



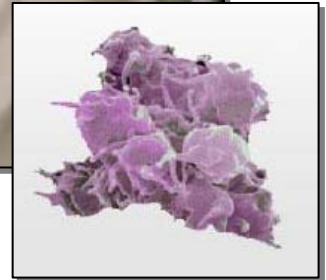
Adlyfe

...innovation is in our blood...

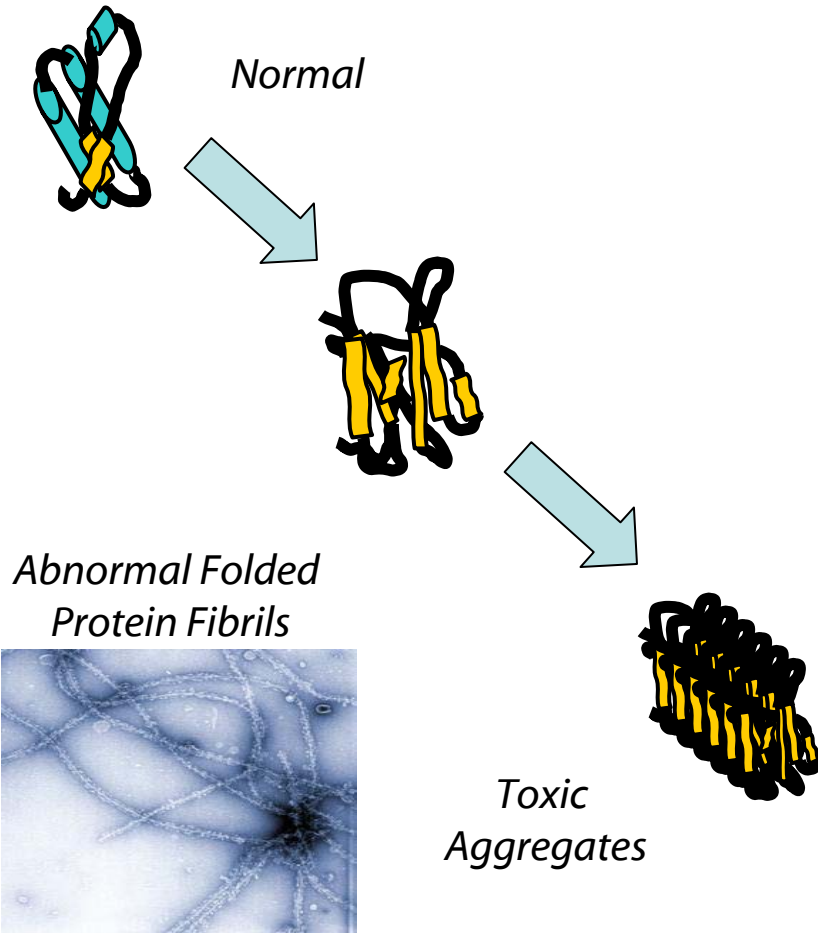


...innovation is in our blood...

- Founded in Summer 2003, located in Rockville, MD.
- We have 12 employees, 6000 sq ft blood lab
- Revolutionary diagnostic and therapeutic blood products for improved **safety**, **testing** and **availability** of blood
- Near term opportunity in protein misfolding technology and products

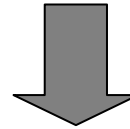


Earlier Detection & Treatment of Neurodegenerative Wastings Diseases

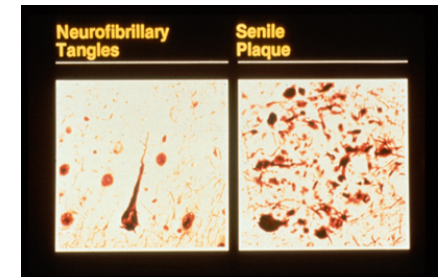
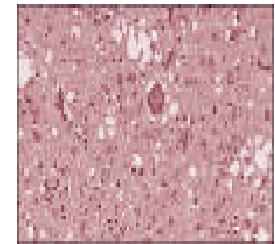


Problem:

