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# Older Australian Twins Study (OATS)

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# Why twins?



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# Why twins?

The Older Australian Twins Study (OATS) aims to determine what influences memory and thinking as we age.



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# Older Australian Twins Study (OATS)

- 740 twin participants
- 342 twin pairs, 56% identical twins
- Aged 65 – 90 years at first assessment
- Assessed up to 6 times between 2006 and 2023
- 3 recruitment phases:
  - OATS (2006 – 2012)
  - OATS PET (2016 – 2017)
  - OATS Online (2020 – 2021)



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# OATS and OATS PET



Participant questionnaires/assessments

Study partner questionnaires

Blood sample for chemistry and genetics



MRI and/or PET scan for brain features

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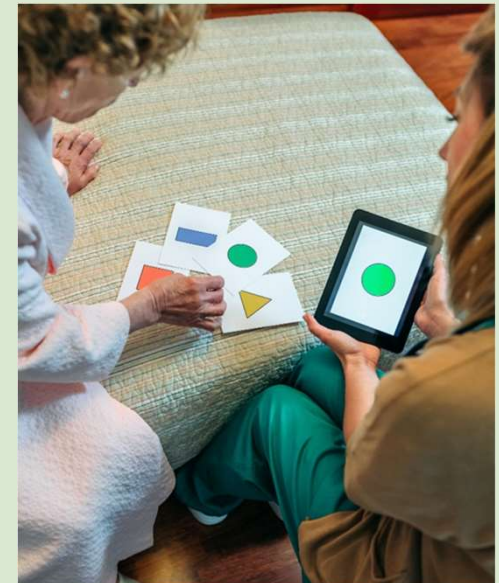
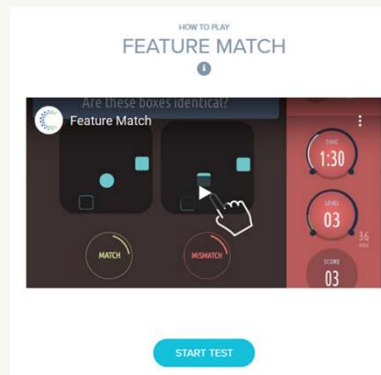


# OATS Online

Online participant questionnaires

Online study partner questionnaires

Online cognitive assessments



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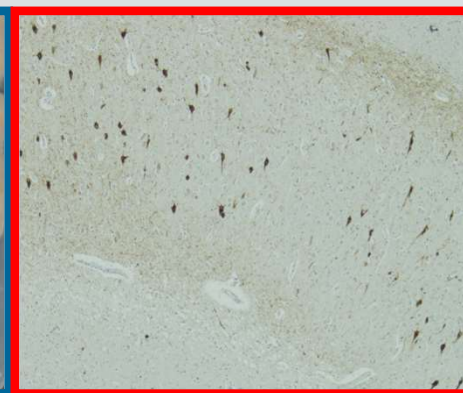
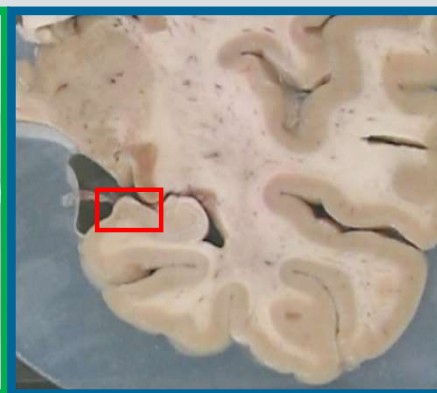






# Brain donations

| Study        | Consented  | Deceased  | Donated   |
|--------------|------------|-----------|-----------|
| MAS          | 114        | 73        | 53        |
| SCS          | 18         | 15        | 12        |
| OATS         | 55         | 10        | 7         |
| <b>Total</b> | <b>187</b> | <b>98</b> | <b>72</b> |



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# Always in our hearts ...



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# What have we learned?

- OATS provides a unique breadth and depth of data in a large sample of twins.
- OATS data have been used in >120 projects.
- Findings have been described in ~100 papers.



