

Influence of diversity on blood-based biomarkers of Alzheimer's disease

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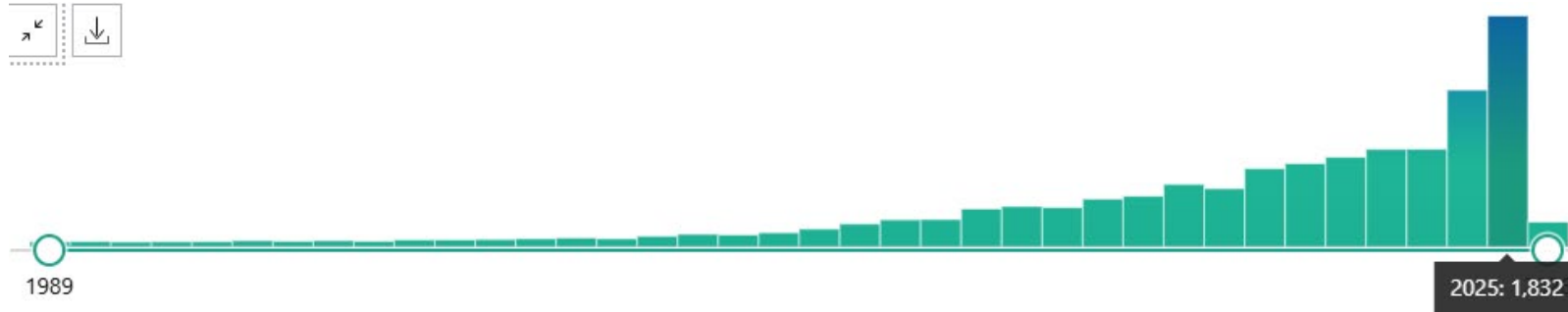
*Danish Dementia Research Centre
Copenhagen University Hospital – Rigshospitalet
Denmark*

Symposium: Assessment of dementia in migrants and culturally diverse individuals

Immidem: Dementia in migrants living in Italy: Promoting a diversity-sensitive clinical approach and provision of care

27th of March 2026





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AGING

Blood Test Might Predict Who Will Develop Alzheimer's

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Ny blodprøve kan forudsige demens med 90 procent sikkerhed – men ønsker du den viden?