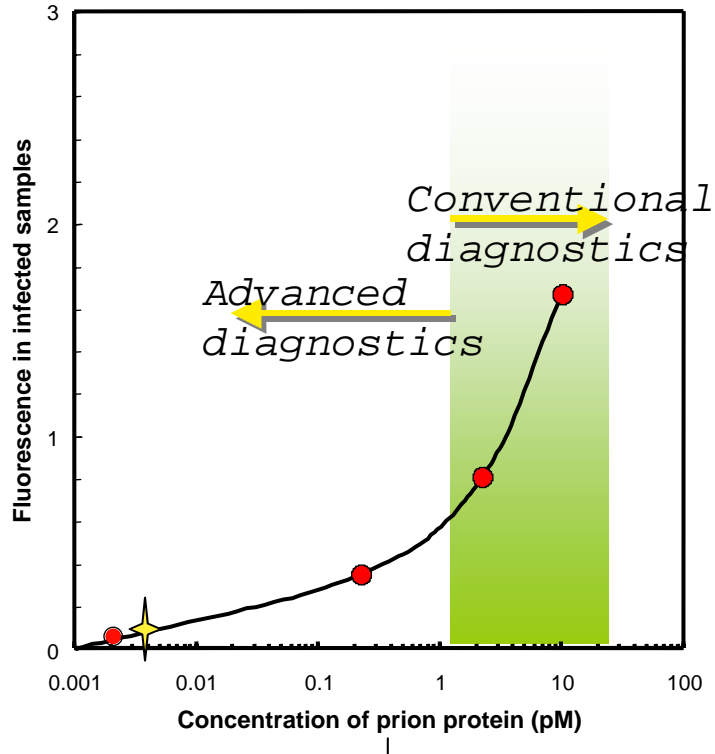
Proteins misfold, aggregate and form fibrils and plaques



These deposit in brain tissue and are correlated to dementia, loss of brain functions and death



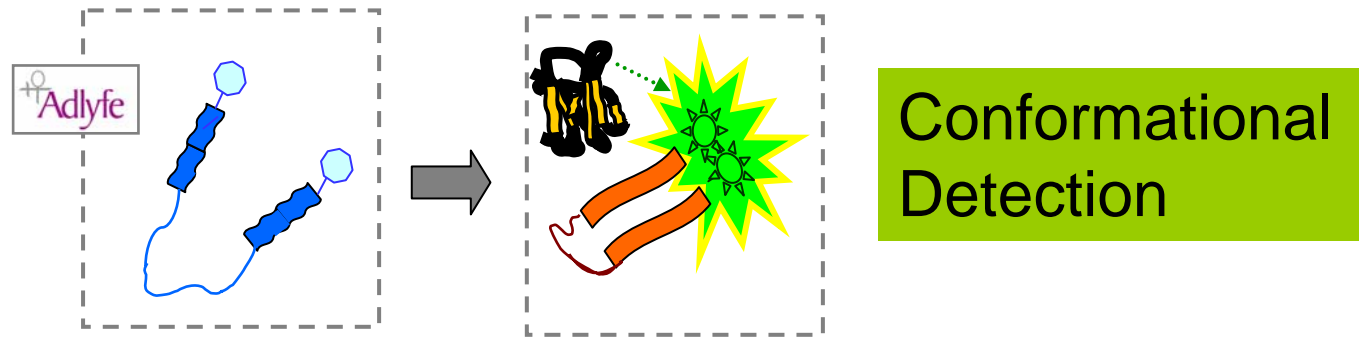
Conventional Diagnostics Currently Don't Meet Requirements



e.g. : 1 IU = 3 fM = 200,000 PrP

- Predicted levels of target proteins are too low early in the timecourse of disease for current tests
- Poor characterization of Protein 'state' in early stage disease
- Adlyfe technology measures protein misfolding events in pre-clinical and presymptomatic stage