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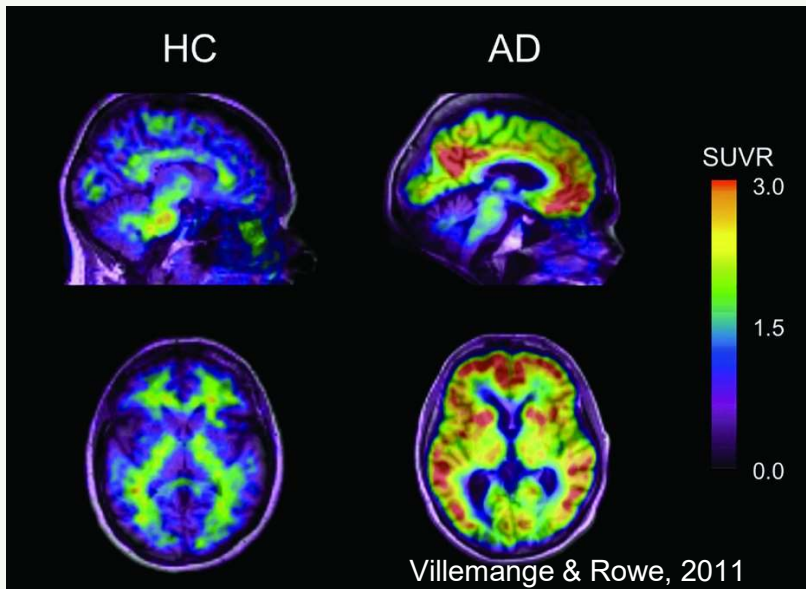


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# What have we learned?

PET brain scans can quantify beta-amyloid, a protein that accumulates in the brain very early on in the development of Alzheimer's Disease.



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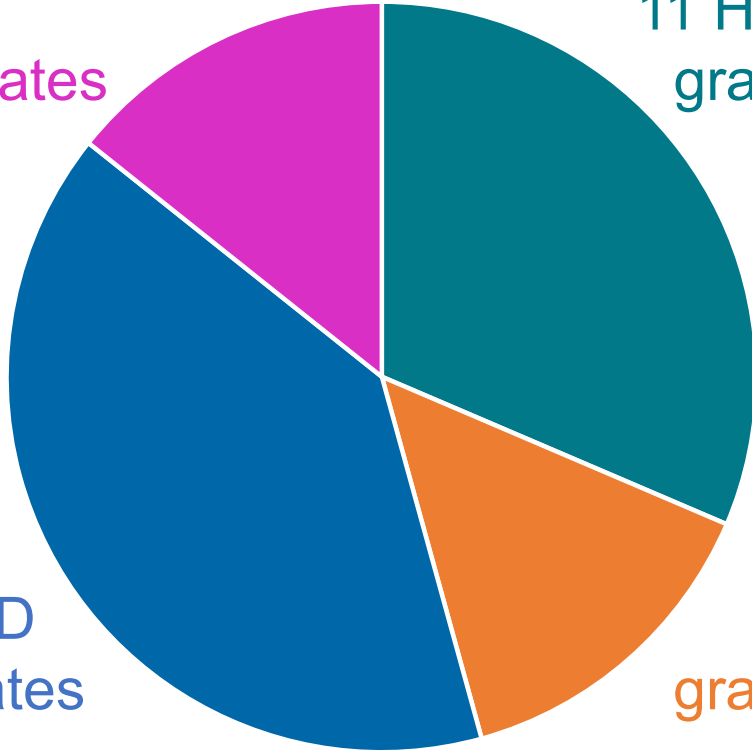
# Research students

