

GEMSTONE Project

Newsletter 2025

This annual magazine presents a curated overview of GEMSTONE's activities and results in 2025, covering both technical progress and capacity-building achievements during the project's final year.



Excellence in
Neuroscience



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the European Union



Editorial

2025 marks the final year of the GEMSTONE Project. Over the past three years, GEMSTONE has combined advanced neuroscience and gene-engineering research with a strong, hands-on approach to institutional capacity building. In 2025, the consortium concentrated on three priorities:

- consolidating scientific outcomes and sharing technical know-how;
- strengthening research support services and management practices through targeted training and peer learning; and
- scaling visibility and policy impact by engaging students, the public, peer institutions, and decision-makers.

This final newsletter reflects that integrated approach. It features major scientific and technical milestones, capacity-building actions that upgraded skills and processes across ACU, and a selection of outreach and networking activities that broadened the project's footprint across Turkey and Europe.

As the project concludes on 31 December 2025, the consortium's focus also turns toward sustainability: ensuring that the capabilities, methods, partnerships, and policy contributions generated by GEMSTONE continue to inform future collaborations and initiatives beyond the project's duration.

We warmly thank all researchers, research managers, trainers, speakers, visiting researchers, students, advisors, partner organisations, institutional leaders, sister projects, and other stakeholders who contributed to GEMSTONE's success.



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About the project

GEMSTONE is a Horizon Europe-funded Twinning project that supports excellence and convergence in the European Research Area by strengthening research and innovation capacity in Widening countries.

In GEMSTONE, Acıbadem Mehmet Ali Aydınlar University (Turkey) works with Lund University (Sweden) and Fondazione ICONS (Italy) to advance gene engineering technologies and neuroscience research, with a particular focus on the neurodevelopmental mechanisms of brain disorders such as epilepsy and Parkinson's disease.

The project also delivers targeted actions to professionalise research support services, enhance institutional processes, and increase international collaboration and visibility.



2025 at a glance

- **Major public outreach in neuroscience:** ACU NeuroConnect brought together 352 attendees from 48 institutions, including students, young researchers, and international partners.
- **Regional research capacity-building dissemination:** the chemogenetics dissemination event gathered 36 attendees, including 14 speakers/moderators and 22 participants (13 external to ACU).
- **Comprehensive soft skills training for proposal success:** the three-day comprehensive Mastering Horizon Europe programme was attended by 30 participants across diverse departments at ACU.
- **Strategic networking and dissemination for widening impact:** the regional Info Day co-organised with Trakya University attracted 123 participants from national and international institutions.
- **Research management knowledge exchange:** GEMSTONE presented best practices to 37 research managers at the University of Malta's Research Managers International Staff Week and shared around 40 printed copies of the project's best-practice guide.
- **End-of-project skills transfer and consolidation:** the final internal course on SOP development and digital laboratory notebook use was held with 21 participants from across ACU.



2025 highlights: Technical results

In 2025, GEMSTONE continued to consolidate technical expertise in neuroscience and gene engineering, while promoting knowledge transfer through seminars, short-term scientific visits, and hands-on laboratory training. Key achievements included advanced capacity building in chemogenetic experiments, strengthened workflows for genetically engineered animal models, and dissemination of scientific insights through conferences and public events.

Feature story: Building capacity in chemogenetics

In June, ACU hosted a two-day dissemination event focused on developing research capacity for chemogenetic experiments from scratch. Designed as an experience-driven programme, the event shared the consortium's practical, trial-and-error journey in building infrastructure, teams, and protocols, and highlighted GEMSTONE's research outcomes on epilepsy and related disorders. The programme combined scientific plenaries with capacity-building sessions on team and time management, infrastructure planning, financial oversight, and data stewardship, enabling participants to adapt the approach to their own institutions.



Feature story: Strengthening gene-engineering workflows and IVF capacity

Throughout the year, GEMSTONE reinforced practical competencies for genetically engineered mouse models. After the April workshop on engineered mouse models and IVF techniques, ACU-DEHAM hosted an advanced hands-on course in November to enable in-house IVF procedures, supported by short-term expertise from Lund University's Transgenic Core Facility. The training addressed laboratory setup requirements, SOP development, live demonstrations, and hands-on practice, helping ACU-DEHAM accelerate the development of high-quality models essential for cutting-edge neurodevelopmental research.