A New Paradigm in Early Detection of TSE Diseases



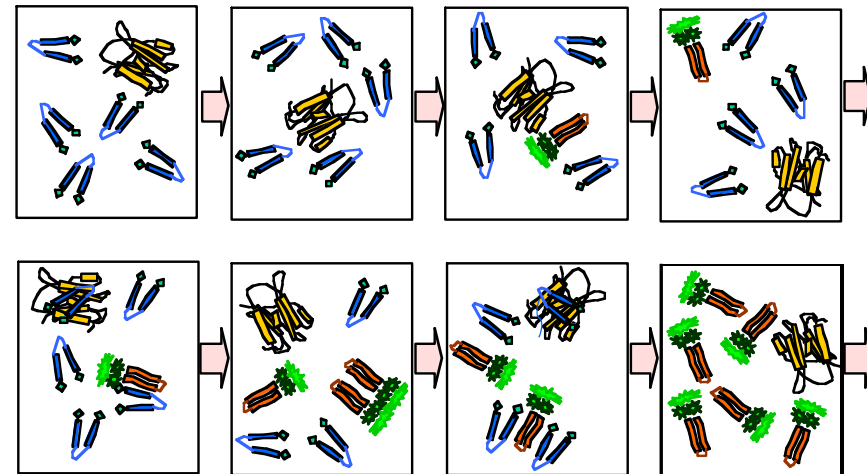
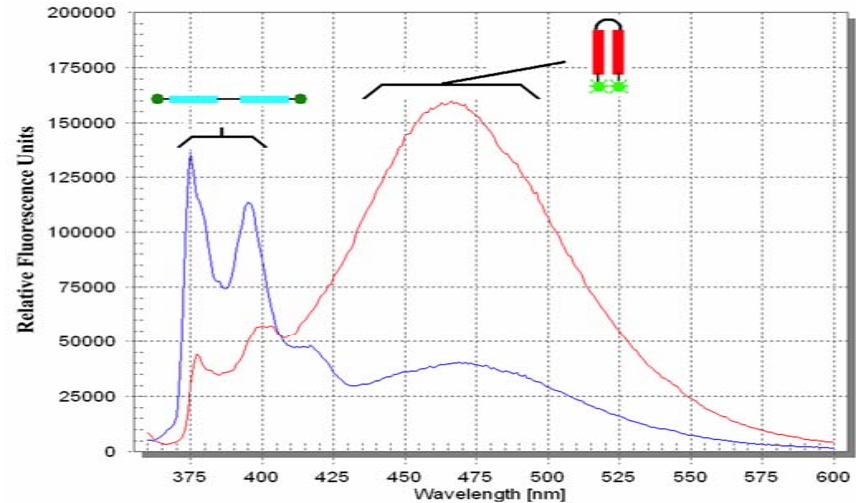
Adlyfe's proprietary reagents:

- Are sequence matched peptides that mirror conformational regions that fold on target protein
- Mimic protein folding events and transduce and amplify a fluorescent signal to report aggregates in the blood before disease progresses

Unparalleled Sensitivity through Novel Amplification

- Adlyfe ligands associate with PrP^{Sc} and transduce signal
- Ligands seed nucleation reaction throughout the peptide ensemble and amplify (propagate) signal

• Thermodynamic studies published:
Tcherkasskaya *et al* (2003) J.
Biomolecular Structure and Dynamics
21:353-365.



MPD Assay versus Gold Standards

- MPD Assay

- No Proteinase K treatment
- Relative to healthy
- Ante- or post-mortem
- Rapid / inexpensive
- 2 hrs to answer

