

Tortuga a la llauna: 50,000+ year old direct evidence of Neanderthal cooking techniques



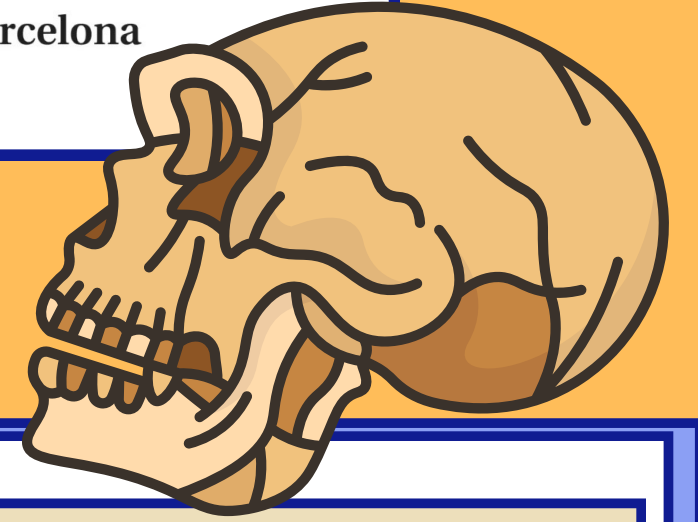
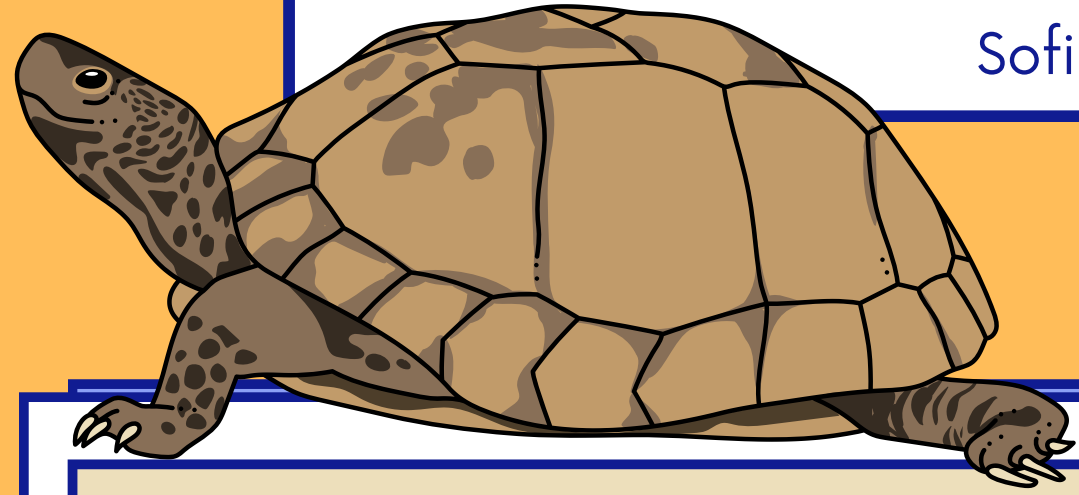
Australian
National
University

AUTHORS

Sofia C. Samper Carro, Rafael Mora Torcal, Jorge Martinez-Moreno, Susana Vega Bolivar

