

## **BRIEF C.V.**

**Gönül Ö. PEKER (23.06.1949, Izmir, Turkey); Turkish, TR-CID #: 52159160234**

### **Affiliations:**

Em. Prof.Dr. Gonul O. Peker

Founding Secretary General and Past President of the Neuroscience Society of Turkey

Founder of the (very first international) Chapter of SfN in Turkey

Founder and Past Vice Director of the Ege University Center for Brain Research

The Leading BAW Coordinator in Turkey

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**Languages:**            **English:** Excellent;    **French & German:** Beginner – Early Intermediate Level

### **Education:**

2008-	MA (pending)	Education Management	EU, Graduate Social Sciences Institute, Faculty of Education
1976-1982	PhD	Medical Physiology	EU, Graduate Health Sciences Institute, Faculty of Medicine
1969-1973	BS & MSc	Physiotherapy-Rehabilitation	Hacettepe University, School of Health Sciences, Section of PTR, Ankara, Turkey
1960-1969	BA Letters-Humanitarians & BSc Math-Biology Programs		American Collegiate Institute (ACI) (A Unique High School & College) Izmir, Turkey

### **( Academic Promotions, Administrative & Educational Appointments**

2009-2014	Member	Committee for Creating and Developing Curriculum for the Bio-Medicine “Research Physician Tract” (Turkey’s First), EUFM
2009-	Member	Com. for Establishing the Integrated Dept. of Neurosciences and Developing MSc and PhD Programs, EU, Graduate Health Sciences
2008-	Member, Physiologists’ Representative	A Multidisciplinary Task Force for Developing Proper Medical Terminology in Turkish, Turkish Institute for (Turkish) Language Studies, Ankara, Turkey

2006-	Member	<b>Com. for Developing MSc and PhD Programs in Medical Physiology, EU, Graduate Health Sciences</b>
2006-2012	Dept. Chair	<b>EUFM, Basic Medical Sciences Section, Dept. of Physiology</b>
2006	Honor	The Progressive and Revolutionist Woman Leader of the Year Award Given by the Citizens and Civil Organisations of the Greater City of Izmir for Sustainable Community Outreach, Advocacy for Peoples' Enlightenment and Service, and Brain Awareness Activities for the Public
2003-2006	Member	EU Medical Education, 1st Year "Introduction to Biomedical Sciences Block Executive Com.
2003-	Member	<b>EU Medical Education, 2nd Year "Neuroscience" Block Executive Com.</b>
2003	Honorarium / Bursary	Salzburg Seminar of the WHO & World Bank on Innovative Training of Physicians and Health Care Professionals for Developing Efficient and Accessible Health Care Systems
2000-	Member	<b>Programme Committee, Annual Turkish Neuroscience Congresses</b>
2000-2006	Representative of Turkey	<b>ERIC I and ERIC II, European Union (EU) Framework V and VI, Working Team for Recognition of Intercultural Communication</b>
2000-2004	Chair	EU Rectorate Com. for R&D of Education in the Ege Un.
1999-2004	Advisor, Supervisor	Ege School of Medicine Students Drama Club
1999	Member	<b>Programme Committee, IAMSE 3rd International Medical Education Conference, Mayo, USA</b>
1999-	Hosting Coordinator	<b>(in collaboration with Visiting Coordinator, devoted role-modeling Prof. Reha Erzurumlu, Maryland, US) <u>7 different</u> Ege University Biennial <u>International</u> Neuro-science Graduate Summer Schools (EGE-BINGSS), (an internationally unique and highly recognized model providing <u>all</u> graduate students and very young neuroscientists along with <u>all</u> the world class eminent international faculty (devoted teachers) a very intensive, interactive, lively, musing curriculum including state of the art NS research, lab practicals, one-on-one mentor-student discussions, academic</b>

survival skills, introductory experimental, publication, bio- and, neuro-ethics, other academic survival skills, full boarding, and culture hunting during one week in early summer every two-three years).