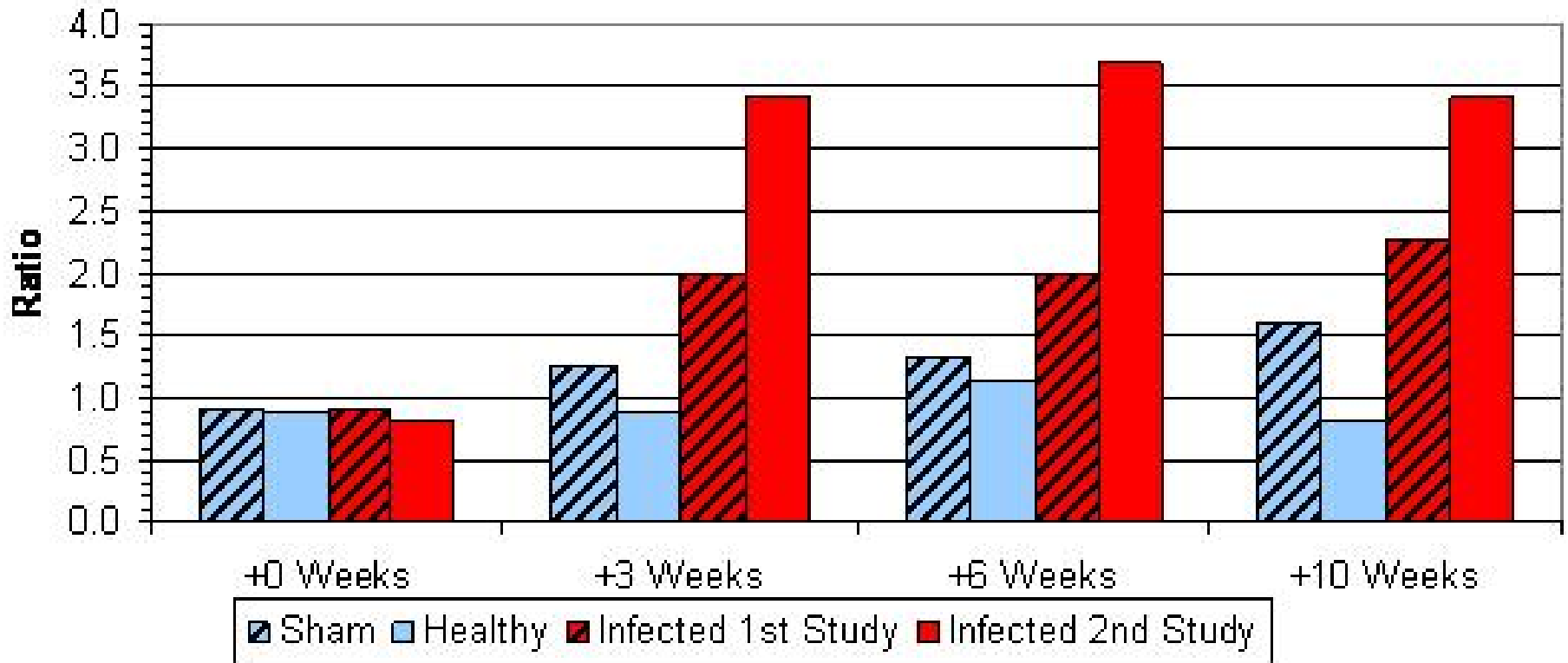
- Gold Standard ELISA and WESTERN

- Requires Proteinase K*
- Post-mortem assay
- 6 to 8 hrs (ELISA)
- 8 hrs+ (WESTERN)

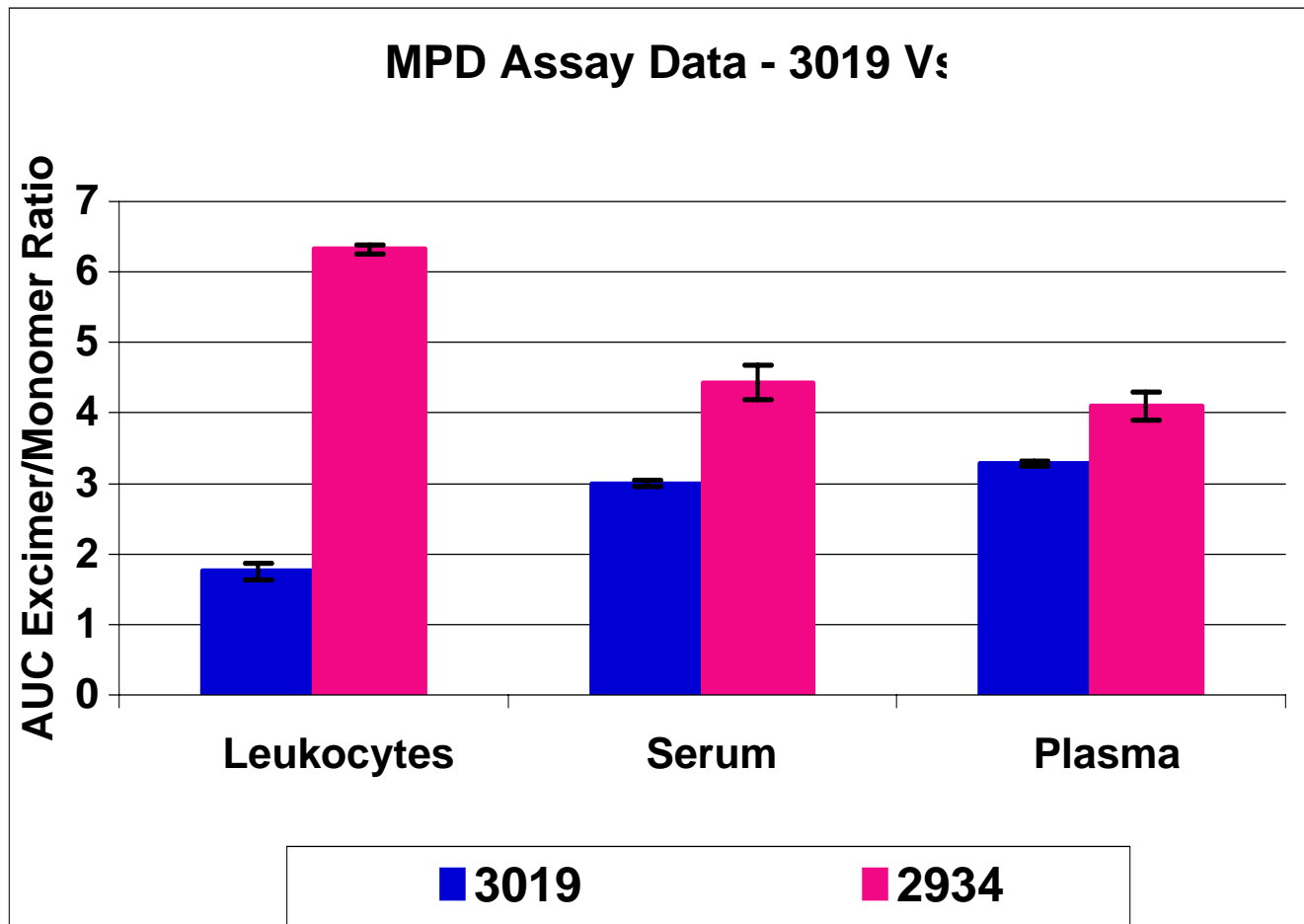
*-*The requirement for proteinase K treatment will underestimate the amount of infectious material*