B B C

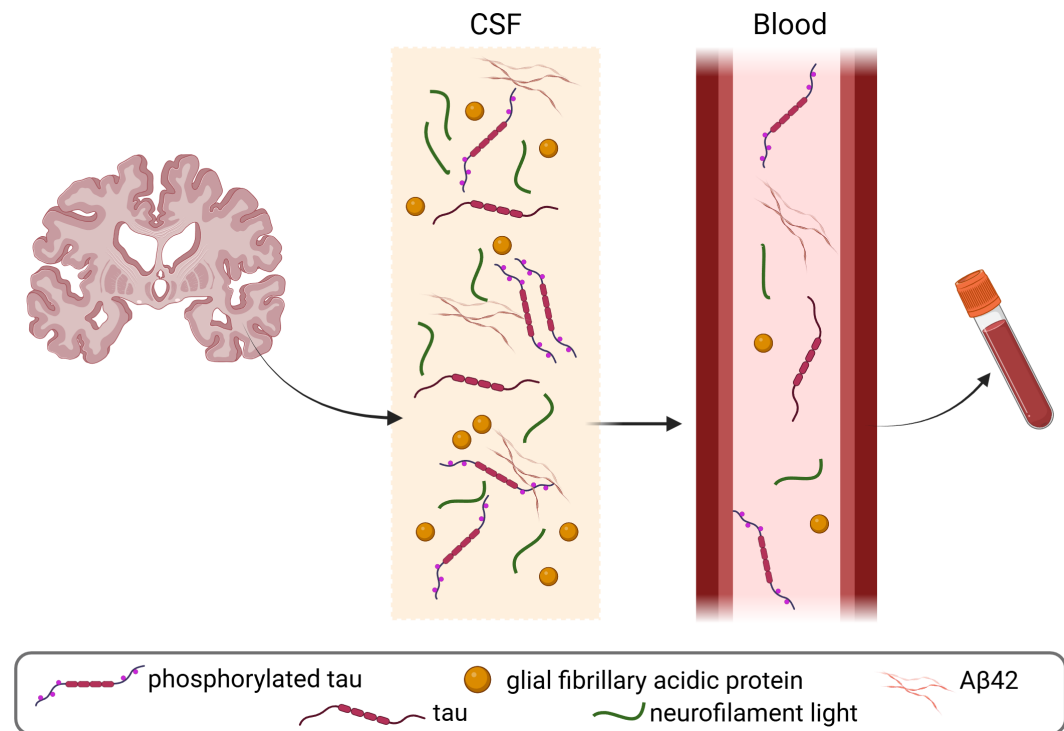
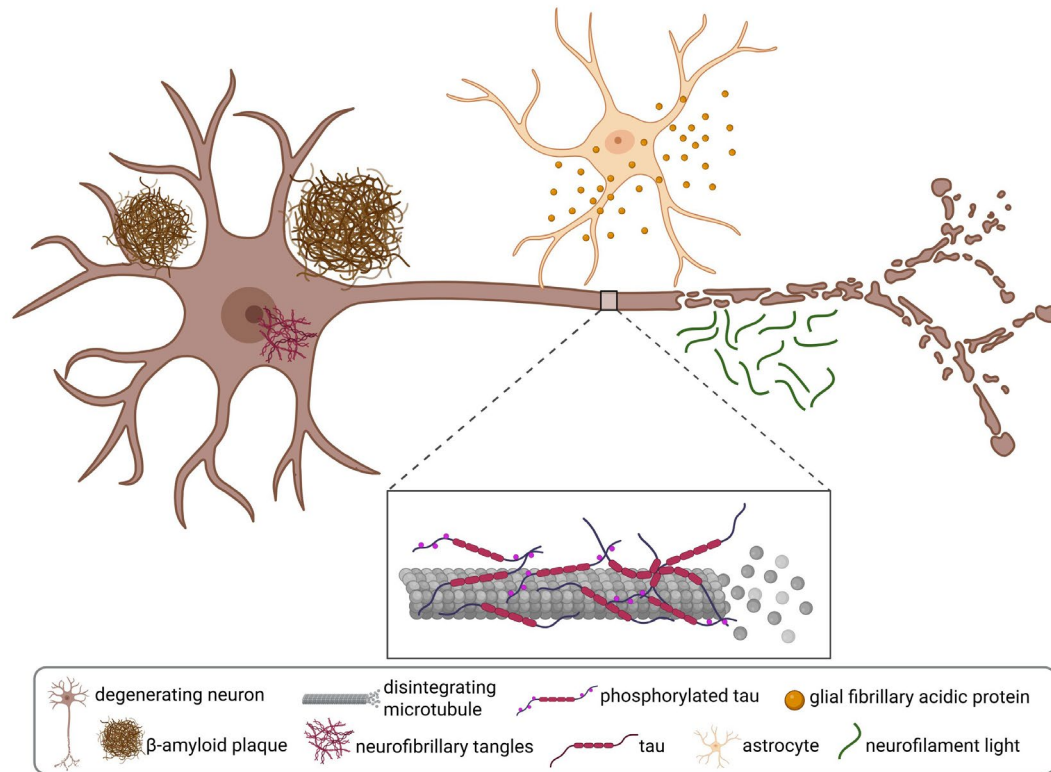
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Early dementia blood test trial begins

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Alzheimer's blood test catches 90% of early dementia cases, study finds

