



# **HARNESSING THE POWER OF THE INNATE IMMUNE SYSTEM**

**Two Therapeutic Platforms: XPro™ and INKmune™**

**Single Goal: Repair Innate Immune Dysfunction to Treat Disease**



# FORWARD LOOKING STATEMENTS

This presentation contains “forward-looking statements” Forward-looking statements reflect our current view about future events. When used in this presentation, the words “anticipate,” “believe,” “estimate,” “expect,” “future,” “intend,” “plan,” or the negative of these terms and similar expressions, as they relate to us or our management, identify forward-looking statements. Such statements, include, but are not limited to, statements contained in this presentation relating to our business strategy, our future operating results and liquidity and capital resources outlook. Forward-looking statements are based on our current expectations and assumptions regarding our business, the economy and other future conditions. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict. Our actual results may differ materially from those contemplated by the forward-looking statements. They are neither statements of historical fact nor guarantees of assurance of future performance. We caution you therefore against relying on any of these forward-looking statements. Important factors that could cause actual results to differ materially from those in the forward-looking statements include, without limitation, our ability to raise capital to fund continuing operations; our ability to protect our intellectual property rights; the impact of any infringement actions or other litigation brought against us; competition from other providers and products; our ability to develop and commercialize products and services; changes in government regulation; our ability to complete capital raising transactions; and other factors relating to our industry, our operations and results of operations. There is no guarantee that any specific outcome will be achieved. Investment results are speculative and there is a risk of loss, potentially all loss of investments. Actual results may differ significantly from those anticipated, believed, estimated, expected, intended or planned. Factors or events that could cause our actual results to differ may emerge from time to time, and it is not possible for us to predict all of them. We cannot guarantee future results, levels of activity, performance or achievements. Except as required by applicable law, including the securities laws of the United States, we do not intend to update any of the forward-looking statements to conform these statements to actual results. INB03™, XPro1595, and INKmun™ are still in clinical trials or preparing to start clinical trials and have not been approved by the US Food and Drug Administration (FDA) or any regulatory body and there cannot be any assurance that they will be approved by the FDA or any regulatory body or that any specific results will be achieved. Forward-looking statements are subject to many risks, uncertainties and other factors that could cause our actual results, and the timing of certain events, to differ materially from any future results expressed or implied by these forward-looking statements, including, but not limited to, the risks, uncertainties, and other factors described in our filings with the U.S. Securities and Exchanges Commission, including our most recent reports on Form 10-K, 10-Q, and 8-K, and any amendments thereto.



# Large Insider Ownership and All Common Capital Structure

Targeting Innate Immune Dysfunction

## INMB Nasdaq

PRICE(3/13/24)      COMMON S/O

\$11.51      ~18 M

MARKET CAP      CASH/DEBT (9/30/23)

~\$200M      ~\$41M/\$12M

PRICE(5/9/23)      AVG. VOLUME

\$5.87-13.37      ~80,000

INSIDER OWNERSHIP

~24%

- **Material Clinical Data in 2024/2025**
  - Data from two biologic platforms in the clinic in 2024 and 2025
- **Cap structure**
  - Large insider ownership
  - All common stock, no warrants or preferred
- **Attractive sum of parts value**
  - XPro™ + INKmune™
  - Multiple clinical programs in P2 and P1
  - Alzheimer's market WW: > 55 million people
  - Prostate market WW: > 1.5m cases per year
  - Pipeline extends into many neurological conditions and many types of cancers



# Investment Snapshot



De-Risked, Phase 2 Asset with Substantial Clinical Safety & Efficacy Data



Leader in Neuroinflammation with next generation TNF inhibitor able to selectively neutralize soluble TNF



Neuroinflammation plays a key role in nearly all CNS disease. Large markets with significant unmet Medical Needs



Experienced Team with Track Record of Success Leading in Neurodegeneration and Inflammation



Significant Near and Long-Term Milestones



Two Product Platforms Driving a Pipeline with Multiple Shots on Development Goals

**Two Platforms Modulating the Innate Immune System to Fight Disease and Help the Body Heal Itself**



# DEVELOPMENT PIPELINE

## DN-TNF PLATFORM

DESEASE FIELD

PRE-CLINICAL

PHASE 1

PHASE II (POC)

PIVOTAL

EST.NEXT  
MILESTONE

**XPro™**

Early Alzheimer's  
Disease



Full enrollment mid-2024  
Topline Data 6m later

**XPro™**

Treatment Resistant  
Depression



P2 Start 2024

**pSar DN-TNF**

Ophthalmology  
Cancer  
Orphan indications

Future Development  
And/or Partnership

## NK PRIMING PLATFORM

**INKmune™**

metastatic Castrate  
Resistant Prostate  
Cancer



Open label  
data 2024

**INKmune™**

AML/MDS

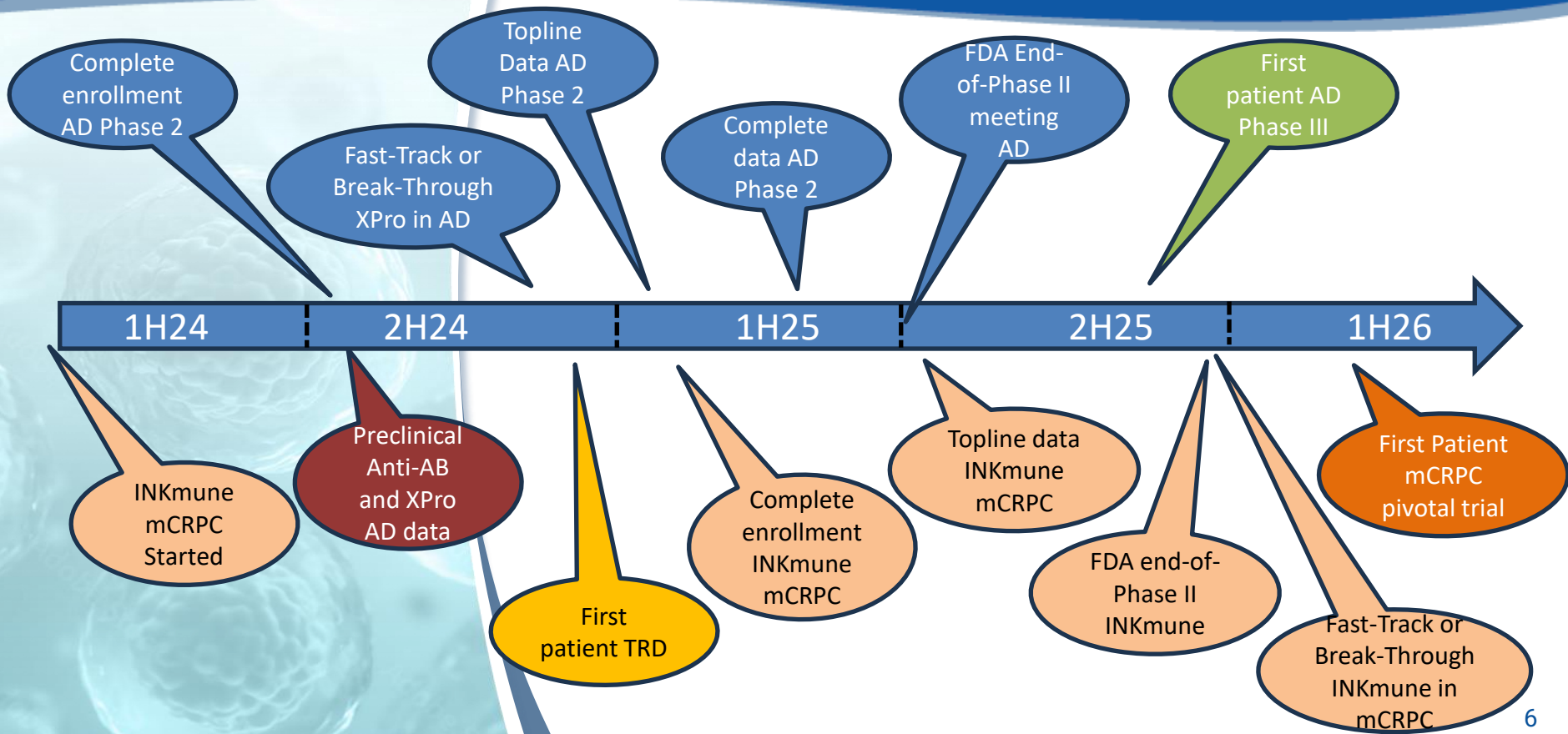



Open label  
data 2024



# Anticipated Milestones in 2024 and 2025

Open Label INKmunne mCRPC and AD Open Label Extension Data to be Reported Periodically





*The Match that lights the Fire...*

# **NEUROINFLAMMATION**

is a critical driver of the pathogenesis and progression of Alzheimer's disease





# Decades of data connects TNF and neuroinflammation with AD

## PubMed 2023: >1500 papers on neuroinflammation and AD

**“Current evidence suggests that neuroinflammation has a vital role in the pathogenesis and progression of Alzheimer’s disease.”**

— Leng F, Edison P. *Nature Reviews Neurology*. 2020

**“In Alzheimer’s disease, neuroinflammation, instead of being a mere bystander activated by emerging senile plaques and neurofibrillar tangles, contributes as much or more to the pathogenesis as do the plaques and tangles themselves.”**

— Heneka MT, et al. *Lancet Neurol*. 2015

Immune attack: the role of inflammation in Alzheimer disease

Frank L. Heppner<sup>1,2</sup>, Richard M. Ransohoff<sup>3</sup> and Burkhard Becher<sup>4</sup>

### Neuroinflammation in Alzheimer’s Disease

Michael T. Heneka, MD<sup>1,2</sup>, Monica J. Carson, PhD<sup>3</sup>, Joseph El Khoury, MD<sup>4</sup>, Gary E. Landreth, PhD<sup>5</sup>, Frederik Brosseron, PhD<sup>2</sup>, Douglas L. Feinstein, PhD<sup>6</sup>, Andreas H. Jacobs

Review

### Neuroinflammation in Alzheimer’s Disease

Isaac G. Onyango<sup>1,\*</sup>, Gretsén V. Jauregui<sup>1</sup>, Mária Čarná<sup>1</sup>, James P. Bennett Jr.<sup>2</sup> and Gorazd B. Stokin<sup>1,3,4</sup>

Systemic inflammation and disease progression in Alzheimer disease

C. Holmes, C. Cunningham, E. Zotova, J. Woolford, C. Dean, S. Kerr, D. Culliford, V.H. Perry

Inflammation as a central mechanism in Alzheimer’s disease

Jefferson W. Kinney<sup>a,\*</sup>, Shane M. Bemiller<sup>b</sup>, Andrew S. Murtishaw<sup>a</sup>, Amanda M. Leisgang<sup>a</sup>, Arnold M. Salazar<sup>a</sup>, Bruce T. Lamb<sup>b</sup>





# COMPLETE ENROLLMENT MID 2024-TOPLINE DATA 6 MONTHS LATER

## PHASE II BLINDED RANDOMIZED OF XPRO™ IN PATIENTS WITH EARLY ALZHEIMER'S DISEASE



**MINDFuL**  
A study of inflammation  
in Alzheimer's disease

### Key enrollment criterion

- Early AD (50-85 yrs) (N=201)
- Amyloid positive
- CDR (0.5 or 1)
- MMSE > 22
- One Inflammatory Biomarker:
  - hsCRP (1.5 mg/L)
  - ESR (10 mmg/hr)
  - HbA1c (6%)
  - APOE4+