UAB

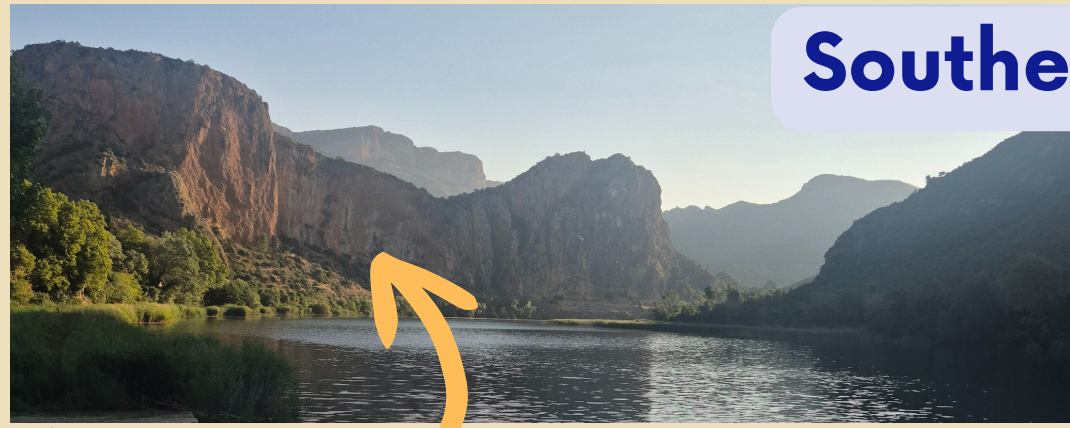
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In August 2024, excavating at Roca dels Bous (Lleida, Spain), we found what appeared to be a mostly complete carapace of European Hermann's tortoise (*Testudo h. hermanni*) dated