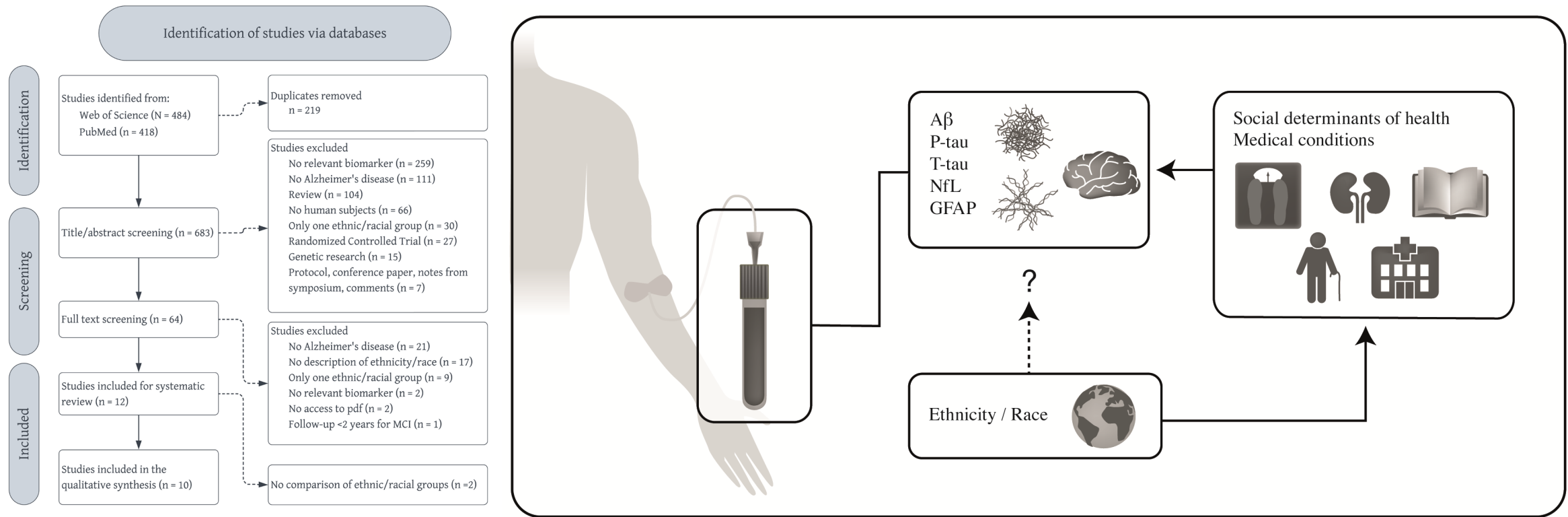
What are blood biomarkers?



- **Less invasive**
- **Affordable**
- **Scalable to less specialized clinics**

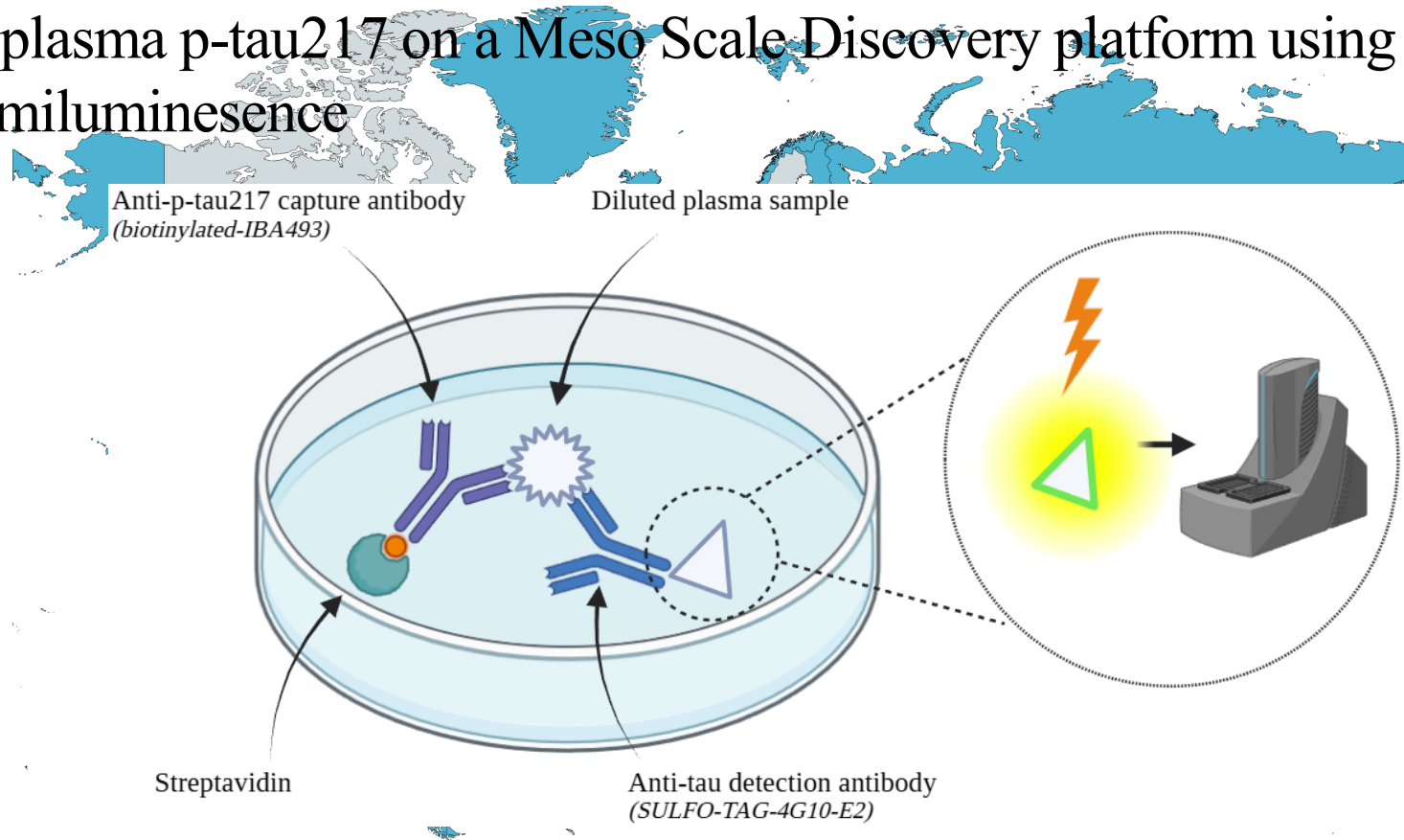
Several studies claim blood biomarkers vary by ethnicity or race