2025 highlights: Institutional transformation

Capacity building remained central to GEMSTONE in 2025. The project invested in people and processes: training researchers and research support staff, enabling peer learning through short-term visits, and sharing practical tools that can be replicated across the Widening region.

Feature story: Research support excellence and proposal skills

In March, GEMSTONE supported professional development for research support services through international training and internal knowledge-transfer seminars. In May, the three-day “Mastering Horizon Europe” training equipped ACU researchers and research managers with proposal planning, consortium building, and networking skills aligned with Horizon Europe 2025 priorities. These actions strengthened ACU’s institutional readiness to lead and participate in competitive EU projects.



2025 highlights: Policy & visibility

GEMSTONE expanded its regional and European footprint through strategic networking, policy engagement, and outreach. In 2025, the project connected with peer universities, research managers, innovators, and policymakers, while increasing visibility through public engagement events and dissemination activities.

Feature story: Knowledge products for the Widening community

GEMSTONE released a flagship guidebook, “Making It Work: GEMSTONE Project’s Better Practices for Horizon Europe Newcomers,” capturing lessons learned and practical strategies developed across the consortium. The guide organises 12 “better practices” across four pillars – communication, financial management, institutional capacity, and operational flexibility – offering adaptable starting points for institutions strengthening their research support systems. In parallel, GEMSTONE coordinated a joint policy brief, “Twinning for Europe’s Competitiveness: Keeping Excellence Connected Across All Regions,” which consolidates evidence from multiple Twinning projects and calls for strengthened and sustained support for Twinning under WIDERA.

- Click [here](#) to watch the promotional video of the guidebook!



Feature story: Outreach at scale – ACU NeuroConnect

ACU NeuroConnect, organised under GEMSTONE, brought together students, young researchers, and experts for a one-day neuroscience event designed to inspire the next generation. With a large and diverse attendance, the programme combined keynote and invited talks, lightning sessions, poster presentations, and interactive activities, strengthening public visibility and student engagement while showcasing GEMSTONE's mission and results.

- Click [here](#) to watch the video clip from the event!



2025 highlights: Governance & sustainability

As GEMSTONE entered its final phase, the consortium focused on completing deliverables, consolidating outputs, and preparing for closure. In November, the partners convened for the final Steering Board meeting in Istanbul to review progress and align on administrative and reporting steps. In December, the project held its final Independent Advisory Board meetings in two sessions, gathering strategic feedback on outcomes, impact, sustainability, and pathways for replication beyond the project duration.



2025 news digest

Here is a chronological digest of GEMSTONE updates throughout 2025!
Click on the **news headlines** to read more!

10 January 2025 | GEMSTONE researchers publish new paper on role of glial cells in epilepsy

The GEMSTONE researchers Filiz Onat, My Andersson, and Nihan Çarçak Yılmaz have published a new article in the open-science journal Cells. Their article, “The Role of Glial Cells in the Pathophysiology of Epilepsy,” explores how glial cells, including astrocytes, microglia, and oligodendrocytes, contribute to the mechanisms of epilepsy.

11 January 2025 | ACU Library and GEMSTONE Project shines at Health Literacy Summit

Ayça Aydemir Mazlumoğlu, Library and Electronic Resources Director at ACU, captivated audiences at the Health Literacy Summit held at Istanbul’s Rami Library, delivering a highly engaging presentation titled “From Research to Practice: The Role of Librarians in EU Projects in Health-Themed Universities.”

24 January 2025 | GEMSTONE seminar highlights cutting-edge research on astrocytes in neurodegenerative diseases

The GEMSTONE Project and ACU Neuroscience PhD Programme proudly hosted a seminar led by Asst. Prof. Büşra Şengül Yediel from the Neuroimmunology Department at Institute of Neurological Sciences, Istanbul University Cerrahpaşa.

20 February 2025 | ACU strengthens international collaboration through GEMSTONE networking meeting with Skopje University

Researchers from ACU held a pivotal online networking meeting with Prof. Vlatko Ilieski of Saints Cyril and Methodius University in Skopje, as part of the GEMSTONE Project. The meeting aimed to reinforce ACU’s role as a key player in the international scientific community, explore new collaborative opportunities, and showcase GEMSTONE’s innovative contributions to neuroscience and gene engineering technologies.