### Baseline

- Cognition
- Function
- Blood
- MRI

### Week 6

- EMACC

### Week 12

- Cognition
- Function
- Blood
- MRI

### Week 18

- EMACC

### Week 24

- Cognition
- Function
- Blood
- MRI



### Primary Endpoint

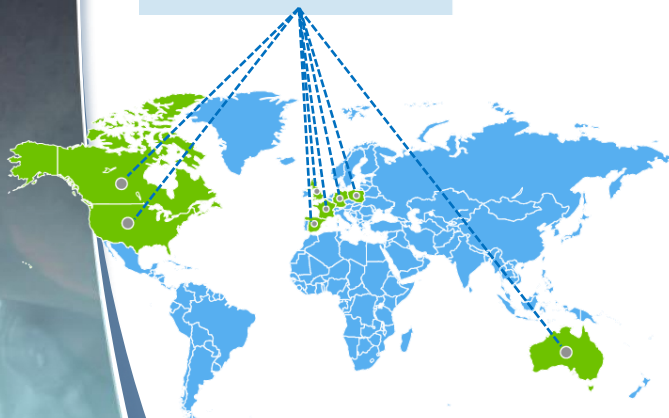
- EMACC

### Treatment

- 2:1 (XPro1595:Placebo)
- 1 mg/kg XPro1595 weekly subQ injection

### Secondary Endpoints

- CDR, ECog
- ADL, NPI
- Blood
- MRI
- Safety

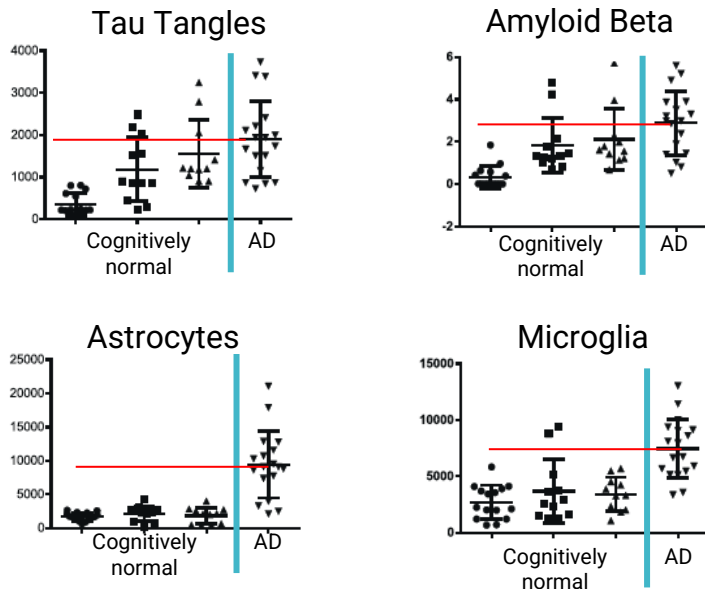


ImmuneBio  
**XPro**  
for AD



# Neuroinflammation and TNF Causes Alzheimer's Disease

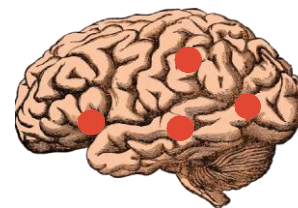
## Inflammation, not amyloid or tau, causes AD pathology



Amyloid and tau is present within the brains of AD patients AND cognitively normal people. Inflammation is increased in AD brains but **NOT** cognitively normal people.

Adapted from: PMID 30336198

TNF long associated with AD and predates deposition of amyloid



co-localized with plaques  
Dickson 1997

corelated with disease progression

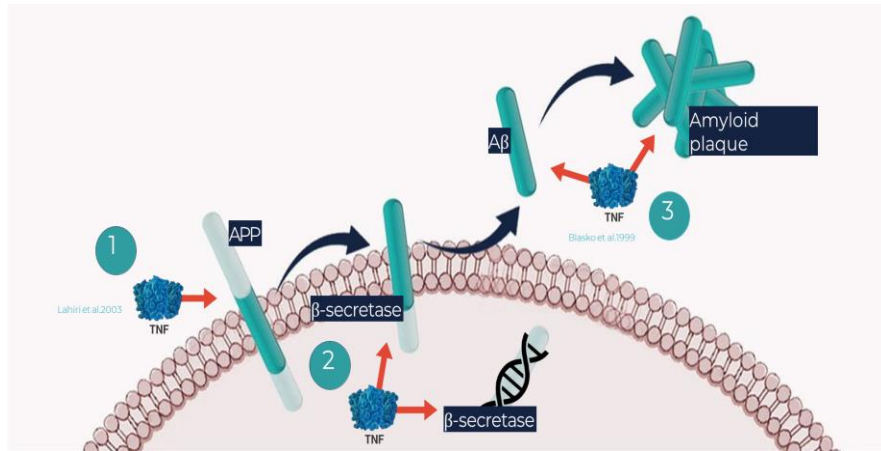


Paganelli 2002

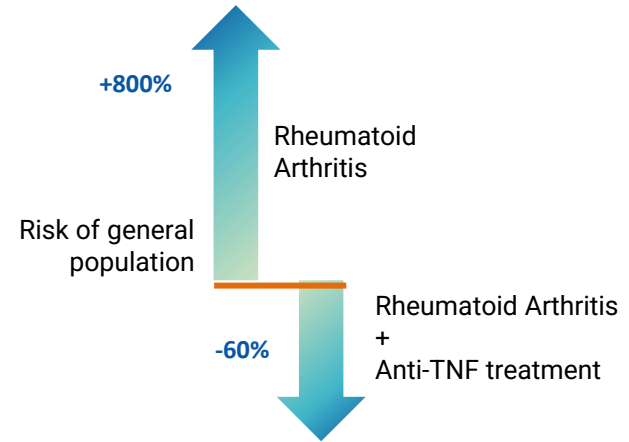


# TNF Drives Amyloid Pathology and Risk of AD

- Neuroinflammation predates formation of amyloid
- TNF drives formation of amyloid plaque
- Chronic treatment with TNF inhibitors prevents AD



## TNF inhibitors reduce risk of developing AD



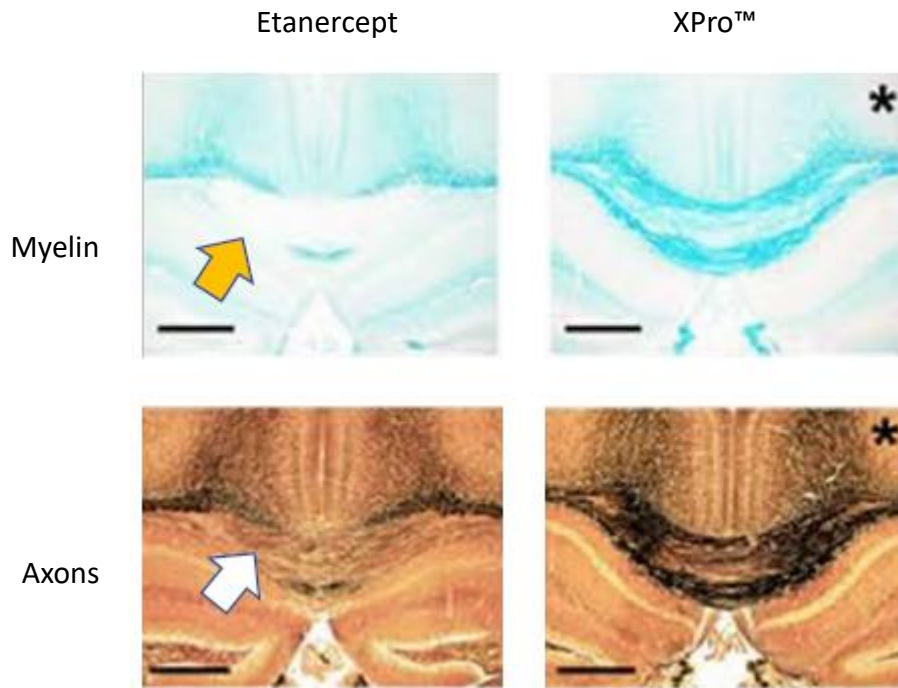
Epidemiological Studies including a meta-analysis of more than 60 Million cases Linking **TNF Blocking Agents** to Reduced Risk of AD

Adapted from PMID: 27470609, 33016914



# XPRO™ Safely Prevents Neuroinflammation without Axonal Degeneration and Demyelination

- Currently approved non-selective TNF inhibitors (eg: Etanercept) block both trans-membrane TNF and soluble TNF, leading to demyelination (yellow arrow) and axonal degeneration (white arrows).
- XPro™ selectively blocks soluble TNF, promoting remyelination and axonal regeneration.
- Currently approved non-selective TNF inhibitors have FDA warning against use in patients with neurologic disease.

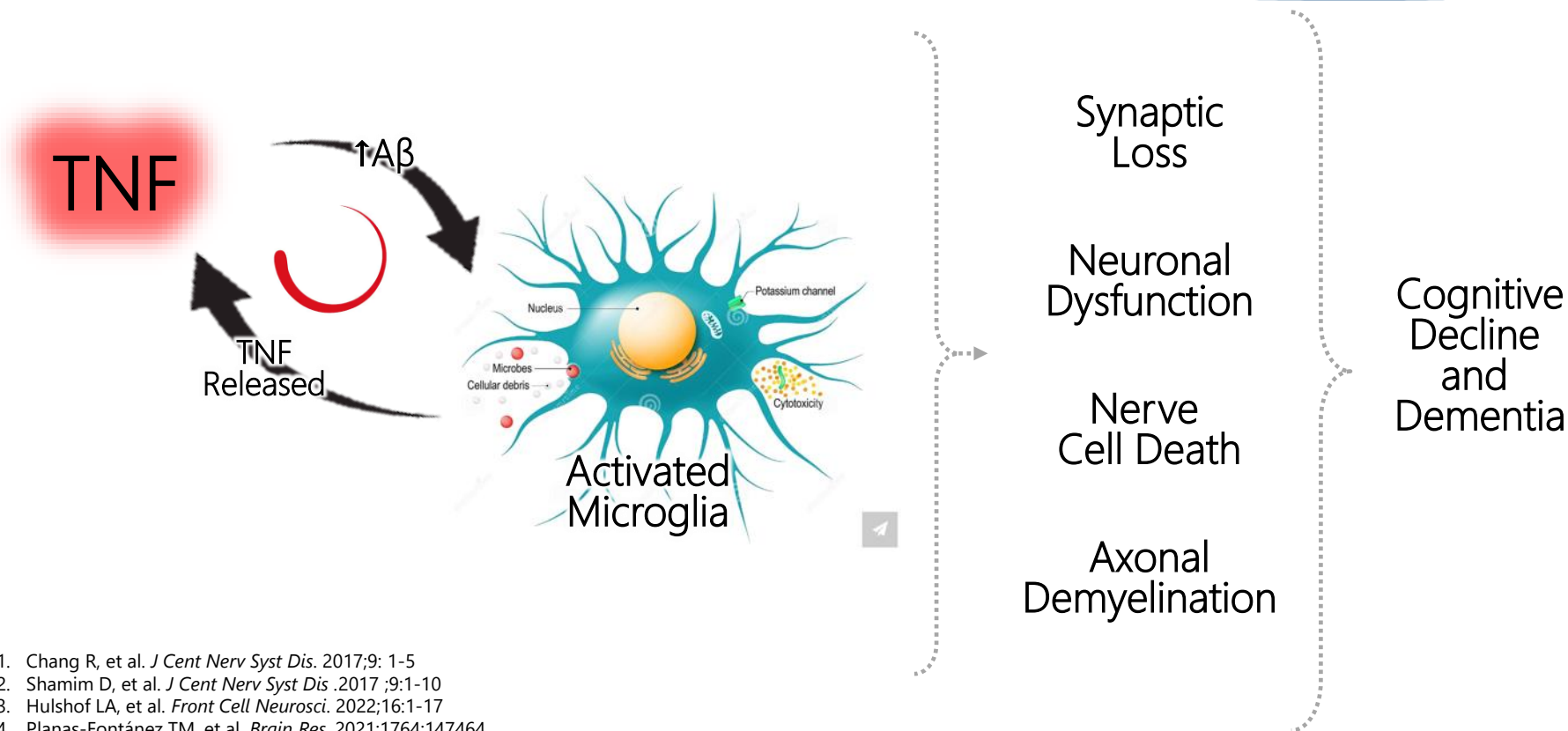


Karamita; Therapeutic inhibition of soluble brain TNF promotes remyelination by increasing myelin phagocytosis by microglia. <https://doi.org/10.1172/jci.insight.87455>



# TNF Plays a Central Role in Neuroinflammation and AD

Pub MED: >1500 papers published on Neuroinflammation and AD



1. Chang R, et al. *J Cent Nerv Syst Dis*. 2017;9: 1-5
2. Shamim D, et al. *J Cent Nerv Syst Dis*. 2017 ;9:1-10
3. Hulshof LA, et al. *Front Cell Neurosci*. 2022;16:1-17
4. Planas-Fontáñez TM, et al. *Brain Res*. 2021;1764:147464
5. Marzan DE, et al. *Glia*. 202;69(6):1583–1604



# PHASE 1B CLINICAL TRIAL DESIGN AND RESULTS

N=18 : 6 Patients per Cohort

## Goals

### Study Design

- Open label, three dose, 3-month study
  - 0.3 mg/kg
  - 0.6 mg/kg
  - 1.0 mg/kg
- XPro1595 administered via weekly Subcutaneous injections
- Biomarkers assessed at baseline and 3 months

### Key Enrollment criteria

- AD Diagnosis

*Plus at least one of the **following inflammatory biomarkers:***

- C-reactive Protein >1.5 mg/mL
- Erythrocyte sedimentation rate > 10 mm/Hr
- Hemoglobin A1c > 6% DSST
- One APOE4 allele

Safety

Reduce Biomarkers of Neuroinflammation

Reduce Biomarkers of Neurodegeneration

Dose Identification

Confirm enrichment criteria identify patients with Neuroinflammation



# Enrichment Criteria used to select patients with AD due to Neuroinflammation

Using simple biomarkers to match patient's disease with XPro's MOA

## ***Hypothesis:***

Patients with elevated biomarkers of peripheral inflammation have increased risk of AD and worsening disease due to neuroinflammation.

