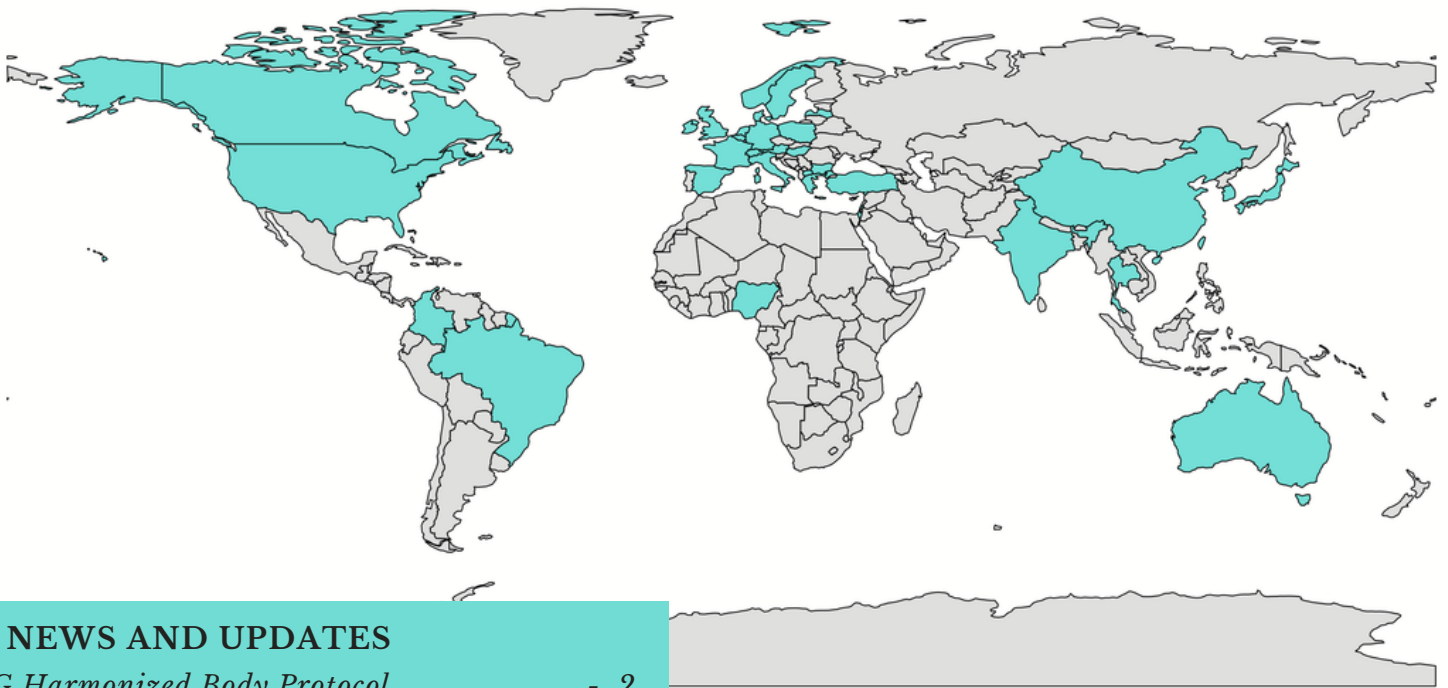




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As we move forward with our mission in 2026, we do so with a deep appreciation for the resilience and dedication of the HSG community. Even after a year of many unexpected twists and turns, we have made substantial progress toward our shared mission - thanks to the time, expertise, and generosity of our members. It has been a privilege to advance the science together while continuing to strengthen and expand our community.

In early 2026, our manuscript detailing the harmonized protocol for hippocampal body subfield segmentation was published in *Hippocampus*. In addition, the manuscript describing the tail protocol has been submitted and is under review. We continue to expand and refine the resources available to the community and continually provide new opportunities to support adoption and implementation of the protocol.

We look forward to continuing this important work, and to staying connected with the HSG community throughout 2026 and beyond.

Cheers,
Gustaf Rådman (Chair), Savannah Tremblay, Jenna Jubeir
HSG Communication Working Group



HSG HARMONIZED BODY PROTOCOL

Manuscript published in Hippocampus

In early 2025, the manuscript detailing the development of the harmonized protocol for hippocampal body subfields was submitted and made available as a preprint on bioRxiv. We are pleased to announce that it has now been published in *Hippocampus*: <https://dx.doi.org/10.1002/hipo.70073>. We would like to thank everyone who helped guide the decisions shaping the final protocol—whether by participating in the initiative’s working groups or by responding to the distributed surveys. This was truly a community effort, and it is wonderful to see it come to fruition.

We have established a landing page for the HSG Harmonized Protocol project on the NeuroImaging Tools & Resources Collaboratory (NITRC), a free, web-based data and software sharing platform serving the global neuroscience community since 2007. NITRC is listed as an NIH-supported scientific data repository, an NLM domain-specific repository, and a neuroscience repository in Scientific Data. The body protocol, along with its training materials, is shared as part of the “Harmonized Protocol for Subfield Segmentation in the Hippocampus” project on NITRC. Available resources include: the full protocol document, training PowerPoint slides and accompanying documentation, and example MRI scans with expert manual segmentations of the hippocampal body.

We will continue to expand the shared materials as progress is made on additional protocols.