25–27 February 2025 | ACU reinforces international ties through GEMSTONE networking visit to London

In a significant step towards fostering international collaboration, the GEMSTONE Principal Investigator, Prof. Filiz Onat, conducted a high-impact networking visit to London. The visit aimed to establish new research partnerships, explore funding opportunities, and showcase GEMSTONE’s innovative contributions to ACU’s capacity building in neuroscience and gene engineering.

11 March 2025 | ACU’s GEMSTONE networks with UPol on future collaborations

As part of the GEMSTONE Project’s strategic networking activities, ACU research managers held an online meeting with Hana Owsiankova from the Grant Office of Palacky University in Olomouc.

20 March 2025 | GEMSTONE seminar showcases best practices in research support from ULUND library

ACU hosts an engaging knowledge transfer seminar highlighting open science, research data management, and research support strategies inspired by ULUND library, as a continuation of the GEMSTONE Project’s capacity-building activities.

21 March 2025 | GEMSTONE meets 8D Games: Exploring synergies in digital health and neuroinnovation

The GEMSTONE Project hosted an inspiring virtual meeting with Dutch-based serious gaming company 8D Games, opening doors for future collaboration in the field of neuroscience, mental health, and digital rehabilitation.

24–28 March 2025 | GEMSTONE team strengthens research support skills at Horizon Europe Academy

Europa Media training in Lisbon marks a new milestone in capacity-building efforts under GEMSTONE. As part of the project's mission to boost ACU's research support capacity, two key members of the ACU team participated in the prestigious Horizon Europe Academy training programme.

8–11 April 2025 | Prof. Filiz Onat presents GEMSTONE research at Synuclein Meeting 2025 in Cambridge

Prof. Filiz Onat, Principal Investigator of the GEMSTONE Project, represented ACU at The Synuclein Meeting 2025 held at the University of Cambridge with a poster presentation.

16 April 2025 | GEMSTONE Project fosters inter-university collaboration with Trakya University

As part of the ongoing activities under GEMSTONE, a high-level networking meeting took place at ACU between representatives from ACU and Trakya University, aimed at exploring collaborative opportunities and foster stronger ties between the two institutions in EU-funded research.

24 April 2025 | GEMSTONE Project hosts capacity-building workshop on genetically engineered mouse models and IVF techniques

ACU researchers and international experts gathered to strengthen gene engineering and translational neuroscience capabilities.

29 April 2025 | GEMSTONE Principal Investigator meets with Harvard Medical School's Dr. Baştepe

ACU welcomed Dr. Murat Baştepe of Harvard Medical School for a high-level networking meeting with Prof. Filiz Onat, GEMSTONE Principal Investigator. The visit marked a significant step toward strengthening international research ties.

16–18 May 2025 | GEMSTONE researchers present scientific findings at national epilepsy symposium

Researchers from ACU's GEMSTONE Project – Prof. Filiz Onat, Nursima Mutlu, and Aylin Toplu – participated in the 8th Epilepsy Symposium held in Muğla, organised by the Turkish Society for the Fight Against Epilepsy.

21–23 May 2025 | ACU researchers gain strategic edge in EU funding through GEMSTONE's "Mastering Horizon Europe" training workshop

Three-day intensive soft skills training equips ACU researchers with essential knowledge and tools for successful Horizon Europe participation.

2 March – 29 May 2025 | GEMSTONE young researchers visit ULUND: Talat Taygun Turan investigating alpha-synuclein in brain tissue

Talat Taygun Turan of ACU undertook an intensive research period at the Lund University's BRAINS lab. His work focused on conducting total alpha-synuclein-targeted immunohistochemical staining on brain sections derived from double transgenic Nestin-cre:snca flox mice developed at ACU.

6 May – 7 June 2025 | GEMSTONE young researchers visit ULUND: Merve Çavuş learning dual-marker immunohistochemistry techniques

Merve Çavuş of ACU joined the BRAINS lab at Lund University to deepen her knowledge of immunohistochemical analysis. Her training provided her with first-hand experience in planning and executing immunohistochemistry experiments from start to finish.