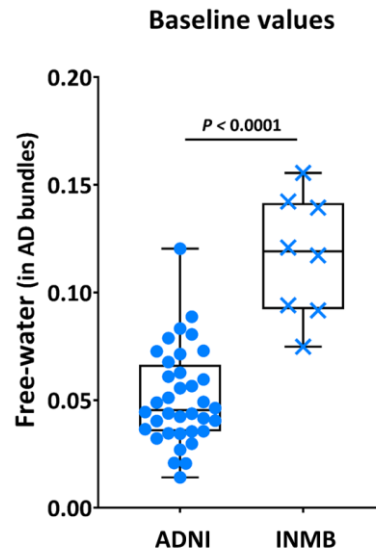
Enrichment Factor	Increased Risk of AD
ApoE4	3
ESR	1.84
CRP	1.34
HgbA1c	1.8

Doi.org/10.1007/s00125-005-0023-4, Jansen 2004

Doi.org/10.3389/fepid.2023.1095236, Cho 2021

## ***Validation:***

ADNI\* patients without enrichment had lower WMFW compared to our enriched Phase 1b patients



\*ADNI is a USC publicly available AD database  
<https://adni.loni.usc.edu/>





Phase 1b Results: TARGET ENGAGEMENT

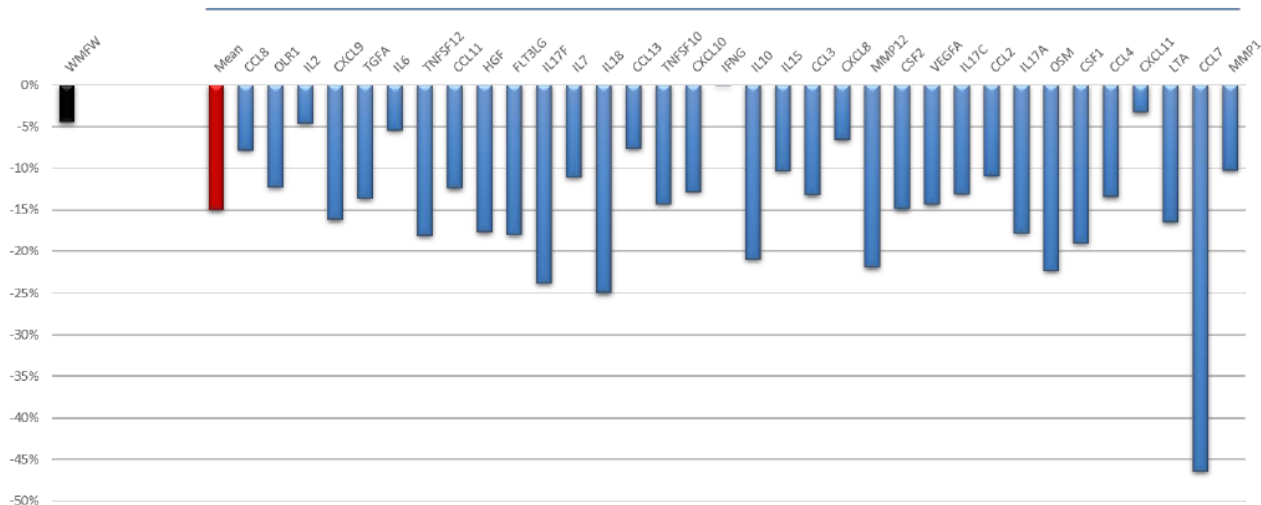
## XPRO™ DECREASES NEUROINFLAMMATION IN AD Patients

Decreased Inflammatory Cytokines in CSF after 3 months

XPro™ decreases whole brain neuroinflammation by 15% after 12 weeks of therapy 1mg/kg XPro (n=6)

**MRI**

**CSF**

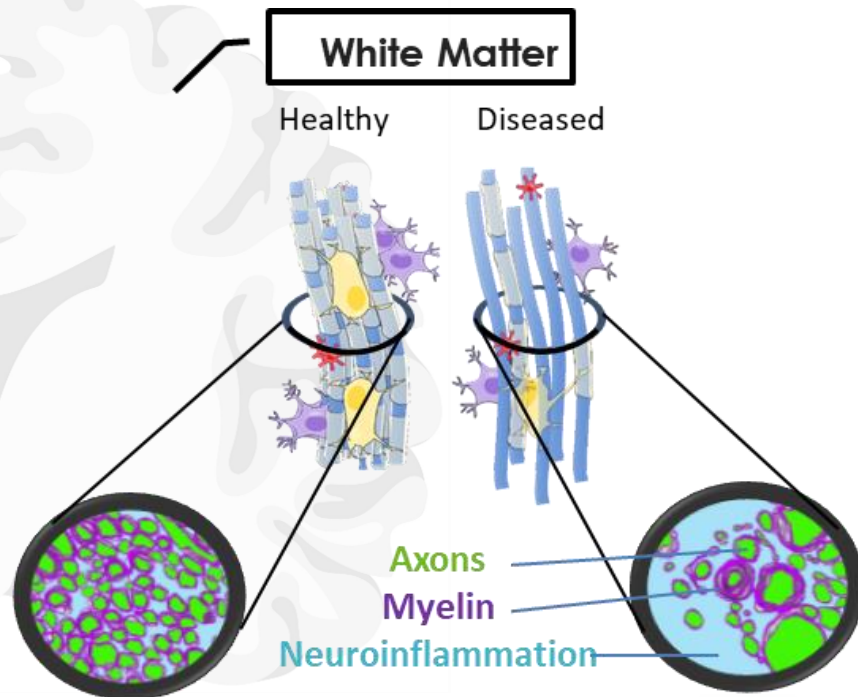




# Non-invasive Virtual Biopsy – Measuring Microstructural Changes

- Diffusion MRI-DTI imaging can assess microstructural changes within the brain.
- Demonstrates structural pathology to located and stage the patient's disease.
- Demonstrates remodeling and repair of effective treatment in “real time.”
- Non-invasive “virtual biopsy” provides a “status report” of the patient's disease.
- Allows for accurate design and execution of clinical trials by correlating biological changes of the brain with clinical outcomes.

- ✓ Myelin degradation and repair
- ✓ Axonal disruption & loss
- ✓ Changes in neuroinflammation



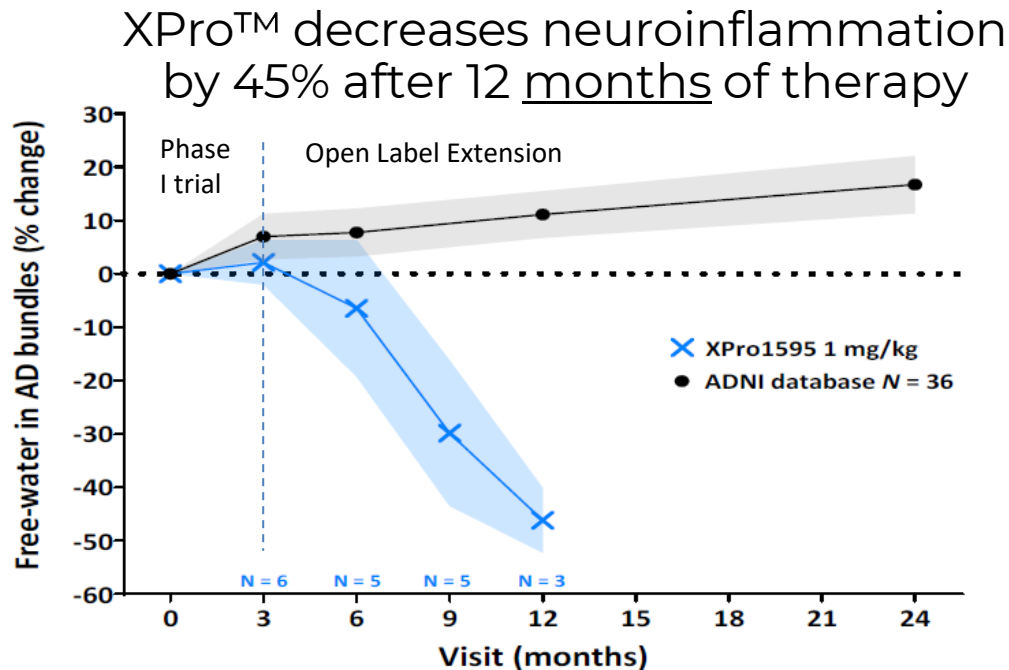


## XPRO™ DECREASES NEUROINFLAMMATION IN AD

Decrease in Neuroinflammation in AD white matter tracts over 12 months

- Patients with AD have increasing WMFW
- AD patients treated with XPro™ have decreasing WMFW over 12 months

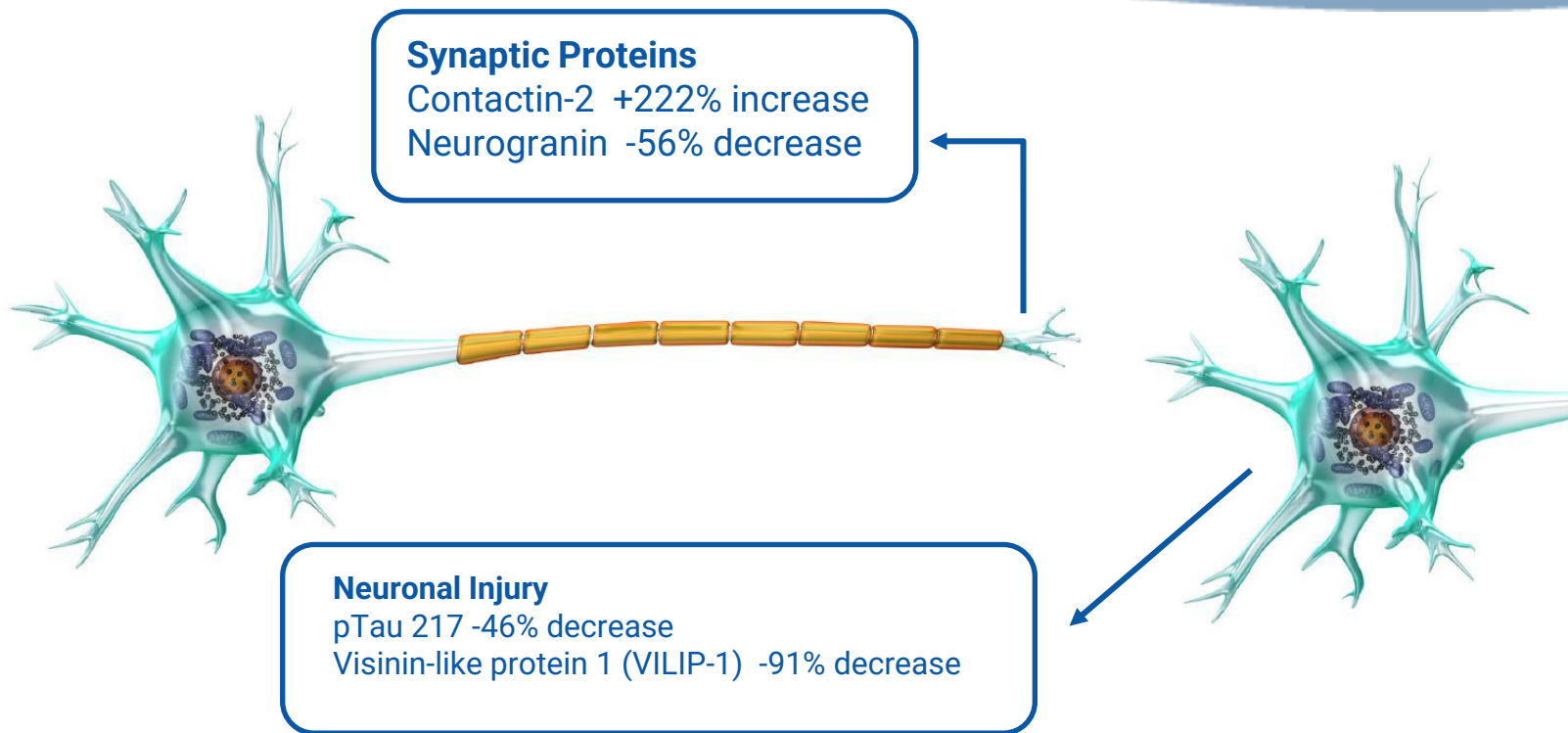
White Matter Free Water is a non-invasive measure of neuroinflammation measured by MRI-DTI