5 PhD  
candidates

11 Honours  
graduates

16 PhD  
graduates

5 MSc  
graduates



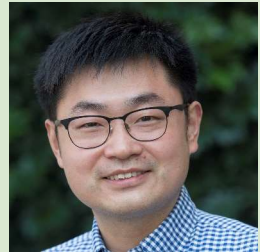
**Dr Lee**



**Dr Batouli**



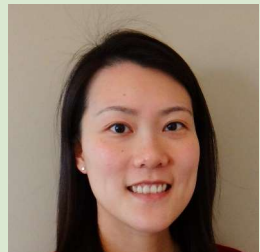
**Ms Kanchibhotla**



**Dr Jiang**



**Dr Tsang**



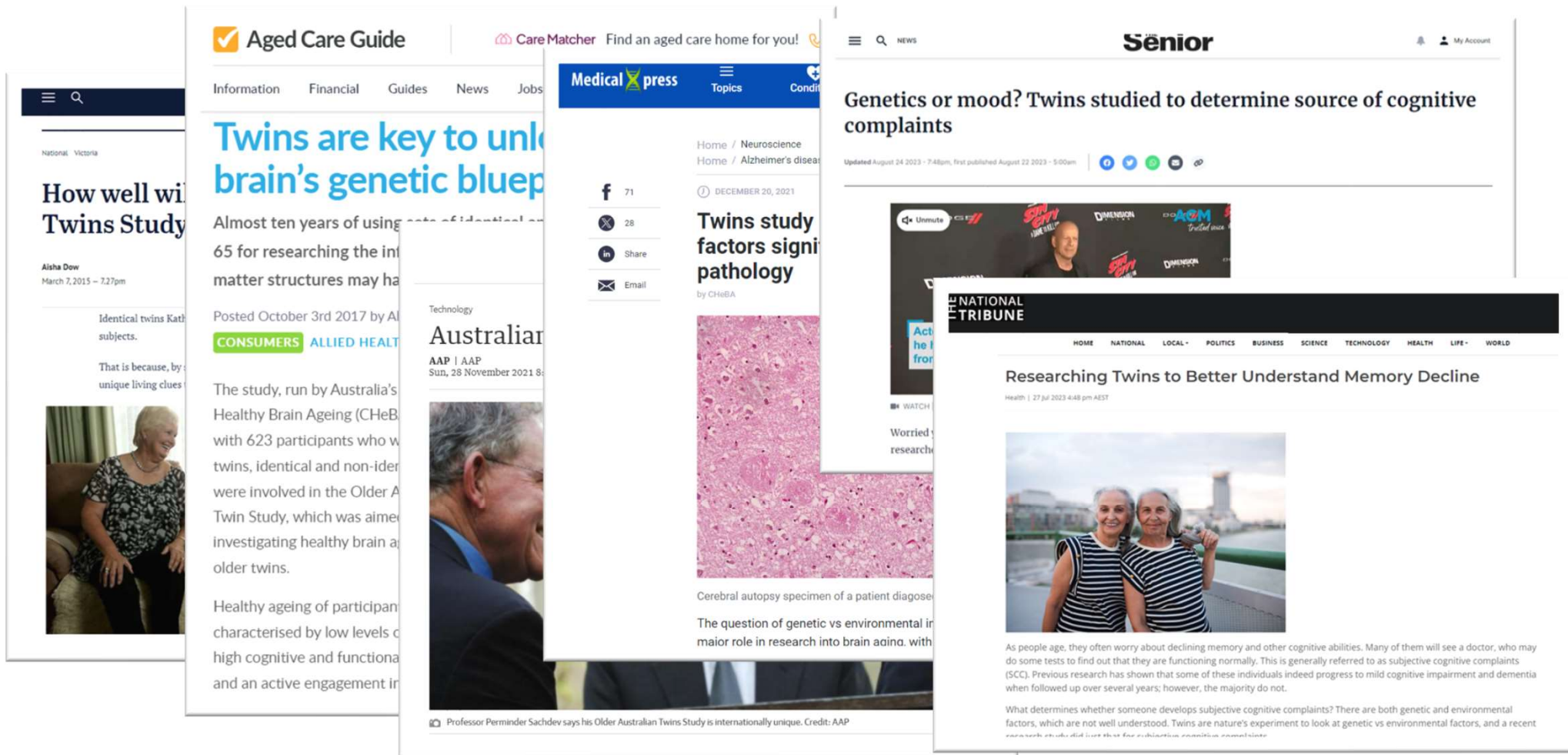
**Dr Wu**

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Thank you for your time: 21,000 hrs!