13 June 2025 | GEMSTONE team joins MD-PhD Programmes Info Day to inspire future neuroscientists

As part of its commitment to outreach and capacity building, the GEMSTONE Project took part in the MD-PhD Programmes Info Day to introduce prospective students to the research and training opportunities offered at ACU. The event brought together aspiring medical students with an interest in advanced research.

17–18 June 2025 | GEMSTONE dissemination event empowers regional researchers to build capacity in chemogenetics

ACU hosts two-day dissemination event showcasing best practices and scientific impact in chemogenetic experiments from the GEMSTONE Project.

17–18 June 2025 | GEMSTONE strengthens regional and international collaboration through strategic networking activities

High-level meetings and networking reception during the GEMSTONE chemogenetic dissemination event lay the groundwork for future partnerships and cross-border knowledge exchange.

25 June 2025 | GEMSTONE intern Zeynep Kaya shares her experience at ACU in new video interview

The GEMSTONE Project is excited to share a new video interview featuring Zeynep Kaya, a rising senior at Oberlin College in Ohio, who joined the research group this summer as an intern. Zeynep's short but insightful video offers a personal perspective on what it's like to be part of a cutting-edge neuroscience lab at ACU.

10–12 July 2025 | GEMSTONE at EPNS 2025: Prof. Onat presents research on absence epilepsy in Munich

As part of the dissemination and networking activities of the GEMSTONE Project, Prof. Filiz Onat from ACU attended the 16th European Paediatric Neurology Society Congress, held in Munich.

21 July – 8 August 2025 | GEMSTONE engages future students at ACU's 2025 Open Days

As part of its outreach and visibility activities, the GEMSTONE Project participated in the ACU 2025 Open Days, with the aim to introduce prospective students and their families to ACU's academic environment, research ecosystem, and international opportunities.

19 August 2025 | New publication: GEMSTONE releases “Making It Work” – a guide to better practices for Horizon Europe newcomers

The GEMSTONE Project is proud to announce the release of its flagship publication, “Making It Work: GEMSTONE Project’s Better Practices for Horizon Europe Newcomers.” This new guidebook captures the lessons learned, tested methods, and pragmatic strategies developed by ACU and its partners throughout the implementation of the Horizon Europe-funded GEMSTONE Project.

30 August – 3 September 2025 | GEMSTONE team showcases epilepsy research at IEC 2025 in Lisbon

The GEMSTONE Project proudly marked its presence at the 36th International Epilepsy Congress, organized by the International League Against Epilepsy. The congress is one of the world's most prestigious scientific gatherings in the field of epilepsy, bringing together leading experts, researchers, and clinicians to exchange knowledge and advance solutions for people living with epilepsy.

4–6 September 2025 | GEMSTONE researchers establish IVF technology infrastructure for transgenic mice breeding at ACU

The GEMSTONE Project has reached an important milestone in advancing in-house capabilities for genetically engineered model organisms at ACU. Researchers at ACU's Experimental Animal Application and Research Centre (DEHAM) have successfully laid the groundwork for IVF procedures on transgenic mice – an essential step for accelerating neuroscience research and enabling the study of neurodevelopmental diseases.

9–12 September 2025 | Prof. Onat represents GEMSTONE at ECCN 2025 in London

Prof. Filiz Onat represented ACU's GEMSTONE at the 19th European Congress for Clinical Neurophysiology.

11–12 September 2025 | GEMSTONE team at Building Bridges 2025: Sharing best practices and exploring AI-driven collaboration in Dresden

Within the scope of the GEMSTONE dissemination and networking activities, Project Manager Cem Öztürk and Researcher Talat Taygun Turan represented ACU at the Building Bridges 2025. The conference, themed “Latest Findings in Artificial Intelligence,” gathered leading researchers, policymakers, and industry experts to discuss the transformative role of AI across science, healthcare, and industry.

3 October 2025 | ACU and TU join forces to strengthen regional collaboration in Info Day through networking and knowledge sharing

Within the scope of the GEMSTONE Project at ACU, a high-level joint event titled “International Cooperation Project Calls Information Day: Multilateral and Bilateral Collaboration Opportunities” was successfully organized in partnership with Trakya University's Project Coordination, Application, and Research Centre.