<b>1999-</b>	<b>Member</b>	<b>Com. for Developing and Steering an Innovative Curriculum of Ethics and Law in Medical Education, EUFM</b>
<b>1999-2004</b>	<b>Member</b>	<b>Com. for Developing the Vertically Integrated Innovative Medical Curriculum, EUFM</b>
1999-2004	Member	(Former, Horizontally Integrated) Medical Curriculum Committee, EUFM
<b>1998-</b>	<b>Member</b>	<b>Association of Medical Educators in Europe (AMEE)</b>
<b>1998-2006</b>	<b>Founding Faculty</b>	<b>(Turkey's First) Medical Education Dept. EUFM Cross appointment (ARC: 13/B)</b>
<b>1998-2002</b>	<b>Founder &amp; Board Member</b>	<b>Turkish Society for Development of Medical Education</b>
<b>1999-2002</b>	<b>Chair</b>	<b>Com. for R &amp; D of Medical Education, EUFM</b>
<b>1998-1999</b>	<b>Chair</b>	<b>Com. for Developing (Turkey's First) Medical Education Guide / Syllabus, EUFM</b>
<b>1997-</b>	<b>Invited International / Viewer Advisor (the First and the Only from Turkey)</b>	<b>Development and Promotion of the Global Quality Standards for Undergraduate, Post-graduate, and Life-long Professionalism in Medical Education, TRILOGY, World Federation of Medical Education (WFME)</b>
<b>1997-</b>	<b>Bursary (ECFM)</b>	<b>Gordon Research Conference on Glutamate Receptors</b>
<b>1997-2014</b>	<b>President</b>	<b>Neuroscience Society of Turkey</b>
<b>1996-1997</b>	<b>Visiting Professor Drexel University (AUSM), ECFMG Fellow (Turkey's First)</b>	<b>Allegheny (Drexel) University School of Medicine Dept. of Neurobiology-Anatomy and Dept. of Physiology, Philadelphia, PA</b>
<b>1996-1997</b>	<b>Invited Foreign Member</b>	<b>Innovative Integrated Curriculum Development &amp; Steering Com. Drexel University (AUSM)</b>
<b>1997-2003</b>	<b>Founding &amp; Elected Board Member, Directors</b>	<b>International Association of Medical Science Educators (IAMSE)</b>

1996- 1997	Invited Foreign Member	Curriculum Com. AUSM
1996	Tenured Professor	EUFM, Dept. of Physiology
1995-2003	Member	Executive Com. of the Basic Neuroscience Research Unit of the Scientific and Technical Research Council of Turkey (TUBITAK)
1994	Hosting Organizer & Co-Director	Search & Concensus Conference for the Establishment of the EURO-ASIAN COMenMISSION of IBRO and Izmir (Headquarters Office), TURKEY (Auspices and Sponsorship of IBRO & Leadership of TÜBAS)
1993	Advocacy and Lobbying Founder	Official Recognition, Registration and Entitlement (by the Turkish Government) of the (Turkish) Brain Research and Neurosciences Society as the only Registered National Academic and Professional Organization of Turkey (Transition to a status of official representation of the Turkish Neuroscience, internationally)
1993-2007	Founder, Principal Vice Director	Ege University, Center for Brain Research
1993	Chair	Organizing Committee, the First National (with International Participation) Neuroscience Congress, Istanbul, Turkey
1991-	Founding Board Member and Secretary General	Neuroscience Society of Turkey, EU, Izmir, Turkey
1990-1999	Chair	2nd Yr Neuroscience Blocks I and II, Horizontally Integrated Medical Curriculum, EUFM
1988-2002	Member	Local Executive Committee (LEC of the AMERICAN BOARD SCHOOLS in Turkey) American Collegiate Institute (ACI)
1988-1996	Tenured Associate Professor	EUFM, Dept. of Physiology
1986-1987	Post-doctoral Research Fellow (with bursary of the International Atomic Energy Agency (IAEA))	Southampton University, School of Biomedical Sciences, Dept. of Physiology & Pharmacology, Southampton, U.K.
1985	Visiting Post-doc	University of Michigan School of Medicine, Dept. of Neuroscience & Dept. of Physiology, Ann Harbor, MI, USA

1980	PhD	EUFM, Dept. of Physiology
1976	Fellowship/Bursary	TUBITAK Fellowship for PhD Training
1973-1976	Neuro-rehabilitation Therapist	EU, School of Medicine and Hospital, Neurology and Pediatric Neurology Dpt. and Clinics
1972	Bursary for a Visiting PT Intern from Turkey	University of Newcastle Upon Tyne, Queen Victoria's Infirmary, Neuro-, Orthopedic Rehabilitation Clinics, and Speech Therapy Department, Newcastle Upon Tyne, U.K.
1969	Winner, the First Place	The highest scoring (100 pts) freshman of all of the Hacettepe University in admittance (Outstanding Turkish Language Skills and Turkish Literature)

**Research Interests (and related Publications, Invited Talks, oral and poster presentations, Panel Discussions, etc):**

**Neuroscience and Physiology:**

- Animal Modelling: Neurodegeneration, Neuroregeneration, Neuroprotection, Neurorepair, Aging, Metabolic Syndrome (diabetic polyneuropathy and cognitive decline), Neuropsychiatric Disorders,
- Sex and Stress Hormones,
- Neuroplasticity,
- Glutamatergic Neurotransmission (Receptor binding),
- Cognitive and Motor Behavioral Evaluations in the Rat,
- Glial and Neural Stem Cells;
- Neuropeptides (Oxytocin, Melatonin, Various Growth Factors)
- Inflammation and Nervous System.