# **XPro™ Decreases Neurodegeneration and Improves Synaptic Function**

**Downstream benefits of decreasing neuroinflammation**

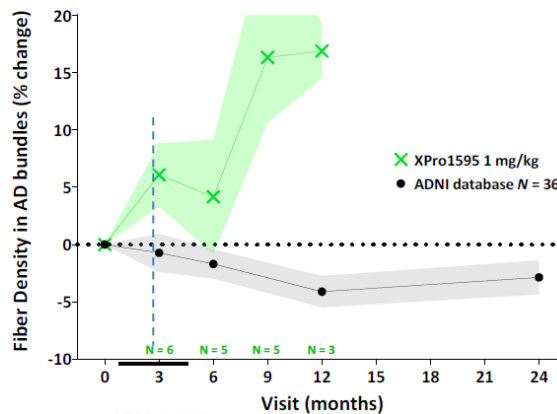




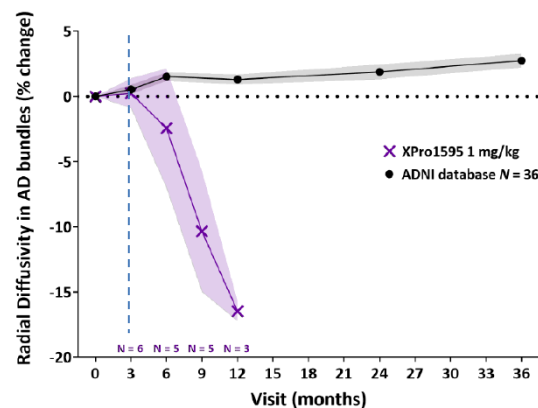
## XPro™ Promotes Myelin Repair and Improves Axonal Integrity

- ✓ XPro™ improves axonal integrity by 17% in white matter tracts after 12 months of therapy (increased Apparent Fiber Density)
- ✓ XPro™ promotes improved myelin by 16% after 12 months of therapy (reduced Radial Diffusivity)

12 month AFD improvement 1mg/kg



12 month RD improvement 1mg/kg

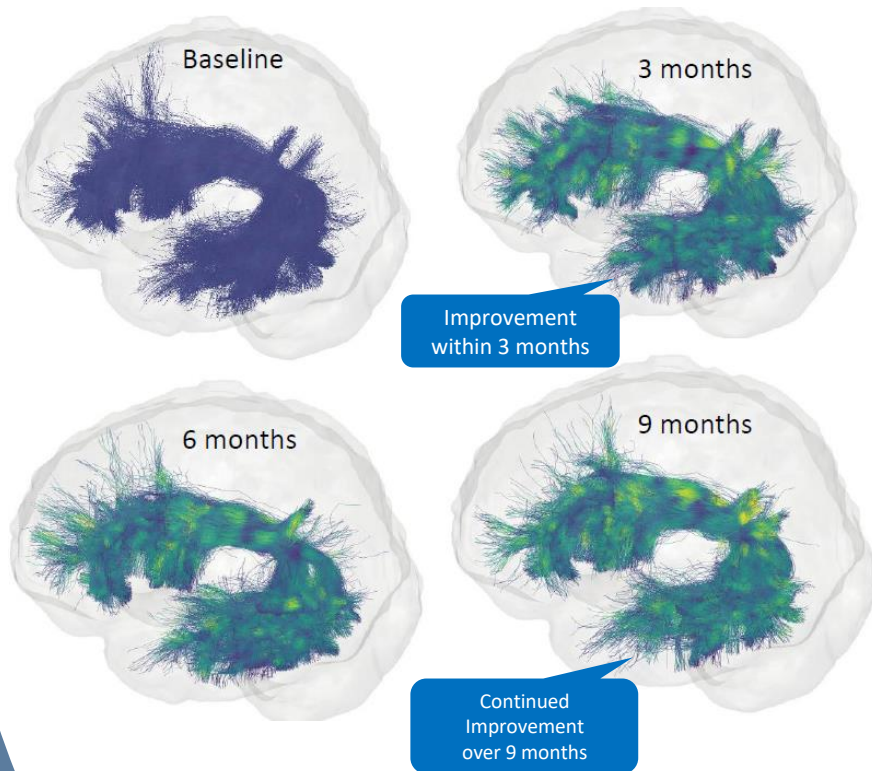




## REMODELING AND REPAIR OF WHITE MATTER TRACTS AFTER XPRO™



INmuneBio  
**XPro**  
for AD



- 65-year-old white male retired due to AD
- Returned to work after 6 months of XPro therapy
- Increasing green/blue shows improvement in axonal quality





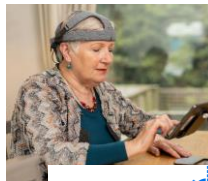
# Alzheimer's Patients in 4-week Phase 1b of XPro™

Pilot study of 7 moderate to severe AD Patients; 1 mg/kg once a week subQ

Resting alpha-band power in EEG is a broad measure of brain network connectivity, which is attenuated with the progression of Alzheimer's disease.

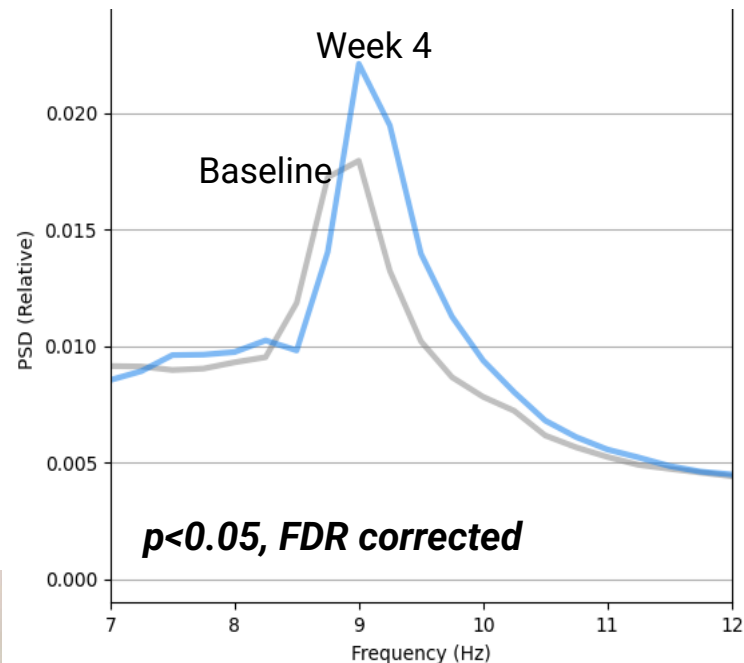
Group level increase in resting alpha power was observed over the 4-week intervention with XPro

INmuneBio  
**XPro™**  
for AD



Cumulus

## EEG Alpha Power after 4 weeks of XPro1595 treatment

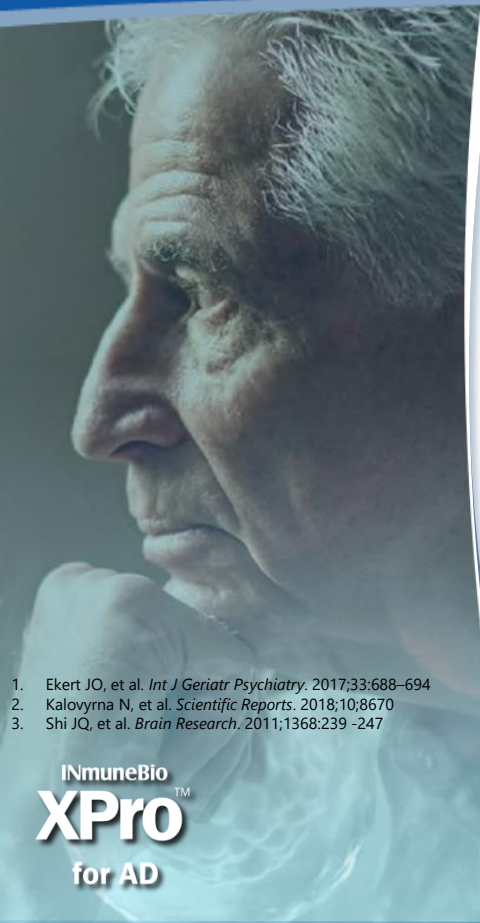






# XPro Attenuates AD-like Pathology and Restores Normal Function in Animal Models

Findings in Phase I studies precisely matched findings in animal studies



**Immune Dysfunction**

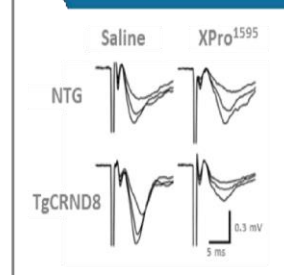
**Amyloid Pathology**

**Synaptic Dysfunction**

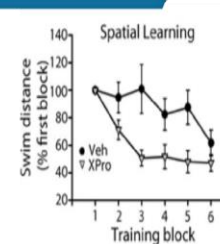
**Nerve Cell Death**

**Cognitive Impairment**

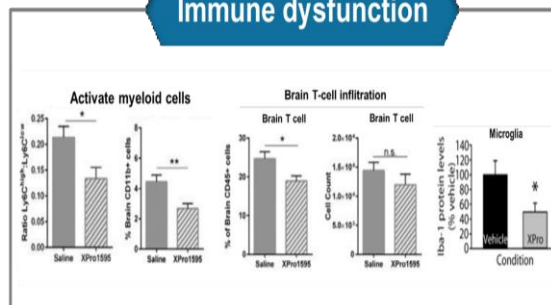
## Synapse dysfunction



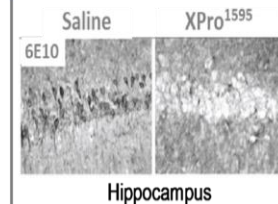
## Cognitive Impairment



## Immune dysfunction



## Amyloid pathology



INmuneBio™  
**XPro**  
for AD

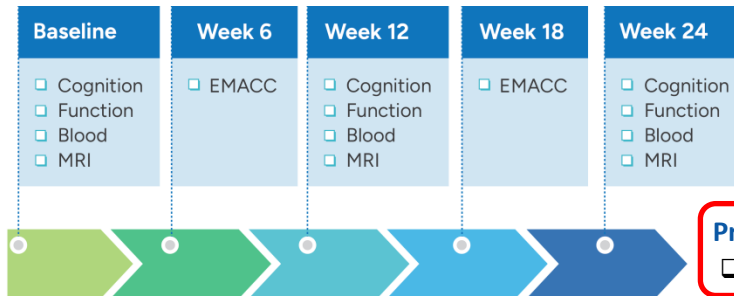
Efficacy has been shown in 3xTgAD, 5xFAD, TgCRND8 and aged mice 23



# A 6 MONTH, RANDOMIZED, PLACEBO-CONTROLLED, DOUBLE-BLIND STUDY OF XPRO™ IN PATIENTS WITH EARLY ALZHEIMER'S DISEASE WITH BIOMARKERS OF INFLAMMATION



Key enrollment criterion	
<input type="checkbox"/> Early AD (50-85 yrs)	(N=201)
<input type="checkbox"/> Amyloid positive	
<input type="checkbox"/> CDR (0.5 or 1)	
<input type="checkbox"/> MMSE > 22	
<b>One Inflammatory Biomarker:</b>	
<input type="checkbox"/> hsCRP (1.5 mg/L)	
<input type="checkbox"/> ESR (10 mmg/hr)	
<input type="checkbox"/> HbA1c (6%)	
<input type="checkbox"/> APOE4+	



## Primary Endpoint

- ☐ EMACC

## Secondary Endpoints

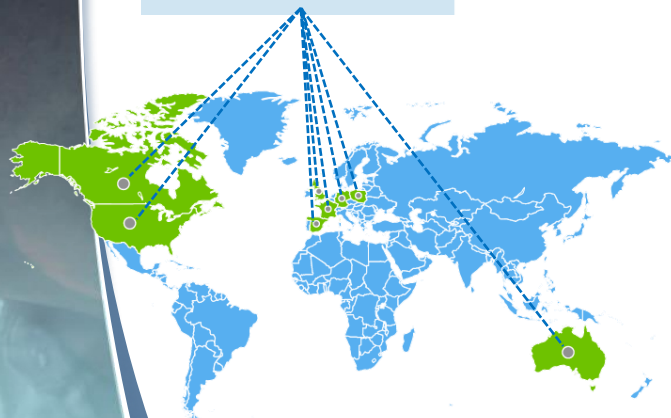
- ☐ CDR, ECog
- ☐ ADL, NPI
- ☐ Blood
- ☐ MRI
- ☐ Safety

## Treatment

- ☐ 2:1 (XPro1595:Placebo)
- ☐ 1 mg/kg XPro1595 weekly subQ injection

## Unique design elements:

- small and short
- enrichment,
- precise cognitive end-point



InmuneBio  
**XPro**  
for AD



# EMACC: Early/ Mild Alzheimer's Cognitive Composite

Why use EMACC as our primary endpoint?

The EMACC provides an accurate cognitive assessment in patients with Early Alzheimer's Disease

## Measure what matters!

- Traditional endpoints (CDR/ADAS-Cog) optimized for cognitive changes that occur in moderate to severe AD patients. These are not the same cognitive changes that occur during early AD.