➤ Systematic review



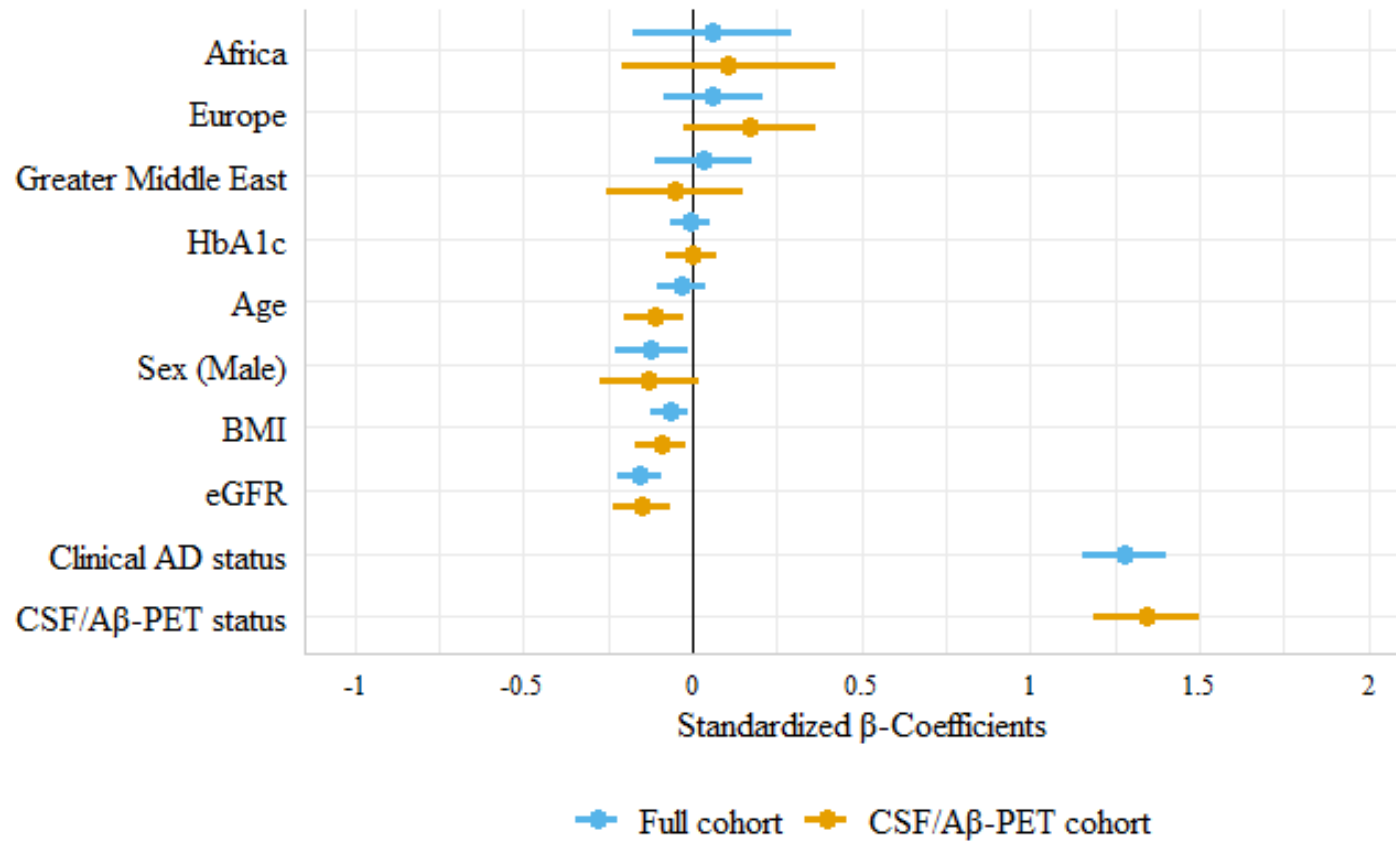
We examined the influence of ethnicity on plasma p-tau217