21–23 October 2025 | GEMSTONE exchanges best practices at University of Malta's Research Managers International Staff Week

Within the scope of the GEMSTONE Project, Project Manager Cem Öztürk and Dr. Cansu Akin Levi, Business Development and International Projects Expert at ACU Technology Transfer Office, took part in the Research Managers International Staff Week, hosted by the University of Malta.

12 November 2025 | New joint policy brief advocates for the reinstatement of Horizon Europe Twinning calls

The GEMSTONE Project at ACU is proud to announce the release of a new joint policy brief and its supplementary policy factsheets on Twinning calls, prepared collaboratively by eight sister Twinning projects under the GEMSTONE coordination, and now publicly available via Zenodo.

13–14 November 2025 | GEMSTONE Project hosts hands-on training on IVF applications for genetically engineered mouse models at ACU-DEHAM

As part of the capacity-building activities of the GEMSTONE Project, ACU's Experimental Animal Application and Research Centre (DEHAM) hosted an intensive hands-on course on breeding and crossing strategies for genetically engineered mouse models, focusing on IVF applications.

15 November 2025 | ACU NeuroConnect connects young minds with the frontiers of neuroscience

ACU proudly hosted its first neuroscience day, ACU NeuroConnect, a flagship outreach and dissemination event organised under the GEMSTONE Project. Designed to inspire the next generation of neuroscientists, the one-day event brought together an impressive 352 attendees from 48 institutions, offering a dynamic platform for scientific exchange, networking, and career exploration in the rapidly evolving field of neuroscience.

16 November 2025 | GEMSTONE Project holds final Steering Board meeting in Istanbul

Within the scope of GEMSTONE, the consortium gathered for its final Steering Board meeting at ACU Kerem Aydinlar Campus in Istanbul. The meeting brought together the project's core leadership team to review the project's final phase, reflect on the achievements delivered over the past three years, and ensure a smooth transition toward project closure.

17 November 2025 | GEMSTONE Project meets with the Swedish Consulate General in Istanbul

The GEMSTONE delegation met with senior officers of the Swedish Consulate General in Istanbul. The meeting took place at the historic Swedish Palace in Taksim and provided a valuable platform to present the project's achievements and explore future cooperation opportunities between Sweden and Turkey in the field of research and innovation.

17 November 2025 | ACU hosts short-term visit by Dr. Wright for advanced knowledge transfer

As part of the capacity-building activities of the GEMSTONE Project, ACU welcomed Dr. Courtney J. Wright of Lund University for a short-term scientific visit. The visit took place at ACU-DEHAM, where Dr. Wright collaborated closely with the GEMSTONE research team.

21 November 2025 | GEMSTONE Project showcased at Pharmacology Congress in Antalya

As part of the GEMSTONE dissemination activities, ACU proudly shared its latest scientific achievements with the wider pharmacology and neuroscience community. Prof. Filiz Onat represented the project at the 28th National and 3rd International Pharmacology Congress, organised by the Turkish Pharmacological Society.

2 December 2025 | GEMSTONE hosts final internal course on SOPs and digital lab notebooks

As part of its ongoing commitment to strengthening research capacity and enhancing institutional excellence, GEMSTONE successfully hosted its final internal capacity-building workshop titled “Understanding and Developing Standard Operating Procedures and Basic Principles and Best Practices for Digital Laboratory Notebook Use.”

8–15 December 2025 | GEMSTONE concludes final Independent Advisory Board meetings

The GEMSTONE Project successfully held its final Independent Advisory Board meetings in two dedicated sessions, marking an important milestone in the project’s lifecycle. The meetings brought together distinguished international experts who provided independent, strategic feedback on the project’s progress, outcomes, and long-term impact.

17 December 2025 | GEMSTONE releases new video interviews showcasing graduate education and R&I ecosystem at ACU

Within the scope of the GEMSTONE Project, two new short video interviews have been released to highlight ACU’s vibrant research, training, and innovation environment. The videos aim to promote ACU as an attractive destination for young students, early-career researchers, and innovators, encouraging them to pursue their training and professional careers within a strong, internationally connected academic ecosystem.

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