Special Editorial Series: Tribute to Global Contributors of Nuclear Medicine
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Dr. A. Cahid Civelek Exemplifies the Act of Integrating Patient Care, Staff Education, Research, and Global Knowledge Sharing

Dr. A. Cahid Civelek, Hasta Bakımı, Personel Eğitimi, Araştırma ve Küresel Bilgi Paylaşımını Bir Araya Getirme Başarısı Gösteren Örnek Bir Akademisyendir

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Among the many bright and successful academic physicians, some stand out for their deep commitment to teaching and sharing their knowledge, experience, and unique skills with others, locally and internationally. These individuals dedicate their academic time, energy, and efforts to this purpose without expecting anything in return. Their only reward is the satisfaction of witnessing their learners and mentees thrive in their academic careers.

I am pleased to introduce A. Cahid Civelek Doctor of Medicine (MD), a colleague, friend, and close supporter of Chinese nuclear medicine who is a professor in the Department of Radiology and Radiological Science of the Johns Hopkins University School of Medicine (Figure 1). Cahid's distinguished nuclear medicine and medical education career began in January 1982 when he joined Johns Hopkins as a Nuclear Medicine resident (1,2).

Since 2003, Dr. Civelek has served as a full professor of nuclear medicine at various institutions. Dr. Civelek is recognized for his accomplishments as a clinician-researcher and clinician-educator.

Dr. Civelek is an internationally recognized expert and educator in nuclear cardiology, nuclear oncology, theranostics, and general nuclear medicine. His scholarship in these areas has been achieved through peer-reviewed publications and numerous presentations in international settings.

Introduction

Dr. Civelek earned his medical degree at the İstanbul University School of Medicine and completed his nuclear medicine residency at Hacettepe University Medical Center in Ankara. He joined Johns Hopkins to pursue a research fellowship funded by a scholarship he received from the International Atomic Energy Agency (IAEA, Vienna, Austria). After completing training and fellowship in 1984, Dr. Civelek was recruited to the full-time faculty in nuclear

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medicine at Johns Hopkins. He was promoted to Associate Professor in 1995 and remained at Hopkins until 2003 (1).

During his early career at Johns Hopkins, Dr. Civelek laid a solid professional foundation through outstanding contributions to clinical and research programs. He subsequently assumed key leadership roles, including the Director of Nuclear Cardiology, Program Director of the Nuclear Medicine Residency Program, and Medical Director of the Nuclear Medicine Technologist Program, while also serving as an Interim Clinical Director. Before his appointment as Professor and Director of Nuclear Medicine and positron emission tomography (PET) at the University of Louisville in 2008, Dr. Civelek had served as a Professor and Director of Nuclear Medicine in Saint Louis University Medical School Hospital.

Dr. Civelek held the position of Clinical Director for the Nuclear Medicine Division at the NIH Clinical Center and subsequently advanced to the role of Deputy Director. Before that, he spent two years at the Department of Radiology and Imaging Sciences at the NIH Clinical Center, specifically in the section of body magnetic resonance imaging (MRI) and MRI-PET. During this time, he also held a visiting faculty position at the Department of Radiology at Johns Hopkins School of Medicine. In January 2018, he was recruited to Johns Hopkins full-time back.

He is a fellow of the American College of Nuclear Medicine, a fellow and founding member of the American Society of Nuclear Cardiology, and a fellow of The American College of Angiology.

Dr. Civelek has mentored numerous physicians in nuclear medicine across the U.S. and internationally, with trainees specializing in both nuclear cardiology and nuclear oncology. As a world-renowned expert in Nuclear Medicine, he has been invited to deliver lectures at medical centers on nuclear medicine, focused on nuclear cardiology, nuclear oncology-theranostics/PET/CT, and PET-MRI.

Dr. Civelek is dedicated to advancing the development of nuclear medicine, cardiology, and oncology. He focuses on pioneering new tumor-targeting radiopharmaceuticals for imaging and therapy, while advocating for high-quality clinical trials and enhancing patient care and safety standards.

He is a devoted patient advocate. He is committed to improving the efficiency of clinical operations and, notably, patient safety. As in his previous practices, he has been improving and implementing new patient safety measures (3). For example, the patient dose reduction program he applied has resulted in nearly a 50% reduction in the injected radiotracer doses and (computed tomography) CT doses, without compromising diagnostic accuracy (4,5).