**Neuroethics: R & D: Promotion, Awareness, Curriculum Development**

**Educational R & D:**

- Needs Assessment, ● Curriculum Development, ● Curriculum Management, ● Educational Outcomes,
- Changing the Climate and Culture in Learning Environments
  - Medical & Health Sciences;
  - Neuroscience;
  - Ethics, Medical Ethics, Bioethics, Neuroethics;
  - Neuroscience & Society;
  - Community Outreach

**Courses Taught:**

- Systems Physiology, ● Neuroscience, ● Neuroethics, ● Physiological Psychology, and
- Biological Psychology;
- Unique Semi-structured, Interactive Contemporary Hot Topics, practicing critical thinking, empathy, and ethics, following the Gaia principles;
- Introductory Tools for Differential Diagnosis (including Bio-Psycho-Social Approach),

- Clinical Problem Solving or Management using Mind (Concept) Mapping,
  - Case Studies and Long Term Scenarios designed and collectively followed using analytic thinking (Homeostatic Problems with varying challenges and severity) in Medical School basic sciences, clerkships, and residency stages;
  - Above mentioned courses taught, and similar modules and seminars conducted in
    - Psychology and Educational Counseling programs;
    - Allied Health Sciences and Vocational Schools; and
    - Graduate (MSc and PhD) Students in Medical Physiology and Neurosciences Programs.

**Grants:**

<b>P.I.:</b>	<b>2 Major TUBITAK Grants;</b>	<b>6 Inst'l / Intramural Grants</b>
<b>Res. Assoc. / Assist.:</b>	<b>3 TUBITAK Grants;</b>	<b>9 Inst'l / Intramural Grants</b>

**PhD Thesis and Mentorship:**      2 Residents and 3 PhDs in Medical Physiology  
2 MSc Students in Neurosciences  
1 MSc Student in Medical Physiology  
3 Research Physician Track (Medical Students from first year on) Mentorship (training and research)

**Membership to Scientific, Professional and Philanthropic Organizations:**  
**(only several prior and long-time memberships)**

Turkish Society for Physiological Sciences (TFBD)  
Neuroscience Society of Turkey (NST-TÜBAS) (Founder)  
Turkish Society for Development of Medical Education (TED) (Founder)  
Society for Neuroscience (USA & Canada) (SfN)  
International Brain Research Organization (IBRO) (by invitation on NST's behalf)  
Federation of European Neuroscience Societies (IBRO) (by invitation on NST's behalf)  
International Association of Medical Science Educators (IAMSE) (Founder by invitation)  
International Neuroethics Society (INS)

Turkish Chapter of SfN (the first SfN national chapter outside US)  
(by invitation on NST's behalf)

DANA Foundation (by invitation)

EDAB Foundation (by invitation)

Turkish Institute for (Turkish) Language Studies (by invitation)

Alumnae Association of ACI

Alumnae Association of Hacettepe University

Turkish Society of Physiotherapists (TFD)

Association of Ege Medical Graduates (by invitation)