## Psychometrically “sound”

- EMACC was empirically derived by pharma to measure change in Early AD
- No floor or ceiling effects
- Lower variance and shorter retest intervals provides smoother measure of cognitive change

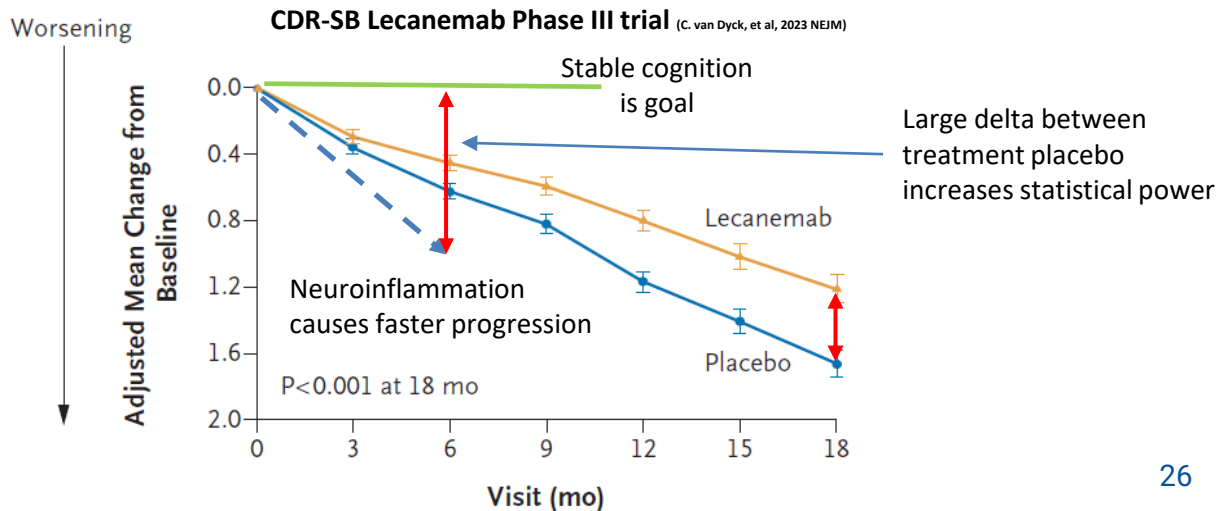
## Why is this important?

- Greater dynamic range allows measure of stable, worsening or improved cognition
- Allows for shorter and smaller clinical trials



# STATISTICAL POWER: WHY XPRO CLINICAL TRIALS ARE SHORT AND SMALL

- Enrichment strategy selects patients with neuroinflammation
- Patients with neuroinflammation have faster cognitive decline with lower variance than patients without neuroinflammation resulting in steeper decline of placebo group
- The goal of XPRO therapy in AD is to PREVENT cognitive decline not SLOW cognitive decline



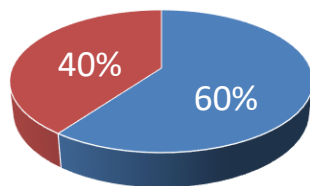


ImmuneRio  
**XPro**<sup>TM</sup>  
for AD

## Total Addressable Market: XPro<sup>TM</sup> in AD

- ✓ Early AD = MCI + mild AD
- ✓ > 40% of Early AD patients have neuroinflammation
- ✓ XPRO Total Addressable Market in US = 4.3M
- ✓ XPRO estimated market opportunity exceeds \$50B

*AD patients with neuroinflammation*



- AD without inflammation
- XPRO eligible - AD with neuroinflammation

Nature Aging 2024 <https://doi.org/10.1038/s43587-023-00550-7>

## Total Addressable Market: US XPRO for AD

MCI patients -US	7M
Total AD patients – US*	6.7M
mild AD patients -US (50%)	3.8M
Early AD patients -US (3.8+7)	10.8M
XPRO eligible - US (40%)	4.3M
TAM value per \$10,000	\$43B

Sample calculations: \$10K annual cost = TAM of \$39B  
\$40K annual cost = TAM of \$172B

\*<https://www.alz.org/alzheimers-dementia/facts-figures>





# SUMMARY: PHASE 2 XPRO FOR AD

ENROLLMENT TO COMPLETE MID 2024 WITH TOP LINE DATA APPROXIMATELY 6 MONTHS FROM LAST ENROLLMENT



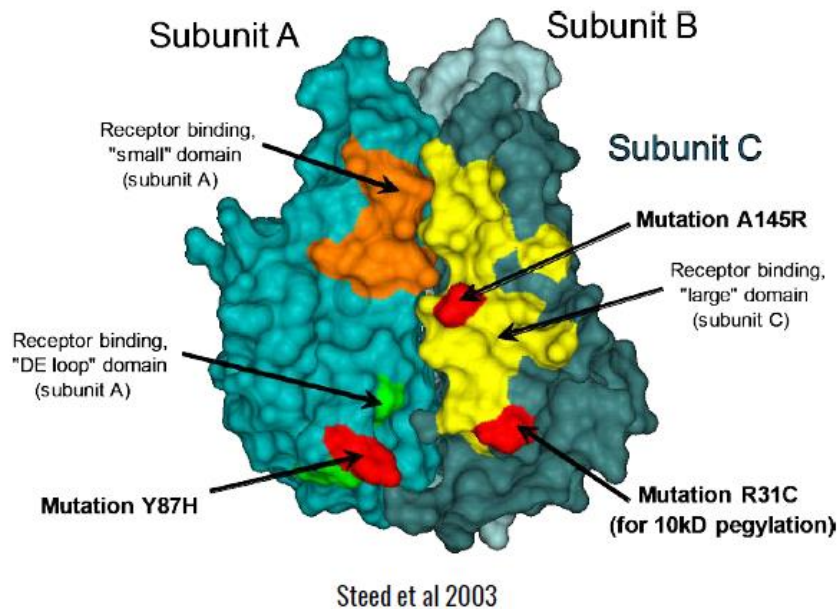
INmuneBio  
**XPro**  
for AD

- **Enriching for patients that have AD with inflammation (ADi)**
  - ADi patients have faster progressing disease with less variance = smaller N's/shorter duration
- **Cognitive and functional measures that are meaningful and relevant for Early AD patients**
  - EMACC has greater dynamic range to detect change in the appropriate cognitive symptoms
  - GAS allows us to assess cognitive functional change important to each patient.
  - E-Cog allows us to assess clinically meaningful functional changes
- **Brain imaging techniques that inform on brain microstructure**
  - Neuroinflammation, axonal integrity, myelination, gray matter
- **Novel approach to evaluate placebo response**
  - Multidimensional Psychological Questionnaire to Identify Placebo Responders
- **Patient friendly design**
  - Short duration, 2:1 randomization, guaranteed access to drug in extension study



# XPRO: A TNF INHIBITOR DESIGNED TO TREAT NEUROLOGIC DISEASE

XPro1595: a selective inhibitor of ONLY soluble TNF

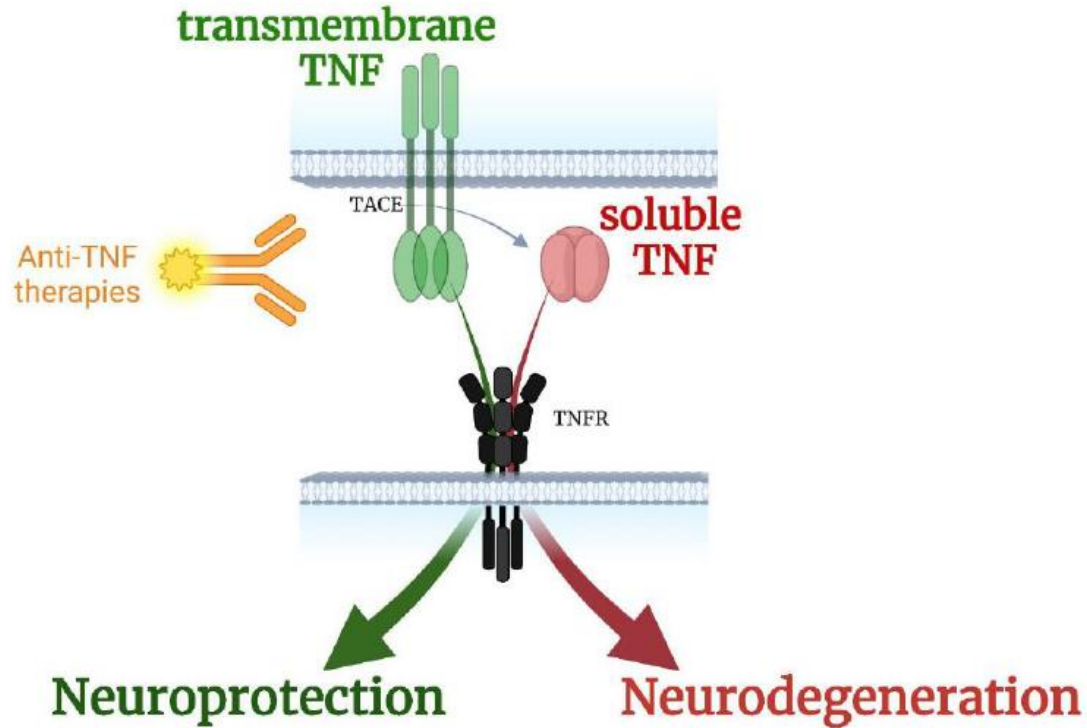


XPro1595 is identical to the human soluble TNF monomer with the exception of mutations in the receptor binding domain and another for pegylation.





## TNF BIOLOGY IS COMPLICATED: TWO LIGANDS WITH OPPOSITE EFFECTS



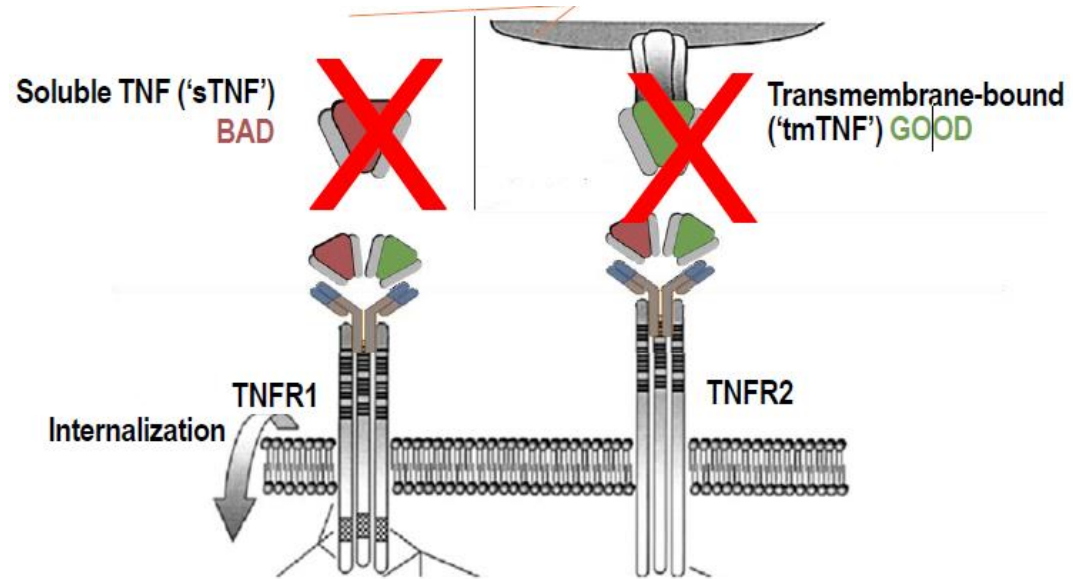


# XPRO IS VERY DIFFERENT FROM CURRENTLY AVAILABLE DRUGS

Precise neutralization of the TNF ligand that drives disease

- **Soluble TNF (sTNF):** “bad” TNF that is known to cause acute and chronic inflammation and cell death
- **Transmembrane TNF (tmTNF):** “good” TNF improves the immune response, is neuroprotective and promotes remyelination