- Included 1,170 patients born in 91 different countries
- Measured plasma p-tau217 on a Meso Scale Discovery platform using electrochemiluminescence



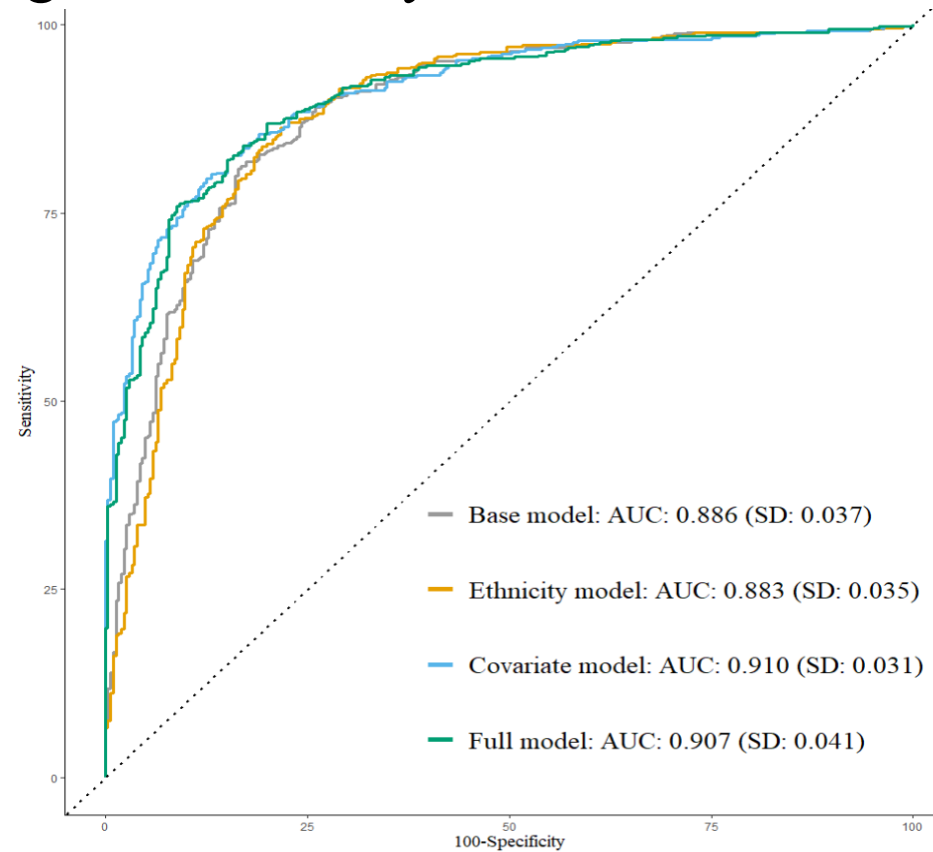
We examined the influence of ethnicity on plasma p-tau217

