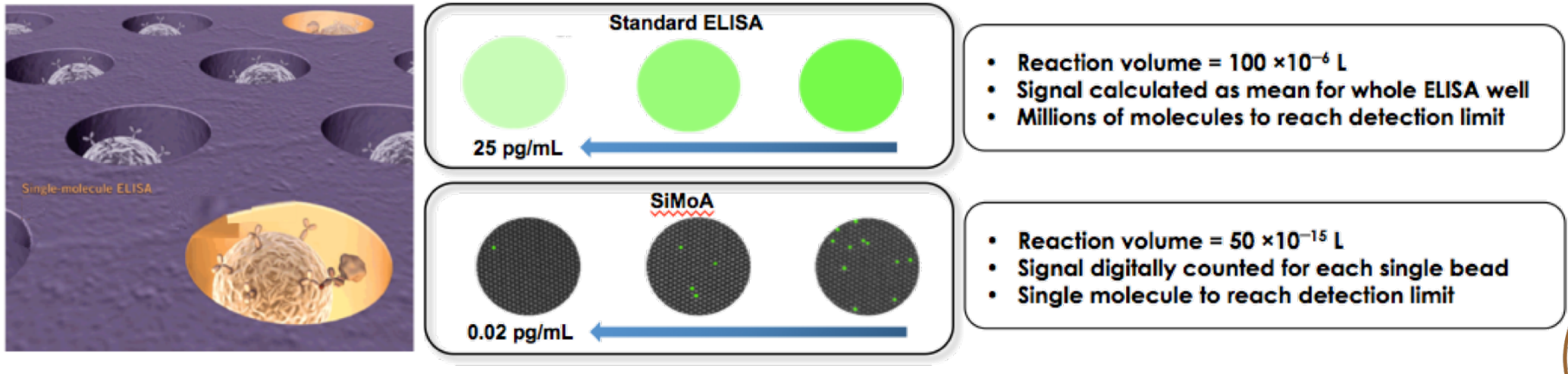
- **Biomarkers of neuronal/brain components may be measured in CSF**
- **Some may be quantified in blood as well**

Simoa: a new technology for serum tau

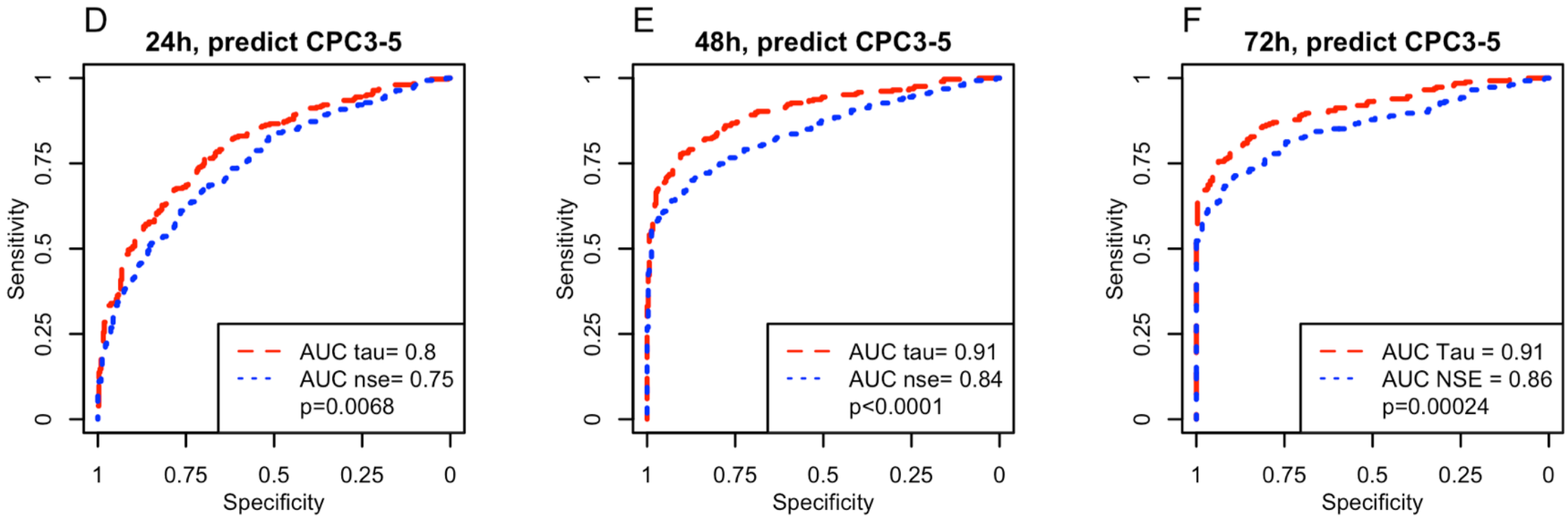


Collaboration with Profs. Henrik Zetterberg & Kaj Blennow University of Gothenburg

Figure 1. Ultra-sensitive single-molecule assay (SiMoA) technique



Serum tau and NSE for prognostication



- **Serum tau has significantly higher accuracy for poor prognosis than NSE**
- **The difference is AUC 0.05-0.06 at all time points**

Mattsson N et al, under review

Conclusions

- Serum NSE and tau are strongly elevated in patients with poor outcome after CA
- Both biomarkers perform best at 48-72 h after CA
- Tau *may be* a better biomarker than NSE
- Cutoffs can be identified combining low FPR with high sensitivity for both biomarkers – clinically useful!
- Biomarkers are useful complements to other prognostication methods

Thank you!

hans.a.friberg@gmail.com