## **Selected Publications:**

- 1) Kutay, FZ, Pöğün, Ş, Hariri, Nİ, Peker, GÖ, Erlaçın, S (1989) Free amino acid level determinations in normal and schizophrenic brain. *Prog. Neuro-Psychopharmacol. & Biol. Psychiat.*, 13: 119-126 (makale)
- 2) Peker GP, Dagci T, Cagli S, Yurtseven T, Islekel S, Guney S, Batigun O, Pehlivan M, Zileli M., (2000) Melatonin, 7-nitroindosole and riluzole improve motor performance following focal ischemia and spinal injury in the rat. *European Journal of Neuroscience*, 12: 117-117, Suppl. S (SCI / A).
- 3) Dagci, T., Yurtseven, T., Islekel, S., Guney, S., Batigun, O., Peker, G. O., (2000) Melatonin and 7-nitroindosole improve motor performance following experimental focal ischemia, *J Neurotrauma*, 17: 968, Suppl. S. (SCI / A)
- 4) Dagci, T., Cagli, S., Zileli, M., Guney, S., Peker, G. O., (2000) Melatonin, riluzole and 7-nitroindosole improve motor performance following experimental spinal injury, *J Neurotrauma*, 17: 968, Suppl. S. (SCI / A)
- 5) Peker GO, Baka M, Certug A, Ersahin Y, Zileli M, Hanci H, Coskunol H, Kirazli Y, Turk M, Gezgin Y, Ozturk L, Gokmen F, Dagci T, Durak I, Pogun S (2000) "Enriched" Neuroscience block for student-centered teaching and collective problem solving in large classes: A model for early vertical integration in community-based humanistic medical curriculum, *European Journal of Neuroscience*, 12: 518-519 (SCI / A)
- 6) Taşkıran, D, Tanyalçın, T, Sözmén, EY, Peker, GÖ, Gülmen, V, Çağlı, S, Kanit, L, Tekeli, G, Barçın, E, Zileli, M, Kutay, FZ (2000) The effects of melatonin on the antioxidant systems in experimental spinal injury, *Intern. J. Neuroscience*, Vol. 104, 63-73 (makale) (SCI / B)
- 7) Dagci T, Yilmaz O, Taskiran D, Peker G (2007) Neuroprotective agents: is effective on toxicity in glial cells? *Cell Mol Neurobiol.* 2007 Mar;27(2):171-7.
- 8) Peker, GÖ, Roberts, PJ (1989) Sıçan tüm beyinde in-vitro L-(3H) Glutamat bağlanmasının bazı özellikleri: yöntem üzerine bir ön çalışma. *Klinik Gelişim*, 2(5-6): 401-406 (makale)
- 9) A. I. Pilyavski, Vladimir A. Maisky, Nuran İ. Hariri, Gonul O. Peker, N. V. Bulgakova (1996) Distribution and quantitative characterization of NADPH and diaphorase retractive neurons in analgesic zones of the rat midbrain. *Neurophysiology* 28 (1): 36-46 (makale)
- 10) Gulgun Kayalioglu, Nuran I. Hariri, Figen Govsa, Berrin E. Okur , Gonul O. Peker, Vladimir A. Maisky (1996) Laminar distribution of the sources of ascending spino-supraspinal pathways involved in nociceptive transmission and pain modulation. *Neurophysiology* 28 (2/3): 141-149 (makale)
- 11) Gonul O. Peker et al. (Faculty and Research Assistants of the Physiology Dept. of the Ege University Faculty of Medicine) (2000) Objective structured practical exam (OSPE) as an efficient tool for final evaluation of the physiology course laboratory. *Medical Teacher* 22 (1), 87-88
- 12) Gonul O. Peker, I. Durak, Tulga Kalayci, Gurbuz Celebi, B. Yilmaz, S. Ozensoy, A. Uysal, H. Bati, Tijen Tanyalçin, T. Ozacar, Canan Saylam, Fehmi Akcicek (2000) A comprehensive freshmen's guide to medical education at Ege University School of Medicine. *Medical Teacher* 22 (2), 201-202
- 13) Peker GO, Baka M, Certug A, Ersahin Y, Zileli M, Hanci H, Coskunol H, Kirazli Y, Turk M, Gezgin Y, Ozturk L, Gokmen F, Dagci T, Durak I, Pogun S (2000) Enriched "Nervous System Block": Model for early vertical integration in humanistic medical curriculum, *Medical Teacher*, 22 (3): 308.
- 14) Peker, GO (2002) Curriculum Change and Innovative Medical Teaching: Growing Demand, Emerging Awareness, and Pioneering Implementations in Turkey. *AMSE Newsletter*, 25
- 15) Erbas O, Yilmaz M, Korkmaz HA, Bora S, Evren V, Peker G. Oxytocin inhibits pentylentetrazol-induced seizures in the rat. *Peptides*. 2013 Feb;40:141-4. doi: 10.1016/j.peptides.2012.12.003.
- 16) Apaydin M, Evren V, Erbas O, Calli C, Peker GO, Taskiran D. Manganese-enhanced MRI to evaluate neurodegenerative changes in a rat model of kainic acid-induced excitotoxicity. *Diagn Interv Radiol.* 2013 Sep-Oct;19(5):349-54. doi: 10.5152/dir.2013.200.
- 17) Erbaş O, Yeniél AÖ, Akdemir A, Ergenoğlu AM, Yılmaz M, Taskiran D, Peker G. The beneficial effects of levetiracetam on polyneuropathy in the early stage of sepsis in rats: electrophysiological and biochemical evidence. *J Invest Surg.* 2013 Dec;26(6):312-8. doi: 10.3109/08941939.2013.797056.
- 18) Erbaş O, Sarac F, Aktuğ H, Peker G. Detection of impaired cognitive function in rat with hepatosteatosis model and improving effect of GLP-1 analogs (exenatide) on cognitive function in hepatosteatosis. *ScientificWorldJournal.* 2014 Mar 11;2014:946265. doi: 10.1155/2014/946265. eCollection 2014.
- 19) Erbas O, Taşkıran D, Oltulu F, Yavaşoğlu A, Bora S, Bilge O, Çınar BP, Peker G. Oxytocin provides protection against diabetic polyneuropathy in rats. *Neurol Res.* 2017 Jan;39(1):45-53. Epub 2016 Nov 24.
- 20) Cevik B, Solmaz V, Yigitturk G, Cavusoğlu T, Peker G, Erbas O. Neuroprotective effects of erythropoietin on Alzheimer's dementia model in rats. *Adv Clin Exp Med.* 2017 Jan-Feb;26(1):23-29. doi: 10.17219/acem/61044.