- We found no influence on plasma p-tau217 concentrations



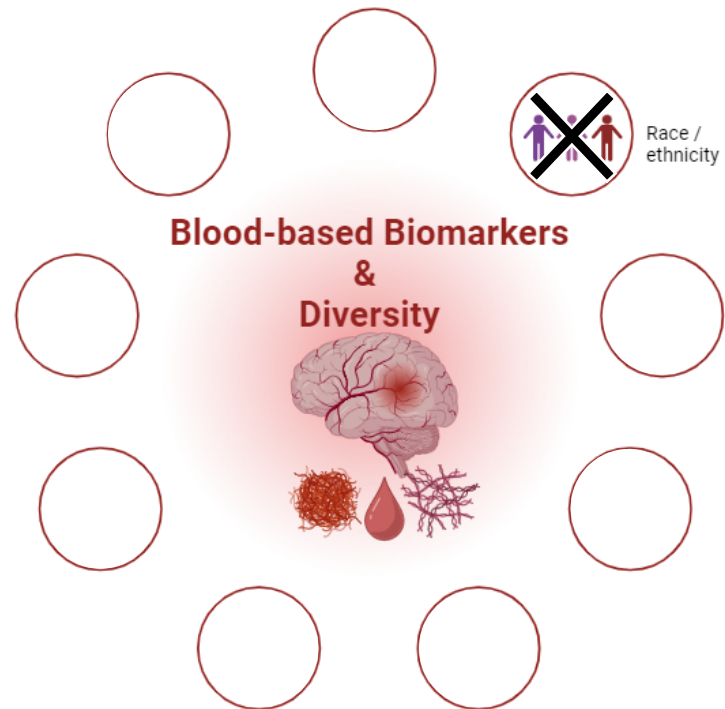
We examined the influence of ethnicity on plasma p-tau217

- We found no influence on plasma p-tau217 concentrations
- And no influence on diagnostic accuracy



We examined the influence of ethnicity on plasma p-tau217

- We found no influence on plasma p-tau217 concentrations
- And no influence on diagnostic accuracy
- Other variables did influence p-tau217



Other known factors affecting plasma biomarkers

Received: 31 March 2023 | Revised: 2 June 2023 | Accepted: 7 June 2023
DOI: 10.1096/fj.202300620RR

RESEARCH ARTICLE

the FASEB Journal

Infection promotes Ser-214 phosphorylation important for generation of cytotoxic tau variants

Ron Balczon^{1,2} | Chung-Sik Choi^{2,3} | Althea deWeever^{2,3} | Chun Zhou^{2,3} | Meredith S. Gwin^{2,3} | Claire Kolb^{1,2} | C. Michael Francis^{2,3} | Mike T. Lin^{2,3} | Troy Stevens^{2,3}

Article <https://doi.org/10.1038/s41467-025-57144-7>

Phosphorylated tau 181 and 217 are elevated in serum and muscle of patients with amyotrophic lateral sclerosis

Received: 31 August 2024 | Accepted: 12 February 2025 | Published online: 05 March 2025
Check for updates
Samir Abu-Rumeileh^{1,11}, Lella Scholte^{1,11}, Alexander Mensch¹, Henning Großkopf¹, Antonia Ratti^{1,2,3}, Anna Kölsch¹, Gisela Stoltenberg-Dikinger^{3,4}, Julian Conrad⁵, Anna De Gobbi², Lorenzo Barba¹, Petra Steinacker¹, Hans-Wolfgang Klafki⁶, Patrick Oeckl^{7,8}, Steffen Halbgebauer^{9,10}, Caroline Stapf¹, Andreas Poser¹, Thomas Kendzierski¹, Vincenzo Silani^{1,2,3}, Lucrezia Hausner¹⁰, Nicola Ticozzi^{2,3}, Lutz Froelich¹⁰, Jochen Hans Weishaupt^{2,7}, Federico Verde^{2,9} & Markus Otto¹



Neuronal plasma biomarkers in acute ischemic stroke

Julia K Gundersen^{1,2,*}, Fernando Gonzalez-Ortiz^{3,4,*}, Thomas Karikari^{3,5}, Bjørn-Eivind Kirsebom¹, Katrin Mertes⁶, Henrik Zetterberg^{3,4,7,8,9,10}, Hlin Kvartsberg^{3,4}, Ole Morten Rønning^{1,11}, Berglind Gisladóttir^{1,12}, Kaj Blennow^{3,4,#}, and Tormod Fladby^{1,11,#}

- APOE carriers
- BMI
- Kidney function (CKD/eGF)
- Hemoglobin
- Infections (CRP)
- Prostate cancer
- Cardiac arrest
- Ischemic stroke
- TBI
- ALS
- Newborns