HSG NITRC Repository:

https://www.nitrc.org/projects/hsg_protocol



WORKING GROUP UPDATES

Updates from the HSG working groups and future plans in 2026

Hippocampal Head

The working group has developed a set of boundary rules for the inferior, superior, medial, and lateral borders, and for identifying the anterior-most and posterior-most slices of the hippocampal head. The segmentation protocol facilitates delineation of the dentate gyrus/cornu ammonis (CA) 3, CA2, CA1 and subiculum subfields. Given the complexity of hippocampal head, several geometric heuristics have been developed to best capture the likely location of subfields along the anterior-posterior axis of the hippocampal head based on a novel histological reference data set. Results presenting the drafted rules and protocol were shared as a poster at the 2024 Annual Meeting of the Society for Neuroscience. A draft of protocol for rules focused on the outer boundaries will be shared with the HSG community for feedback in the coming months.

Hippocampal Tail

Last year, following a Delphi consensus procedure conducted the year prior, the hippocampal tail protocol was finalized. The protocol underwent formal validation, with final reliability assessed on a set of 24 scans. Reliability testing was performed by three raters with varying levels of experience in hippocampal segmentation and differing familiarity with the protocol. The protocol demonstrated high intra- and inter-rater reliability, with averaged ICC values exceeding 0.98 and Dice Similarity Coefficients exceeding 0.86. A manuscript describing the development of the tail protocol and the validation results has been written, submitted for publication, and is currently available in preprint form here: <https://www.biorxiv.org/content/10.1101/2025.11.20.689476v1>

MTL Cortex

The draft of the MTL Cortex harmonized segmentation protocol was finalized in mid-2025. The segmentation protocol underwent feasibility testing by two expert raters naive to protocol development on four scans (two younger adults, two older adults with atrophy). Manual segmentation of all subregions demonstrated sufficient quantitative metrics (Dice and ICC values), qualitative assessments, and rater feedback of protocol implementation. Next, the segmentation protocol will move to questionnaire development to gain HSG community consensus through the Delphi procedure.



RICARDO INSAUSTI IN MEMORIAM WEBINAR

The Medial Temporal Lobe Through the Looking Glass

Our recent webinar celebrated the scientific legacy of Ricardo Insausti through perspectives spanning comparative anatomy, histology, neuroimaging, and community-building. Thank you all panel members, those who joined the webinar, and Laura Wisse and Hannah Tucker for organizing this wonderful event!

Menno Witter presented the “Insausti perspective” on hippocampal system organization. Revisiting the evolution of ideas about limbic circuitry—from early anatomical descriptions by Paul Broca to modern circuit models—he highlighted how Ricardo’s careful delineation of the entorhinal cortex provided a shared anatomical framework for the field. By refining its subdivisions and connections, Insausti emphasized that precise structural knowledge is essential for interpreting function and for comparing findings across species.

Monica Munoz Lopez reflected on Ricardo’s human hippocampal research, highlighting his meticulous dissections and cytoarchitectonic analyses. She emphasized how his histology revealed fundamental organizational principles, from preserved entorhinal and parahippocampal volumes in aging to detailed mapping of hippocampal efferent pathways. By bridging histology and MRI, Ricardo laid the foundation for decades of functional studies.

Paul Yushkevich focused on building probabilistic atlases of medial temporal lobe anatomy and neurodegenerative disease spread. Expanding on Ricardo’s early integration of histology and MRI, the UCLM–UPenn collaboration has generated the world’s largest collections of detailed medial temporal lobe annotations to date. These data now form the basis for automated MRI segmentation tools and new in vivo atlases, enabling more accurate tracking of disease progression and anatomical variability.

Laura Wisse described the work of the Hippocampal Subfields Group, highlighting the important contributions Ricardo has made to the efforts since its inception. By grounding subfield boundaries in histology, systematically testing feasibility, and conducting formal reliability analyses, the group aims to reduce discrepancies across protocols and improve comparability between studies—an effort closely aligned with Ricardo’s commitment to anatomical precision.

Finally, **Ana Insausti** reflected on Ricardo’s academic journey: his devotion to teaching, his hands-on leadership in human brain banking, and his gift for mentorship. Friends and colleagues also shared personal memories, highlighting the workshop in Albacete—organized by Ricardo and his team at the University of Castilla-La Mancha—as a defining and career-shaping experience.

For those of you who missed the event, video recordings are available on our YouTube channel: <https://www.youtube.com/watch?v=CzCmHo7AfsU>



HSG PROTOCOL TRAINING WORKSHOPS

Early in 2026, we have kept busy running two workshops covering the currently validated parts of the HSG protocol.

First, in May, a workshop was hosted by the Institute of Gerontology at Wayne State University, Detroit, MI where attendees had the opportunity to learn the body protocol. There were a total of 18 attendees with a variety of previous experience with hippocampal subfield segmentation.

Special thanks to Dr. Ana Daugherty and Dr. Roya Homayouni for leading the workshop!



Following OHBM 2026, a symposium and workshop was held at the University of Bordeaux. Prior to the workshop, attendees had the chance to first hear about new research involving hippocampal subfields during a half-day symposium.

Despite the ongoing heatwave, attendees persisted in what was a successful and fun event!

A special thanks to:

- All speakers at the symposium
- Dr. Robin de Flores for organizing the workshop
- Dr. Rosanna Olsen, and Gustaf Rådman for leading the workshop
- Dr. Marshall Dalton for his updates on the Hippocampal Head Working Group
- Savannah Tremblay for providing in-person training support for attendees
- Léa Chauveau for her on-site organizational support