to ca.50kya. We recorded, photographed and boxed the remains until September 2025, when we could analyse them. And here the adventure began..

Archaeological site

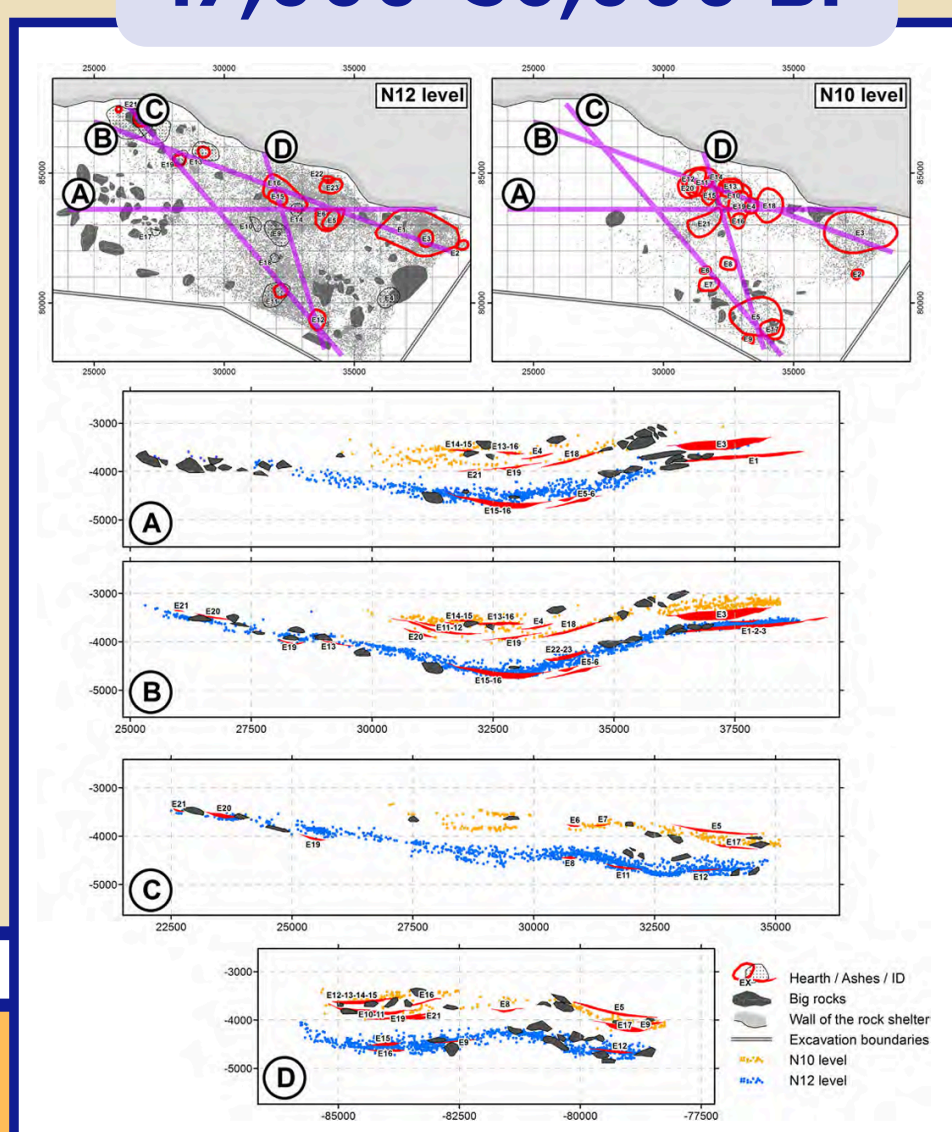
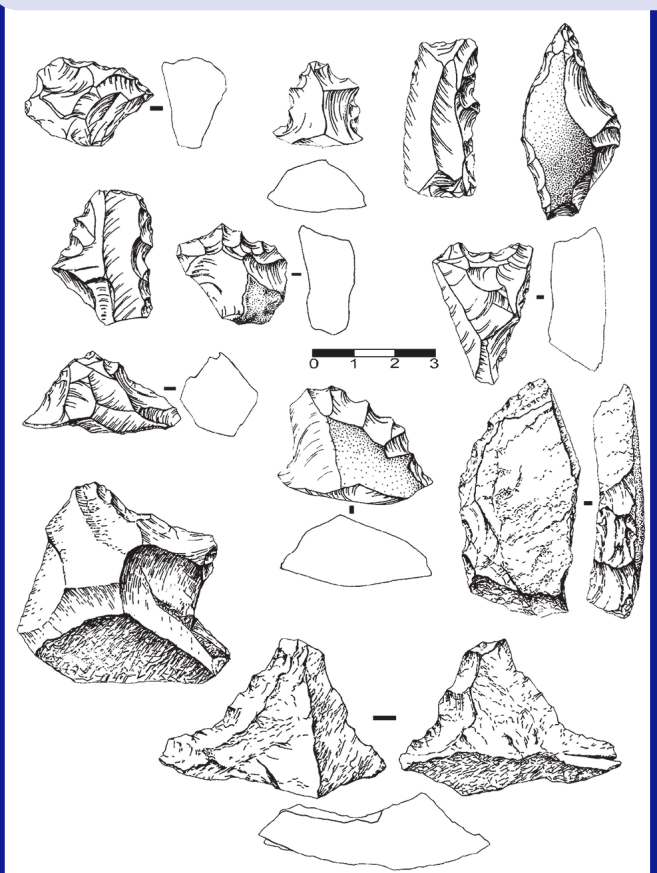
Southeastern Pre-pyrenees