89–7701

Mitotic phosphorylation of Tau/MAPT modulates cell cycle progression in prostate cancer cells

Letizia Clementi¹ · Samantha Sabetta¹ · Veronica Zelli^{1,2} · Chiara Compagnoni¹ · Alessandra Tessitore^{1,2} · Vincenzo Mattei³ · Adriano Angelucci¹

Received: 9 July 2024 | Revised: 2 October 2024 | Accepted: 3 October 2024
DOI: 10.1002/alz.14368

RESEARCH ARTICLE

Alzheimer's & Dementia[®]
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Original Investigation | Neurology

Association of Serum Brain-Derived Tau With Clinical Outcome and Longitudinal Change in Patients With Severe Traumatic Brain Injury

Fernando Gonzalez-Ortiz, MD, MSc; Maciej Dulewicz, PhD; Nicholas J. Ashton, PhD; Przemyslaw R. Kac, MSc; Henrik Zetterberg, MD, PhD; Emma Andersson, MD; Yara Yakoub, BSc; Jörg Hanrieder, PhD; Michael Turton, PhD; Peter Harrison, MA; Bengt Nellgård, MD, PhD; Thomas K. Karikari, PhD; Kaj Blennow, MD, PhD

Research

JAMA Neurology | Original Investigation

medRxiv [Preprint]. 2025 Mar 24;2024.12.20.24319360. [Version 2] doi: [10.1101/2024.12.20.24319360](https://doi.org/10.1101/2024.12.20.24319360)

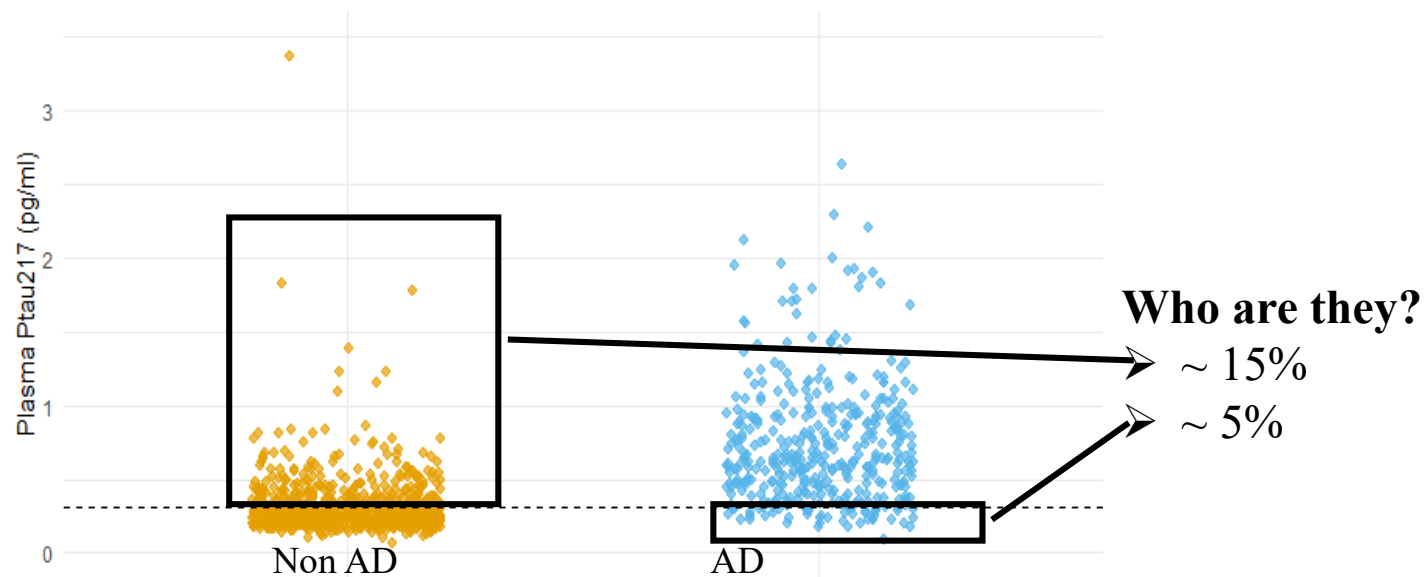
Umbilical cord blood pTau217 and BD-tau are associated with markers of neonatal hypoxia: a prospective cohort study