87 laps



5,118 episodes

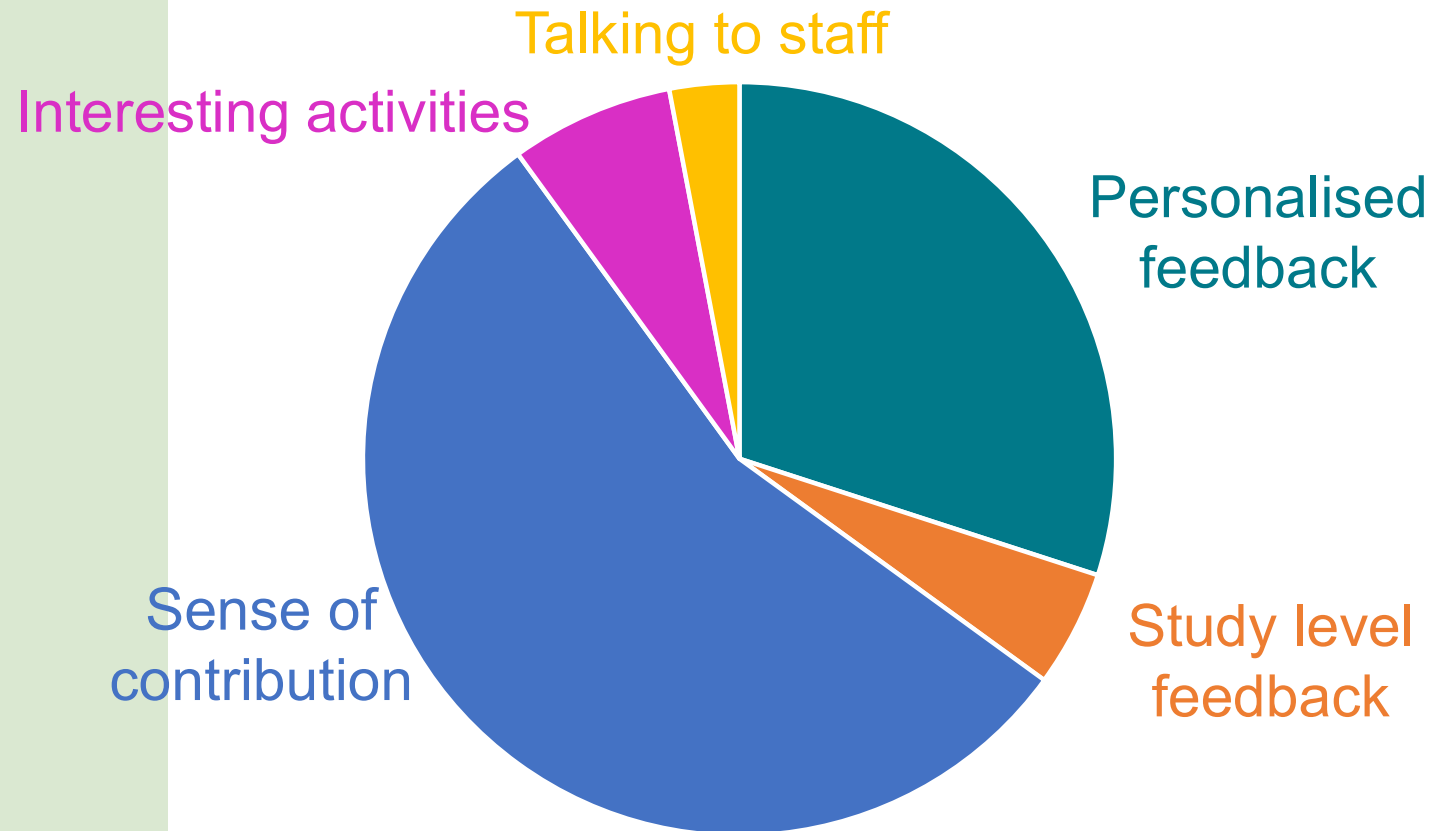


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# Why did you do it?



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# Thank you



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