Pre-symptomatic Detection in Hamster Scrapie Model (strain 263K)

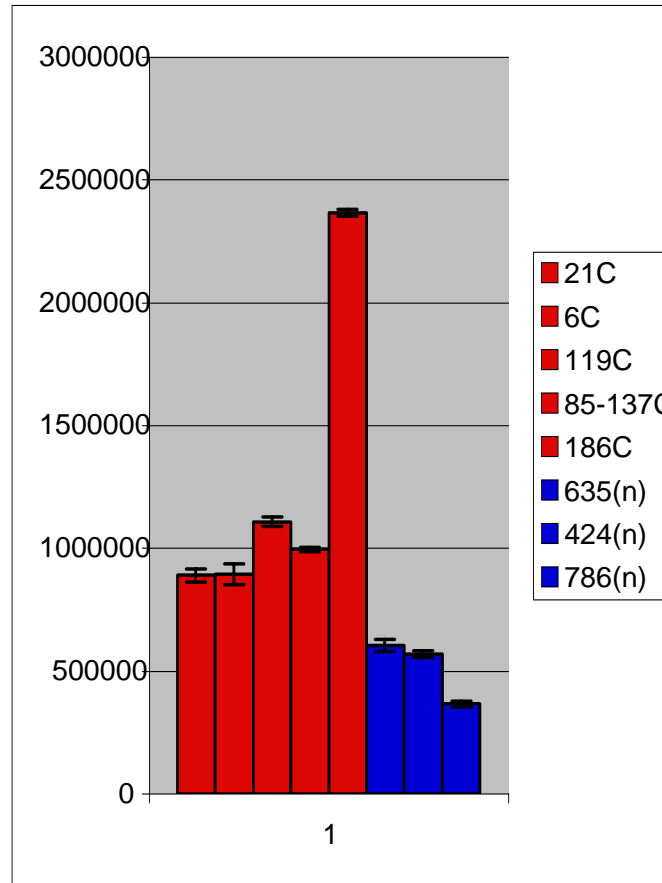
MPD Assay on Hamster Brain Homogenates



Detection in Sheep



Discrimination of sCJD in Human Plasma



Compiled MPD Assay Results:

Endemic Disease

	<u>Diseased Sensitivity</u>	<u>Healthy Specificity</u>
Sheep		
plasma	13/13	36/36
serum	39/39	9/9
Total	52/52	45/45
	100%	100%
Bovine		
plasma	20/20	19/20
	100%	95%
Human		
plasma	5/5	3/3
	100%	100%

Experimental Infection

	<u>Diseased Sensitivity</u>	<u>Healthy Specificity</u>
Hamster		
plasma	43/43	23/23
brain	88/88	50/50
Total	88/88	50/50
	100%	100%
Monkey	Coded samples	
plasma	8/8	4/4
	100%	100%
Mouse		
plasma	5/5	
brain	1/1	1/1
	100%	100%

TSE Test Kit

- Multi-well polypropylene plate
 - target peptide
 - Reaction buffer
 - Extraction buffer
- Sequence specific ligands would create blood screen and diagnostic kits for BSE, vCJD and other neurodegenerative protein misfolding diseases
- Current focus on blood sample preparation for high throughput screening applications