ROCA DELS BOUS

Overlapping hearths,
47,000-53,000 BP

Mousterian tools



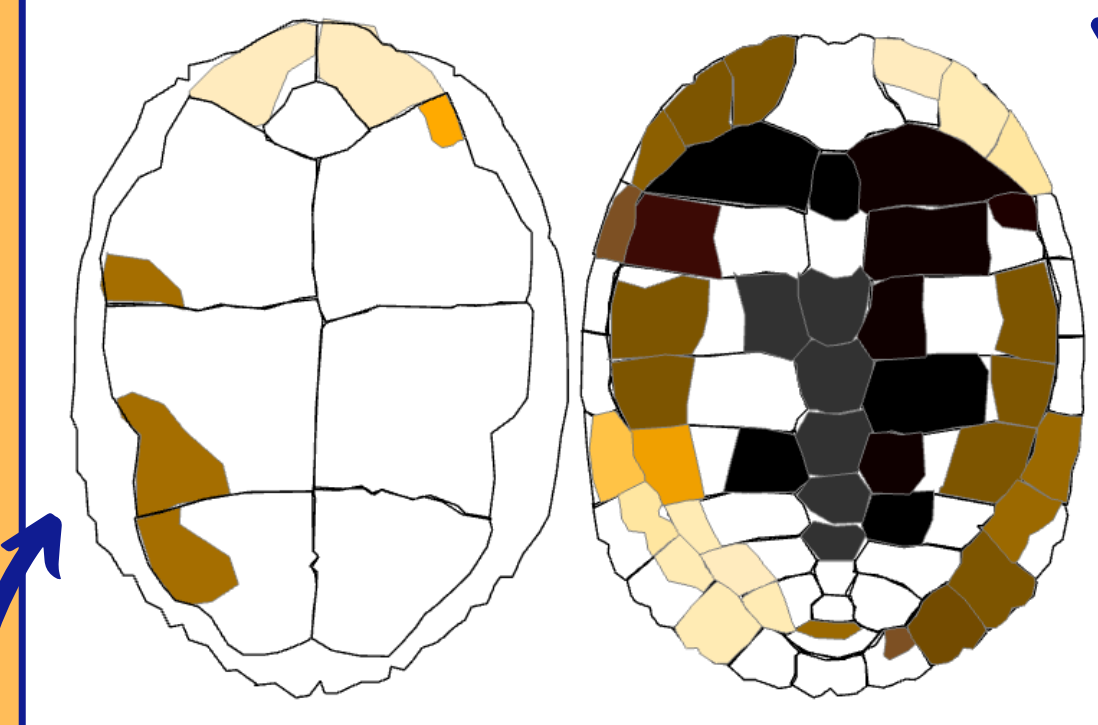
Research questions

- How did Neanderthals cook tortoise?
- Can we correlate feature with activity?

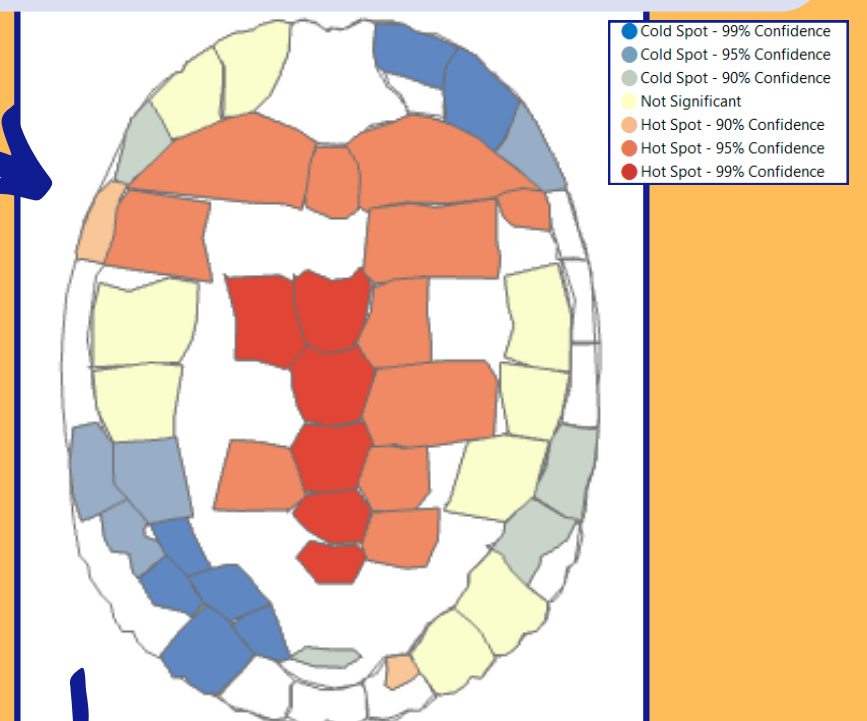
Methodology

- Refitting and digitization
- Burning evidence ID
- Hot spot spatial analysis
- GIS spatial analysis
- Reconstruction cooking practice