Emma Payne¹, Fernando Gonzalez-Ortiz^{2,3}, Kaitlin Kramer^{4,5}, Thomas Payne^{4,5}, Shreeya Marathe⁵, Neha Mahajan⁵, Ashly Liu⁵, Jessica Barry⁵, Andrew Duckworth⁵, Mitchell Brookes⁵, Bradley de Vries^{6,7}, Benjamin Moran^{8,9}, Helen Manning¹⁰, Adrienne Gordon^{4,6}, Kaj Blennow^{2,3}, Henrik Zetterberg^{11,12}, David Zalcberg^{4,5}, Robert D Sanders^{4,5}

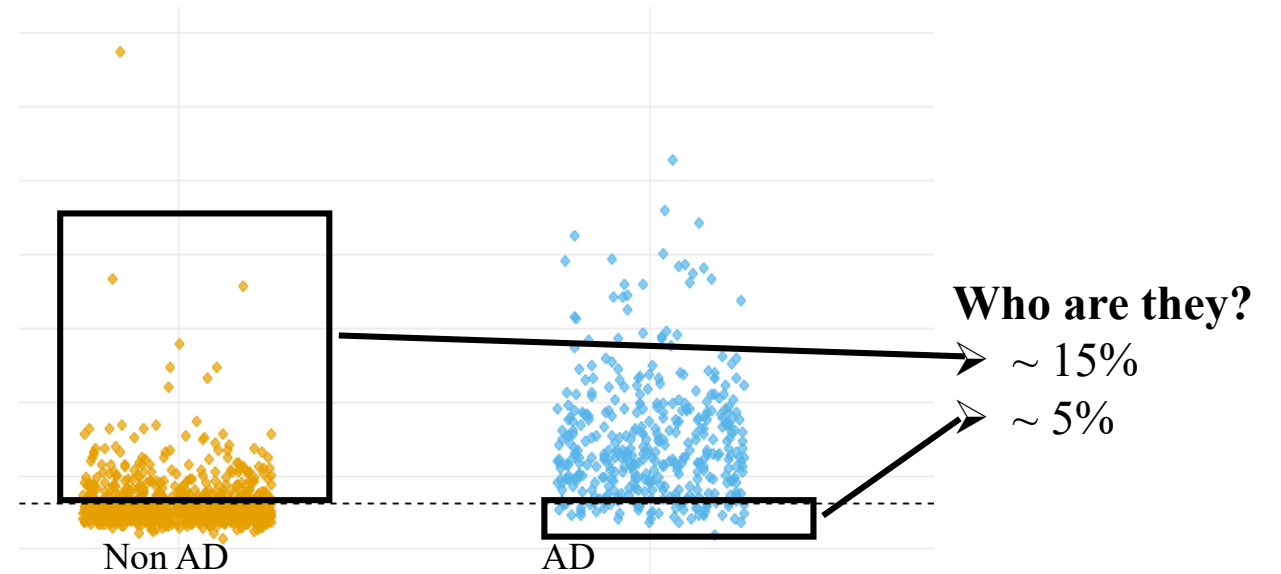
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Wise, PhD;
obias Cronberg, PhD;

- APOE carriers
- BMI
- Kidney function (CKD/eGFR)
- Hemoglobin
- Infections (CRP)
- Prostate cancer
- Cardiac arrest
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- APOE carriers
- **BMI**
- **Kidney function (CKD/eGFR)**
- Hemoglobin
- Infections (CRP)
- Prostate cancer
- Cardiac arrest
- Ischemic stroke
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- **Normal Pressure Hydrocephalus**



Thank you for your attention!

Thank you to

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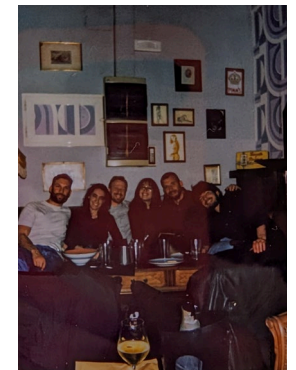


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My wonderful Italian colleagues



FUNDING

This project was supported by Innovation Fund Denmark (1099-00022B) under the frame of ERA PerMed (ERAPERMED2021-184)

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