Approved TNF inhibitors block both cytokines



D. MacEwan et al, Cellular Signaling, 2002



- Infection
- Cancer
- Demyelination

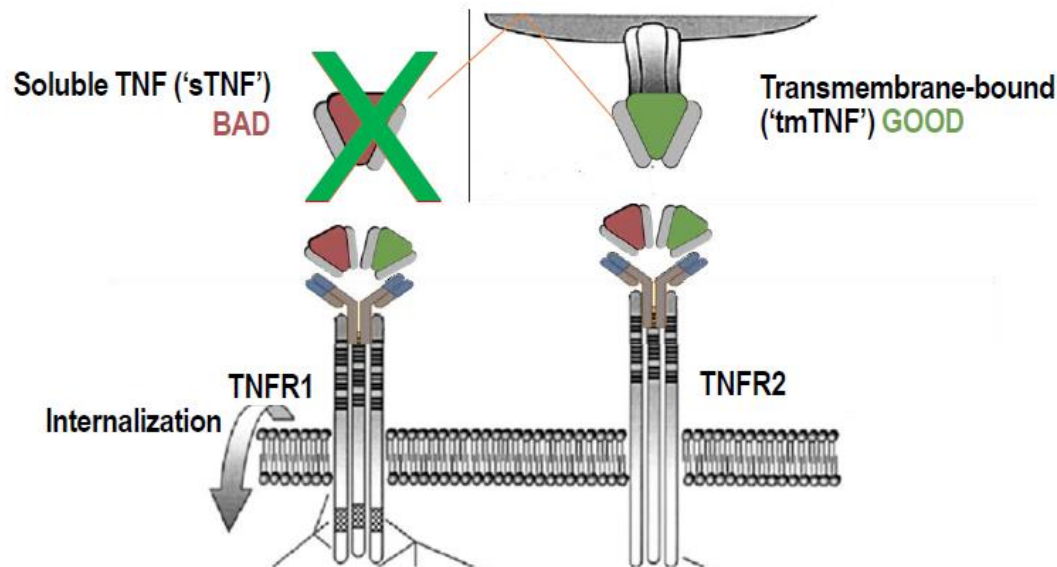


# XPRO IS VERY DIFFERENT FROM CURRENTLY AVAILABLE DRUGS

Precise neutralization of the TNF ligand that drives disease

- **Soluble TNF (sTNF):** “bad” TNF that is known to cause acute and chronic inflammation and cell death
- **Transmembrane TNF (tmTNF):** “good” TNF improves the immune response, is neuroprotective and promotes remyelination

## XPro blocks soluble TNF



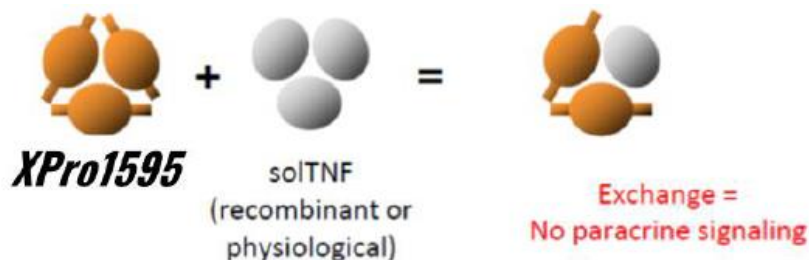
Adapted from MacEwan et al 2002



# XPRO UNIQUE MECHANISM OF ACTION

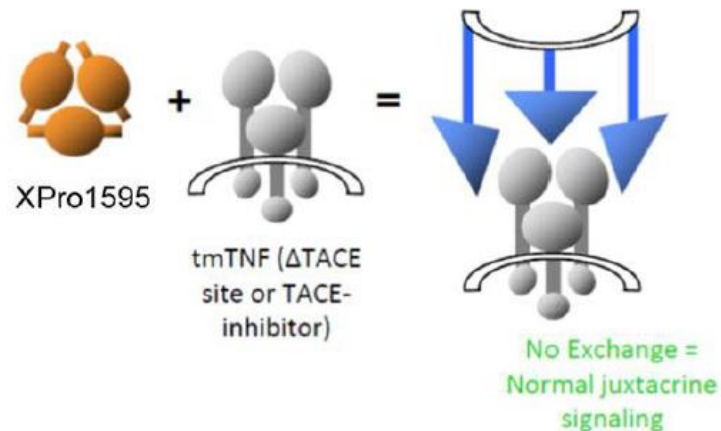
Xpro1595 freely exchanges with soluble TNF monomers to form inactive heterotrimers

Inflammatory soluble TNF eliminated:  
No paracrine signaling through receptors



tmTNF homotrimers are anchored to the cell membrane, XPro1595 cannot exchange

Immuno protective transmembrane TNF unaffected: Allow juxtacrine cell-cell signaling





INmuneBio

# **INKmune™** **for Oncology**

Off-the-Shelf NK Therapy Converts Patient's Resting NK cells  
into Cancer Killing memory like NK cells





# INKMUNE NK CELL PRIMING PROGRAM IN CANCER

INKmuneBio  
**INKmune™**  
**for Oncology**

- Novel technology with strong patent protection
- Off-the-shelf program with scalable manufacturing
- Focus on solid tumors
- Timeline:
  - Select patient level data 2H24
  - Phase II data 2H25

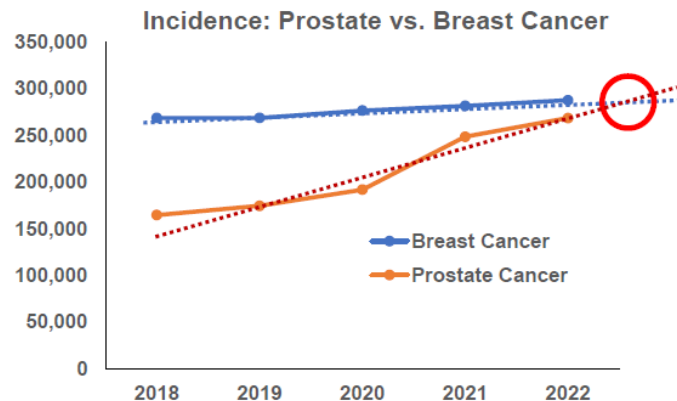




# PROSTATE CANCER INCIDENCE AND MORTALITY

INmuneBio  
**INKmune™**  
for Oncology

Prostate Cancer	2018	2019	2020	2021	2022
Incidence	164,690	174,650	191,930	248,530	268,490
Mortality	29,430	31,620	33,330	34,130	34,500





# MONTHLY MEDIAN OS BENEFIT OF DRUGS APPROVED FOR MCRPC

INmuneBio  
**INKmune™**  
for Oncology

Agent	Sipuleucel-T	Abiraterone	Enzalutamide
Median OS benefit (Months)	4.1	Post-doc: 4.6 Pre-doc: 4.0	Post-doc: 4.8 Pre-doc: 4.0

Docetaxel	Cabazitaxel	Radium-223	PSMA RLT	Olaparib
2.4	2.4	3.6	5.3	2.3

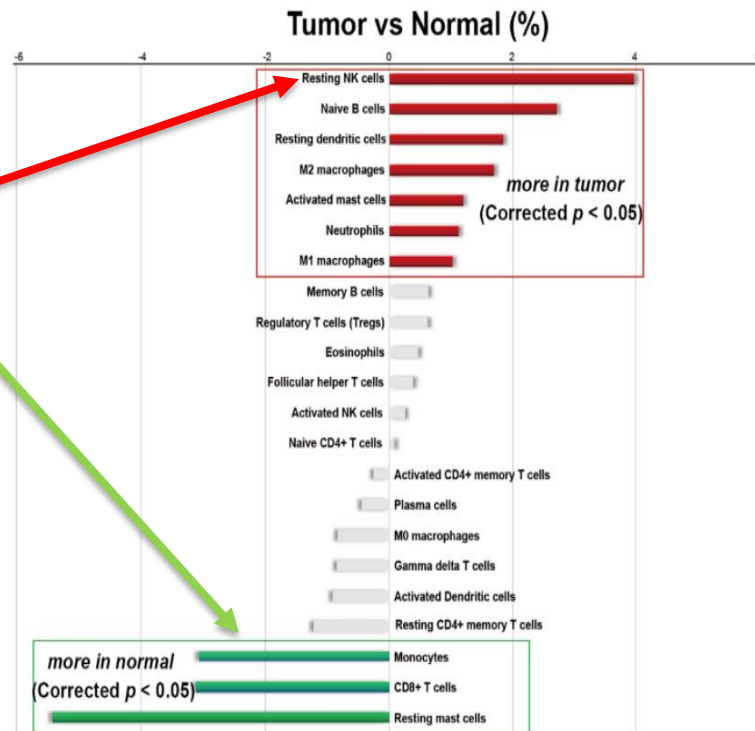


# INKmune™ to Activate Resting NK Cells in mCRPC

INKmuneBio

**INKmune™**  
**for Oncology**

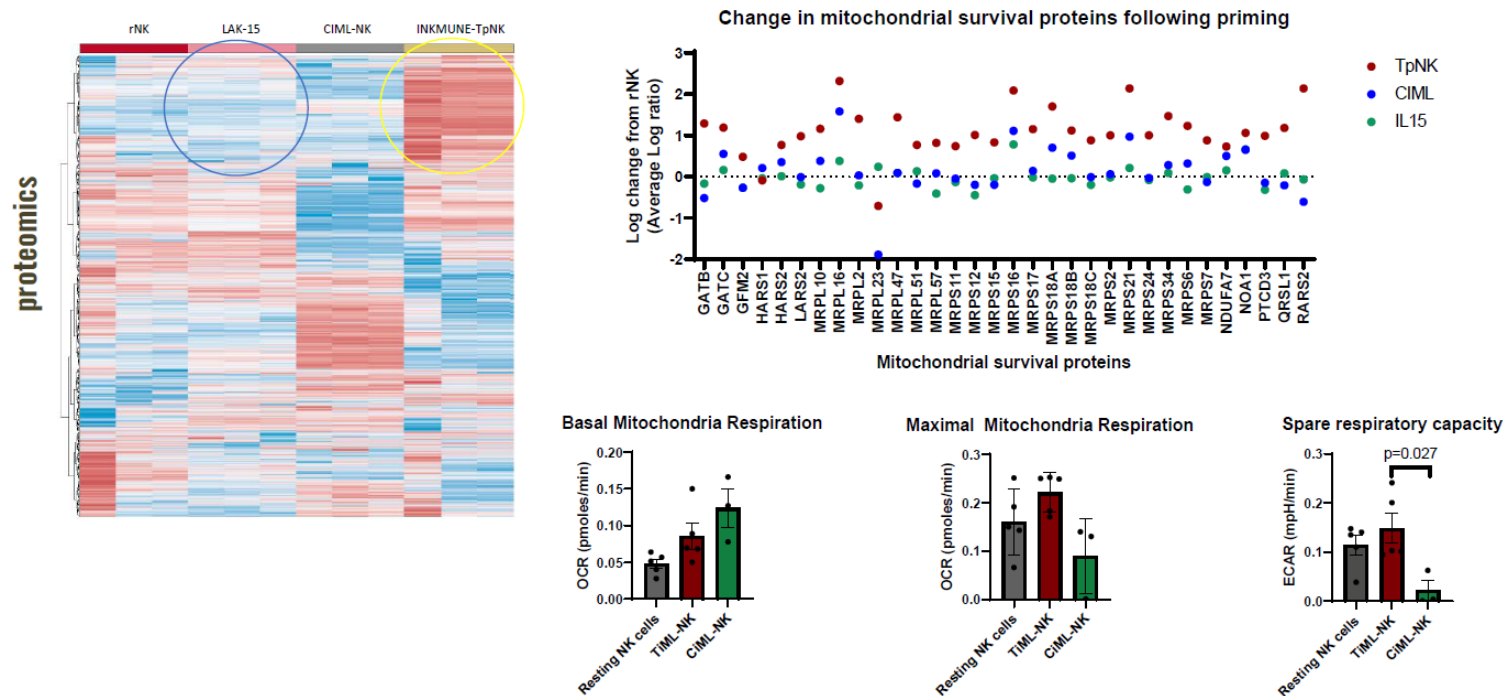
- Prostate cancer immune infiltrate cells are resting NK cells *not* T cells
- Is lack of T cell infiltrate why PDL1 and TIGIT fail in mCRPC?
- NK cells in mCRPC are resting NK cells that do not kill tumor
- INKmune goal: convert resting NK cells to cancer killing memory like NK cells