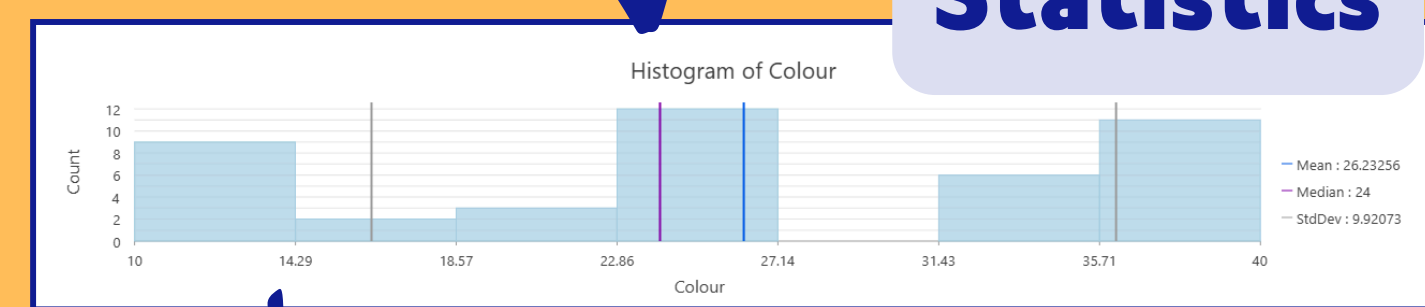
Digitization



Hot Spot Analysis



Statistics



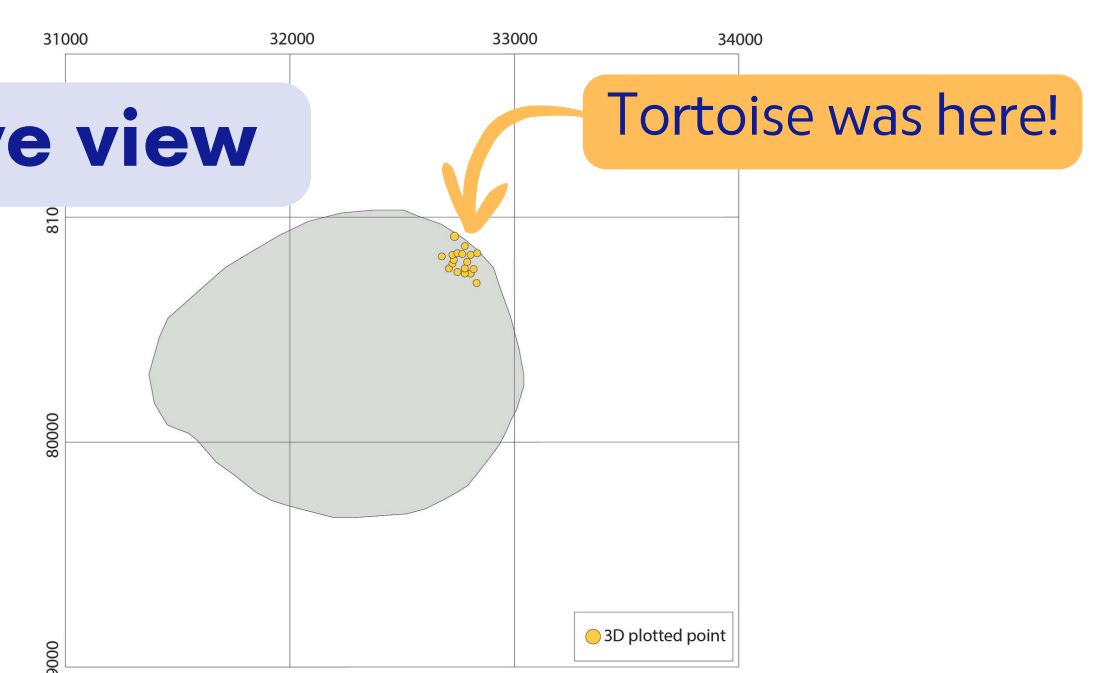
Tortoise Puzzle



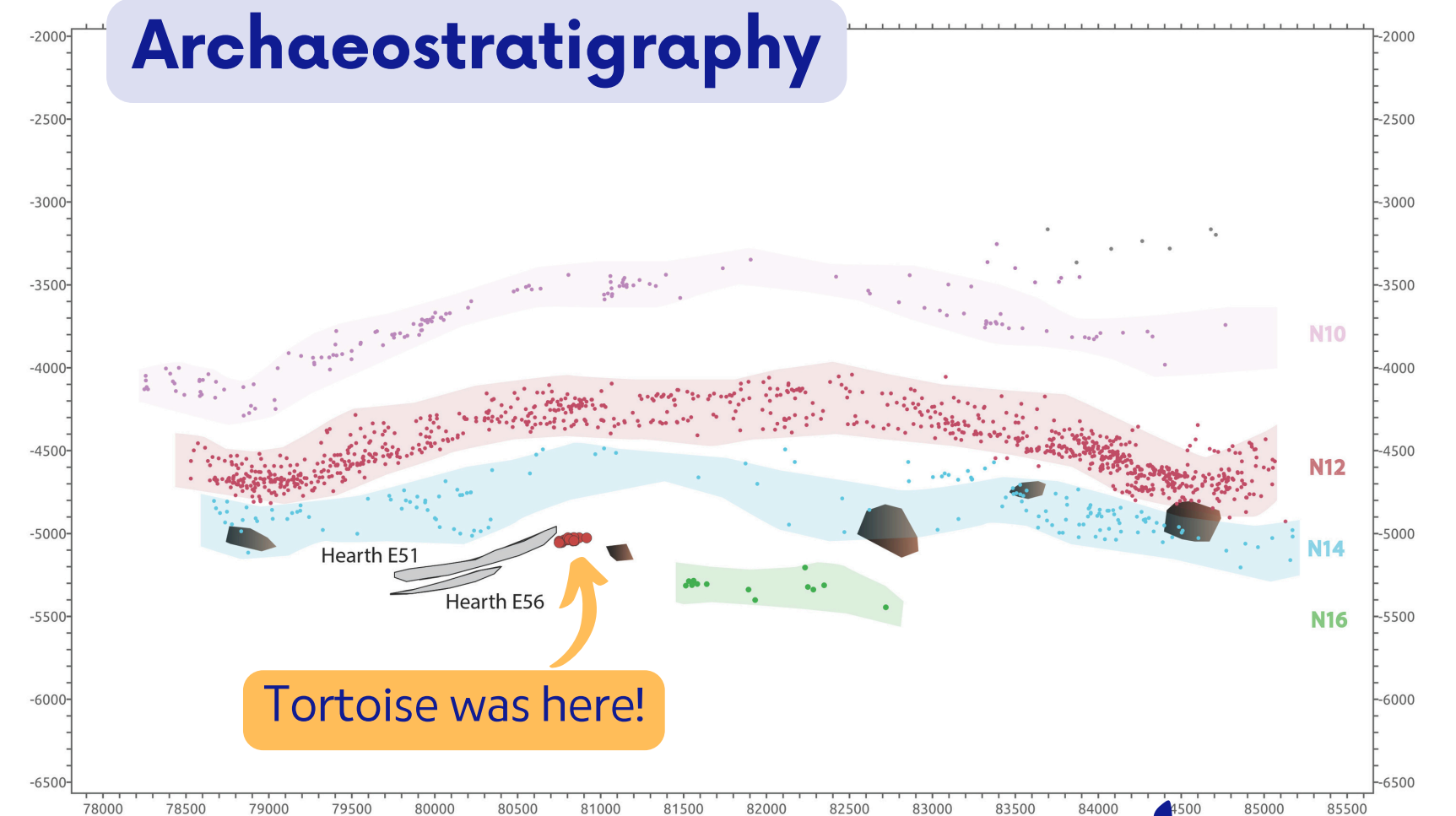
GIS spatial analysis

Location of tortoise & hearths

Bird's-eye view



Archaeostratigraphy



Conclusions

- Largest (and hottest) burning evidence on carapace's neural plates
- Limited damage on plastron, but highly fragmented
- Spatially related to hearth feature (e51) identified in archaeological unit N14
- **Cooked resting on carapace and access to meat through plastron**

Scene Reconstruction



Illustration by Patricia del Amo

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VIDEO

ACKNOWLEDGEMENTS