Research Scholarship and Accomplishments

As a junior faculty member, Dr. Civelek became interested in nuclear cardiology. At that time, the standard of care for nuclear cardiac stress testing involved planar nuclear imaging. A significant improvement in accuracy came with the introduction of single photon emission computed tomography (SPECT), which produced cross-sectional images analogous to the more familiar X-ray CT. When the second SPECT machine in the United States was installed at Johns Hopkins, Dr. Civelek took the opportunity to become an expert in the installation and running of SPECT for clinical applications in nuclear cardiology, participating in some of the earliest work in cardiac SPECT (6,7) and describing specific imaging signs for more accurate diagnosis of coronary artery disease (8).

Early SPECT machines were developed primarily for myocardial imaging, but Dr. Civelek felt such a technological advance should also be used in other clinical problems. One such area is minimally invasive parathyroid surgery for primary hyperparathyroidism, where success demands accurate preoperative localization of a parathyroid adenoma; scintigraphy is the most common localization method. Starting with his clinical observations, Dr. Civelek demonstrated in a large prospective study that a single-phase delayed SPECT study was more accurate than dual-phase planar imaging and equivalent to dual-phase SPECT. This study streamlined the parathyroid imaging protocol and led to a highly cited publication (9).

Since those early cardiac SPECT days, Dr. Civelek's career has continued to evolve successfully alongside the inevitable technological advances in nuclear medicine. These changes shifted his interest from nuclear cardiology to nuclear oncology, the latter involving PET cancer detection and, more recently, the combination of PET with CT or MRI (PET/CT and PET-MR, respectively) (10). During these changes, Dr. Civelek has maintained his practice of drawing from clinical practice to find practical applications of new radiotracers and imaging protocols. For example, he has investigated new PET/CT radiotracers to image non-small cell lung cancer (11,12), the simultaneous injection of two tumor-seeking radiotracers (13), and the utilization of ^{68}Ga-DOTATATE to detect pheochromocytoma and paraganglioma (14). Dr. Civelek's work with ^{68}Ga-DOTATATE exemplifies his quick adaptation to innovations in the field, since it is one of the more recent clinical PET radiotracers approved for nuclear oncology.

Clinical Practice Scholarship and Accomplishments

Dr. Civelek is a busy clinical nuclear medicine physician who spends 80 to 90% of his time providing patient care in all stations of nuclear medicine, including general nuclear

medicine, nuclear cardiology, PET/CT, nuclear oncology, and theragnostics. Despite his accomplishments in research and education, he considers himself to be foremost a clinician with the ultimate responsibility of providing high-quality, expert clinical care. Even as a junior faculty member at Johns Hopkins, he became the "go-to'' for nuclear cardiology. He received specific referrals from established Hopkins physicians to perform nuclear cardiac stress tests on their patients and themselves when necessary.

In keeping with his clinical emphasis, he is an expert and "go-to" person for troubleshooting patient-related clinical problems. Dr. Civelek's willingness to address whatever problems arise is reflected by the diverse topics of some of his publications and invited talks. His emphasis on providing high-quality care has led him to be recruited to lead nuclear medicine divisions at three different institutions the University of Saint Louis, the University of Louisville, and the National Institutes of Health Clinical Center in Bethesda.

Education Scholarship and Accomplishments

Dr. Civelek sees the education of nuclear medicine trainees as an integral part of clinical practice, and he continues to devote significant time and effort to supervising residents and fellows daily. His broad and deep knowledge of all aspects of nuclear medicine is respected and appreciated by trainees, advisees, and his clinical colleagues. These traits and his clinical emphasis make him the ideal person to be the Director of our nuclear medicine residency and PET/CT fellowship programs.

Figure 1. Professor Dr. A. Cahid Civelek
The use of the images was made with the explicit consent of Dr. A. Cahid Civelek

While his educational influence starts with those around him, his efforts receive attention from a broader audience. For example, in the early days of SPECT, his troubleshooting skills led him to travel to institutions around the United States of America to help install their new SPECT gamma camera equipment.

Reputation and Recognition

Dr. Civelek's scholarship, clinical skills, and educational acumen have been recognized nationally and internationally. His initial interest and expertise in nuclear cardiology led him to be one of the founding members of the American Society of Nuclear Cardiology, the primary organization for this subspecialty. He has also been asked to serve on multiple committees associated with the Society of Nuclear Medicine and Molecular Imaging, the world's primary organization for nuclear medicine. He has served on many editorial boards and has received multiple editorial awards for his peer-review contributions.