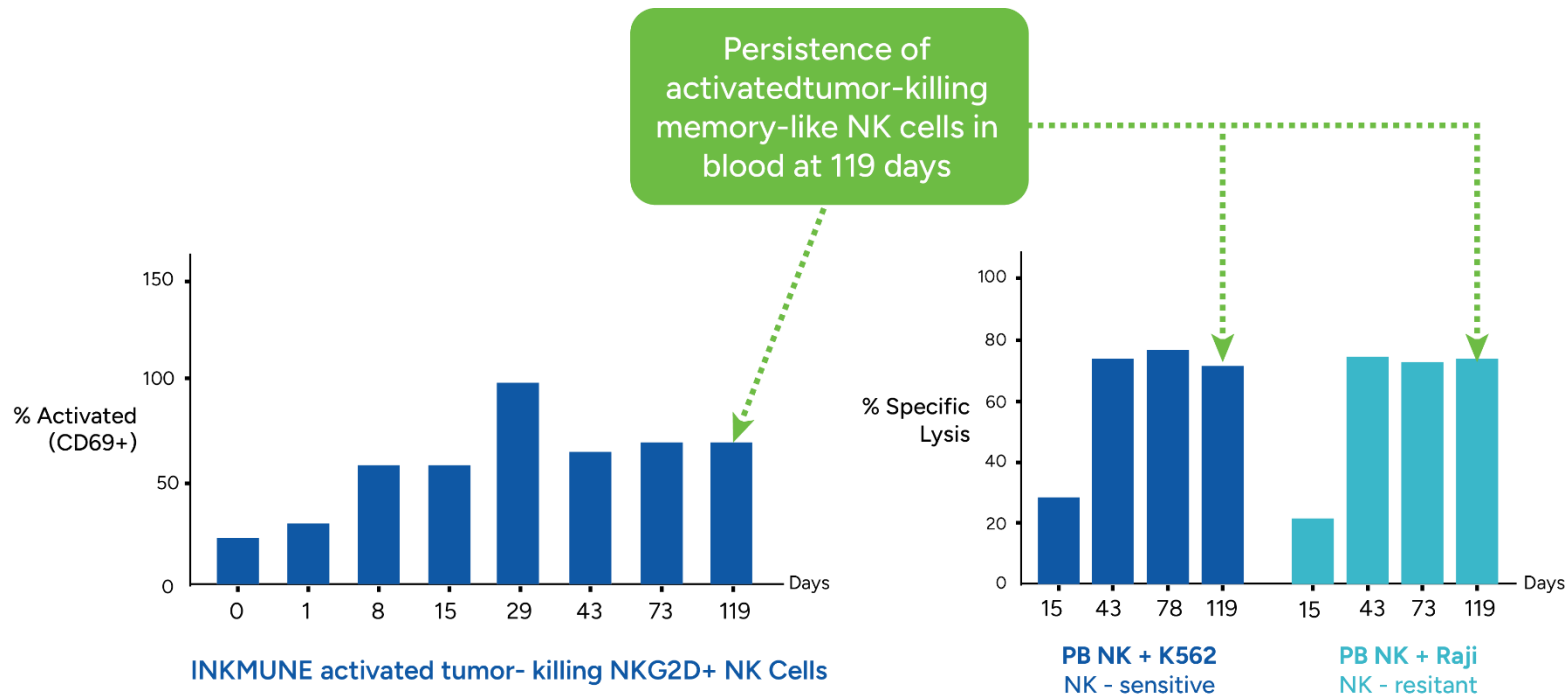
# INKMUNE PRIMED NK CELLS PRODUCE CANCER KILLING MEMORY LIKE NK CELLS

## INKmune induces a unique NK cell that survives in a hostile TME to kill tumor cells





# INKMUNE™ PHASE 1 HUMAN RESULTS



Safe and well-tolerated as an out-patient  
Controls disease with excellent QOL



# CaRe PC – a modified Bayesian design Phase I/II trial testing multiple doses of INKmune in men with mCRPC

INmuneBio  
**XPro**<sup>TM</sup>  
for AD

## Step 1 - 3X3 dose escalation “run-in” to demonstrate

- Short-term safety (28 days)
- short-term immunologic efficacy

## Step 2 - simultaneous testing of multiple doses to

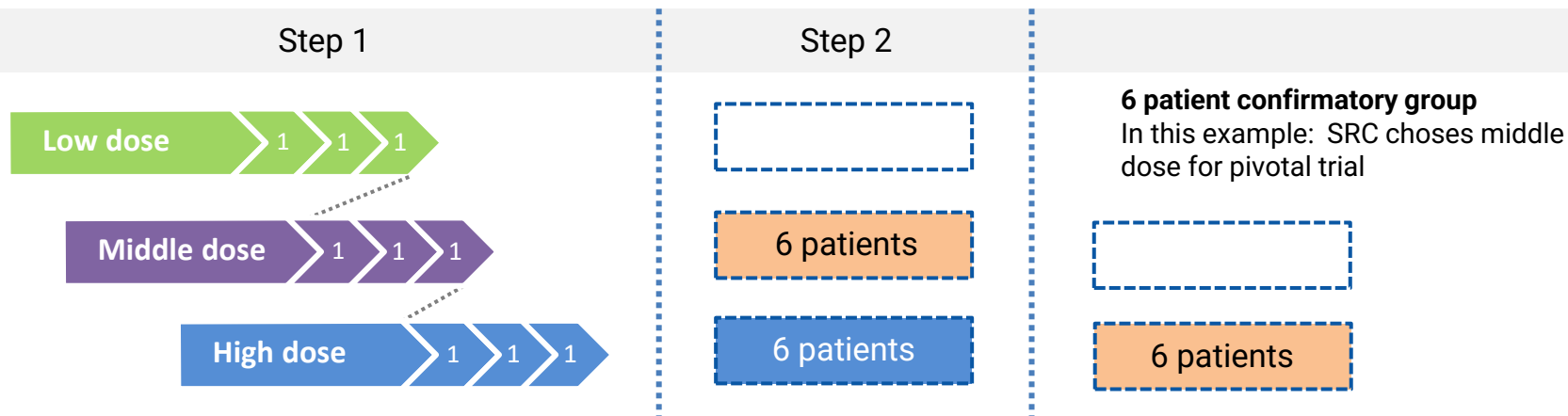
- Demonstrate long-term safety (6 month)
- Demonstrate proof-of-biology (POB = anti-tumor effects)
- POB “efficacy” measures - PSA, ctDNA and PSMA PET
- Quantify long-term immunologic efficacy - persistence

**Desired Outcome** - clear safety and POB to support dose selection and investment decision for blinded randomized trial





# INKMUNE MBION12 MCRPC



- ✓ Inclusion criteria: mCRPC without contraindications or recent chemo or immunotherapy
- ✓ Inclusion criteria: mCRPC without contraindications or recent chemo or immunotherapy
- ✓ Definition of effective dose
  - Safe
  - Evidence of anti-tumor effects
  - Manufacturing efficiency

## Definitions:

- Short and long-term safety – no drug related SAE
- Short-term immunologic efficacy – converts patient's NK cells to mINK cells that kill tumor cells (ex vivo assay)
- Long-term immunologic efficacy – persistence of mINK cells in patient's circulation
- Anti-tumor effects – evidence of control of tumor burden by PSA, PSMA and/or ctDNA



# Appendix



# MANAGEMENT TEAM

Broad biotechnology background including legal, intellectual property, drug manufacturing, clinical trial management, FDA approval, drug marketing, finance, business development and operations.



**Raymond J. Tesi, MD**  
CEO/CMO & Chairman of the Board



**David J. Moss**  
CFO



**Mark W. Lowdell, PhD**  
CSO



**Joshua S. Schoonover, Esq.**  
General Counsel



**Tara Lehner**  
VP Clinical Operations



**Christopher J. Barnum, PhD**  
VP CNS Development



# INTELLECTUAL PROPERTY SUITE

Patent  
Exclusivity



Ref. Biologic  
Exclusivity

## DN-TNF PLATFORM

31 global patent properties

- Compositions
- Formulations
- Treatment Methods



Exclusive Patent Licenses

- Xencor
- Pitt

10 issued patents  
21 pending apps

Patent Coverage  
thru 2033\*

\*\*# years from Marketing  
Authorization,  
varies by jurisdiction:

12 years\*\*  
10 years\*\*  
5 years\*\*  
8 years\*\*  
8 years\*\*  
6 years\*\*  
6 years\*\*

US  
EP  
AU  
CA  
CN  
JP  
KR

## NK PRIMING PLATFORM

10 global patent properties

- Compositions
- Formulations
- Treatment Methods



Exclusive Patent License

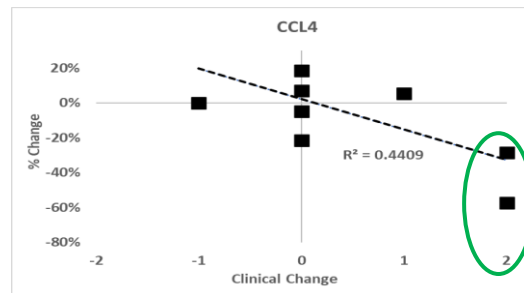
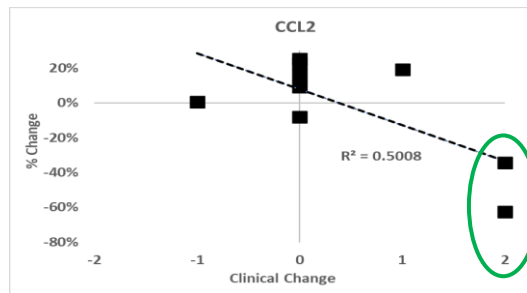
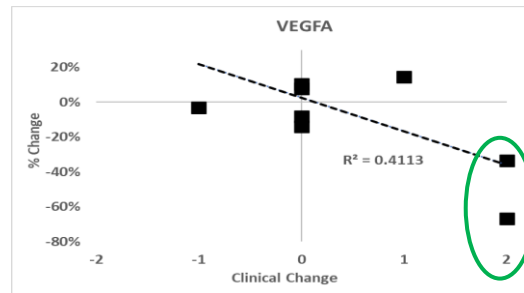
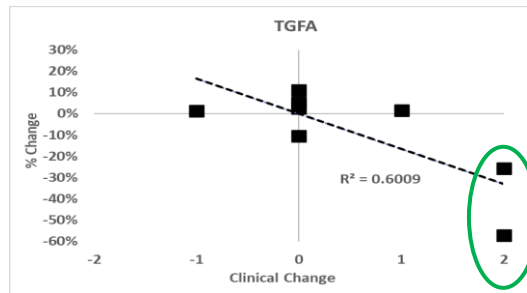
- Immune Ventures

5 issued patents  
5 pending apps

Patent Coverage  
thru 2036\*

\*current coverage.  
Subject to patent term  
extension up to 5 years  
and/or issuance of follow  
on patents

# Correlation between decreased neuroinflammation and improved cognition



$R^2 = 0.4$  to  $0.6$   
CSF cytokines by OLINK platform





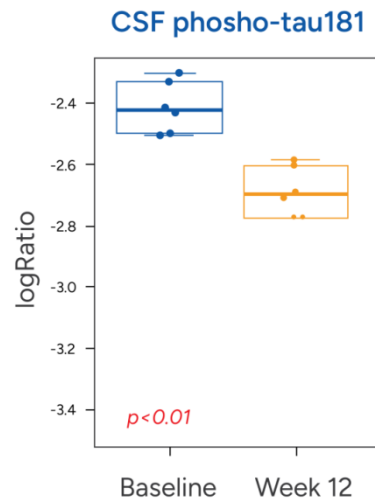
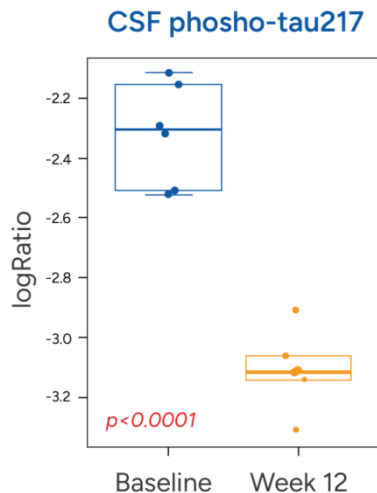
# RESULT OF PHASE I TRIAL – p-tau217 as a sensitive and specific biomarker of AD

## **BIOMARKER OF NEURODEGENERATION IN AD – pTAU 217/181**

CSF following 3 months of therapy with XPro™ (1 mg/kg)



INmuneBio  
**XPro™**  
for AD

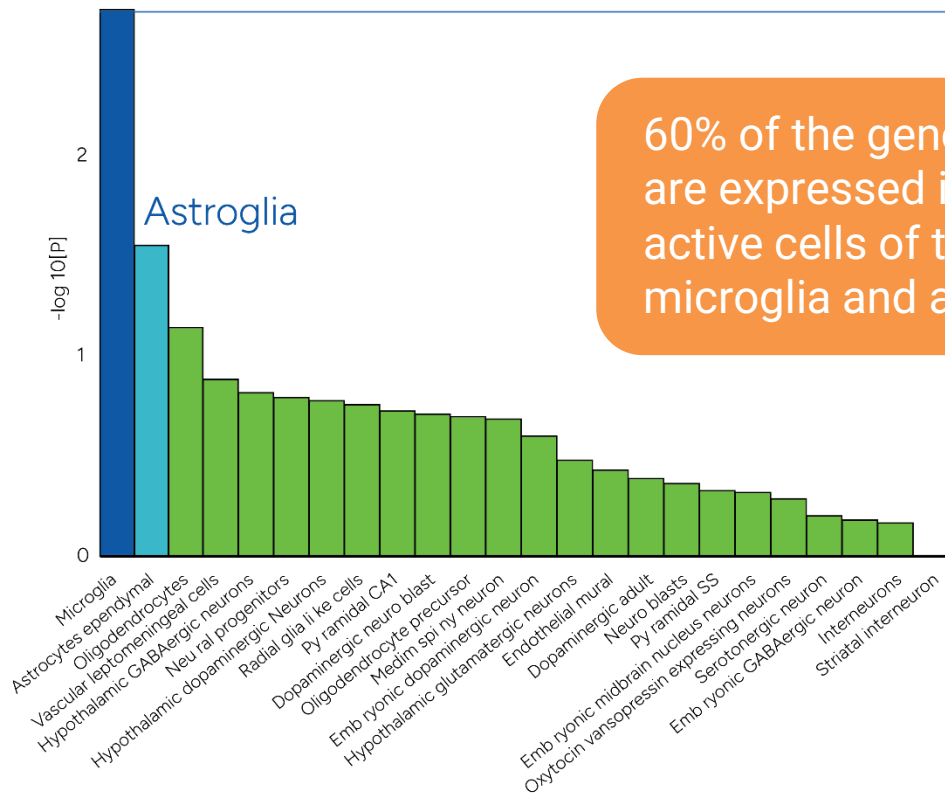


Phospho-tau is a biomarker of neurodegeneration  
Phospho-tau217 correlates best with cognitive dysfunction



## Large Genetic Profile Study Of AD Patients Demonstrated Strong Association With Immune Dysfunction

### MICROGLIA



60% of the genes up-regulated in AD are expressed in immunologically active cells of the brain including microglia and astroglia

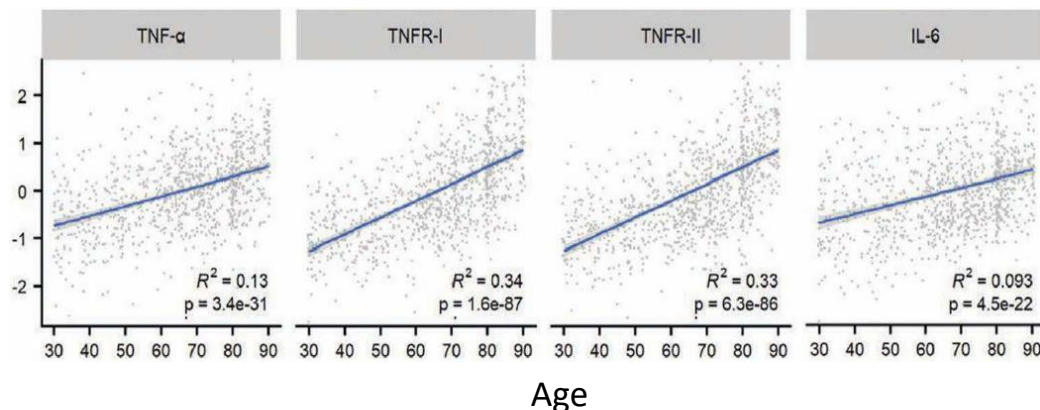
Genome-wide association study of 71,880 AD cases and 383,378 controls



# TNF INCREASES EARLY IN LIFE CONTRIBUTING TO INFLAMMAGING



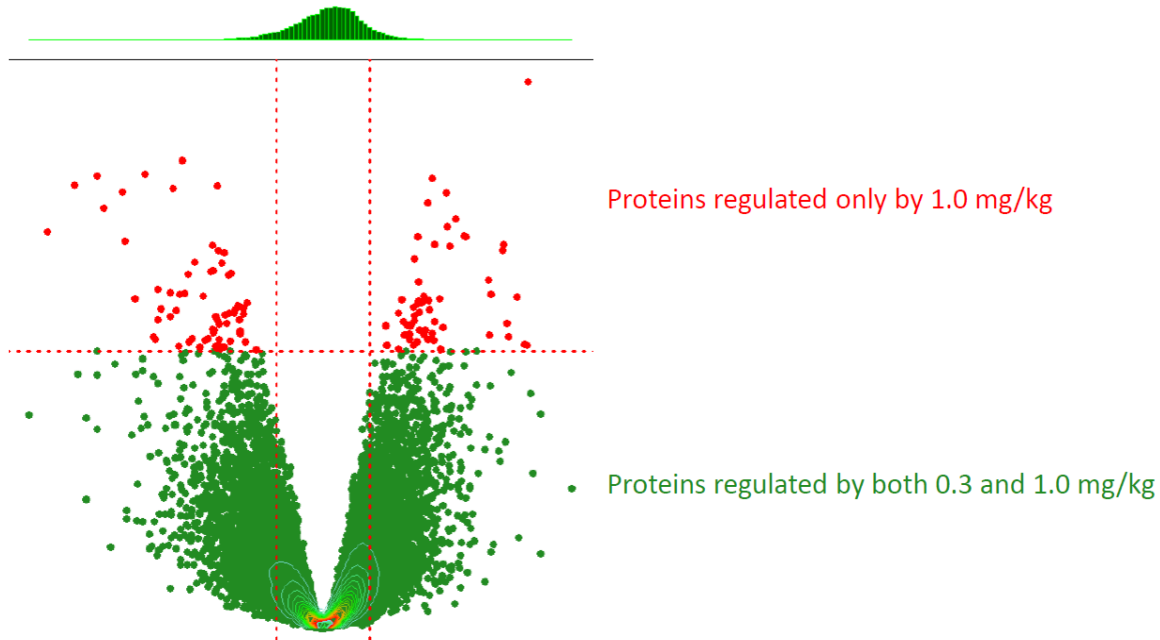
**AGE 30**



- Age is the most important risk factor for AD.
- Pro-inflammatory cytokines increase with age
- TNF is the master cytokine driving *age related chronic inflammation* – also known as *inflammaging*.

# Dose response Phase I AD

- Unbiased analysis of CSF proteome using Proteome Sciences TMT Calibrator technology
- 35,443 distinct peptide sequences associated with 4,966 protein groups were quantified and statistically evaluated
- **Conclusion:** Markers of microglial activation, synaptic and axonal dysfunction were significantly regulated in CSF from AD patients treated with XPro1595.



CONFIDENTIAL INMB

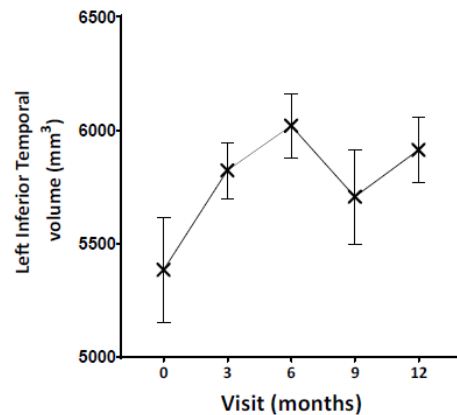
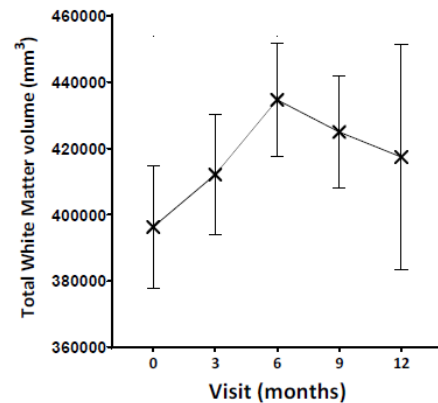
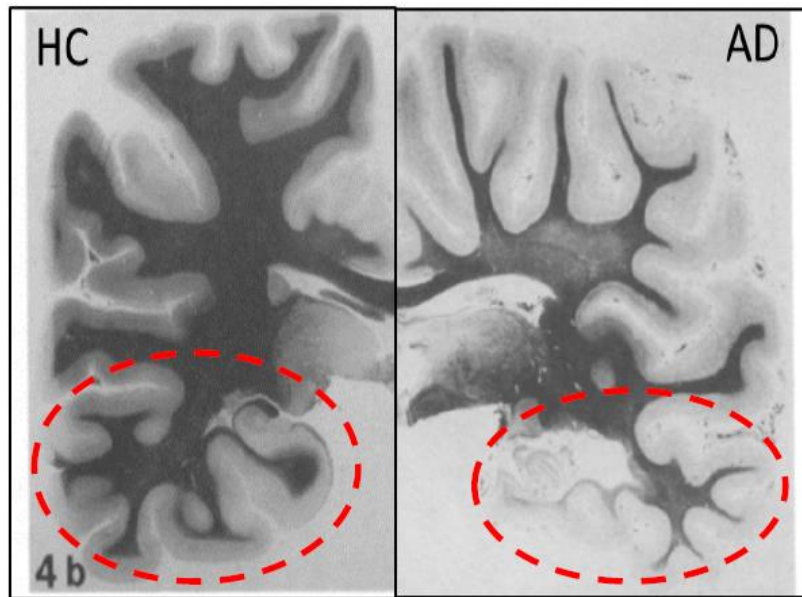


Phase 1b Data

# XPRO™ INCREASED WHITE MATTER VOLUME



ImmuneBio  
**XPro™**  
for AD









# CLINICAL BENEFIT IN PHASE I TRIAL: stable disease



INmuneBio  
**XPro**  
for AD

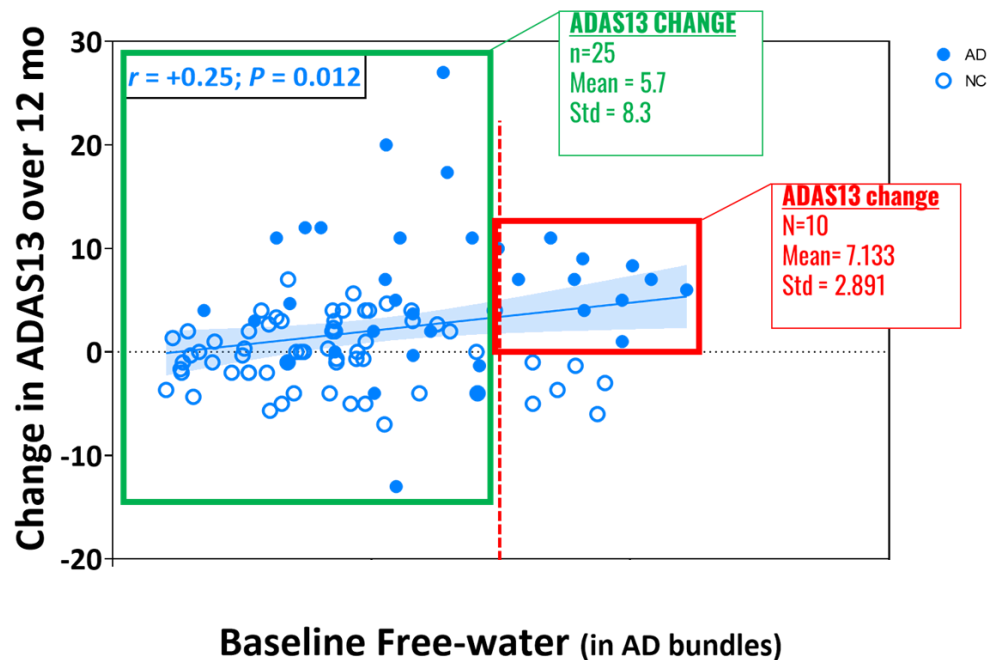
Disclaimer: small N, disease status heterogeneity, short time period

- Assessments administered:
  - ❖ Cognitive: MMSE, Verbal Fluency Test, Digit Symbol Coding
  - ❖ Neuropsychiatric Inventory
  - ❖ Bristol Activities of Daily Living Scale
- To compare across patients of different disease states, Dr. Judith Jaeger issued each patient a qualitative score of (-2, -1, 0, 1, 2) based on her assessment of the overall change over 3 months.

-2	-1	0	1	2
Meaningful progression	Minor progression	Stable Disease	Minor Improvement	Meaningful Improvement
				

Patients with the greatest improvement in cognition had the largest reduction in neuroinflammation

## Patients with higher levels of FW have greater cognitive decline (ADAS13) over 12 months in ADNI







# XPro™ Improves EEG Alpha Power Following 4 Weeks of Treatment

EEG is a biomarker of brain function that can be used as a measure of target engagement



The study evaluated the feasibility of using a portable EEG device to collect quality EEG data when used by the patients at home. EEG was assessed in seven moderate to severe AD patients treated once weekly with 1 mg/kg (sc) of XPro1595 for 4 weeks.

The study demonstrated the feasibility of collecting EEG in advanced AD patients. A significant increase ( $p < 0.05$ ) in resting alpha power was observed after 4-weeks of treatment with XPro1595

Resting alpha-band power in EEG is a broad measure of brain network connectivity. Reduced Alpha power is linked with cognitive decline and the progression of Alzheimer's Disease. Alpha waves are essential for internal functions like mental arithmetic, short-term and working memory, and visual-spatial mental imagery exercises. In individuals with AD, Alpha wave power is diminished due to the breakdown of brain networks associated with degeneration.