However, Dr. Civelek's most significant impact has been his educational outreach on the international stage, which includes Türkiye his native country and especially China. His regular trips to China include Nanjing University, one of the nine elite universities in China's C9 "Ivy" League (Figure 2). The invitation eventually grew to a regular string of invitations, leading to a "tour" of multiple academic venues in China. In 2012, Dr. Civelek assisted in revising

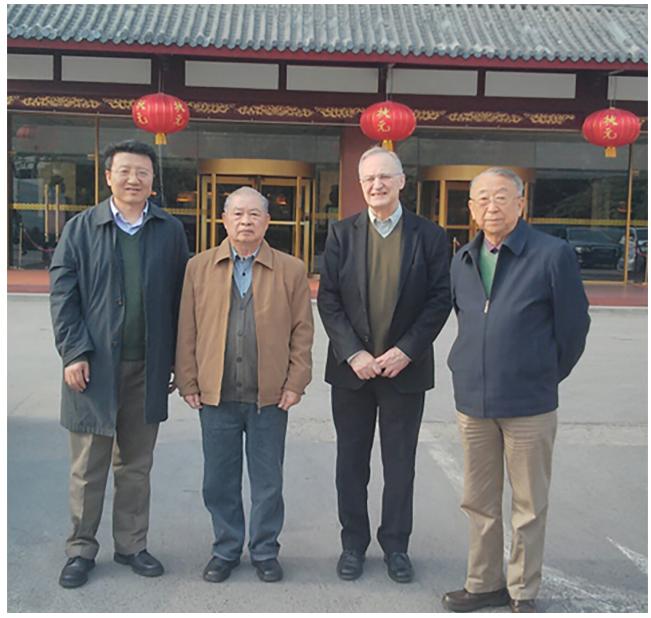

Figure 2. Nanjing 2013: From left to right: Professor Drs. Xiao-Feng Li, Xiu Jie Liu, A. Cahid Civelek, Jixiao Ma. At the front of the Nanjing Hotel
The use of the images was made with the explicit consent of Dr. A. Cahid Civelek

the primary nuclear medicine textbook in the Chinese language, funded by the International Atomic Energy Agency. Recognizing his contributions, he was asked to coauthor the textbook's foreword. Also, in 2012, Dr. Civelek was appointed a member of the Advisory Board of the Center of Excellence in Medical Molecular Imaging of Zhejiang Province. This center is part of the Institute of Nuclear Medicine and Molecular Imaging of Zhejiang University (another "C9'' university), one of the few leading institutes of molecular imaging in China. In 2016, Nanjing University recognized his academic influence by conferring the title of Visiting Professor (Figure 3). Unlike the term "visiting professor" in the United States of America, which implies a temporary interaction, the title of Visiting Professor at Nanjing University is permanent, akin to an honorary faculty appointment. It requires submitting academic credentials and requesting recommendation letters from academic referees.

Dr. Civelek has made significant accomplishments in clinical nuclear medicine, including extensive scholarship and recognition for international educational outreach.

He played a pivotal role in helping implement and strengthen China's global scientific collaboration in nuclear medicine and molecular imaging. (15).

Dr. Civelek was first introduced to Chinese Medicine and culture when he met Dr. Xiu Jie Liu, MD, and Dr. Jiang, at Johns Hopkins Nuclear Medicine in 1982 during their training. His friendship with Dr. Liu was deep and uninterrupted until Dr. Liu's passing on January 1, 2023, due to complications associated with COVID-19.

Figure 3. A commemorative photograph capturing Dr. A. C. Civelek during the official ceremony in November 26, 2016 at Nanjing University Medical School, Nanjing, China, where he was formally awarded the title of professor.
Dr. Civelek alongside the university's dignitaries, including the Dean and President of Nanjing University Medical School
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In October 1985, Dr. Civelek made his first visit to China. During his stay, he delivered lectures on SPECT Myocardial perfusion imaging (MPI) at the FuWai Hospital of the Chinese Academy of Medical Sciences, the world's largest center for cardiovascular diseases. After spending a few days in Beijing, he visited the second affiliated hospital of China Medical University in Shenyang. He spent two weeks helping Dr. Zhuguo Pei (who passed away several years ago), his colleagues, and their technical staff in establishing their SPECT MPI program. During his stay, Dr. Civelek delivered multiple daily lectures and guided the staff on nuclear cardiology imaging and its potential pitfalls.

Dr. Civelek became a mentor to Dr. Feng Wang and later a colleague after being introduced by Drs. Liu and Jixiao Ma. He continued to collaborate and support Dr. F. Wang and his department through lectures, short visits to his department, and mentoring several graduate students from Nanjing University Hospital.

Over the years, Dr. Civelek has visited many university hospitals in China, delivering numerous lectures, and, at times, even visiting multiple cities during a single trip.

Dr. Civelek also developed a long-lasting collaboration and friendship with Professor Mei Tian and Hong Zhang, who are leaders at Zhejiang University, Hangzhou. He joined and contributed to their international scientific meetings (Figure 4) by delivering lectures at many HIMIC conferences, most recently HIMIC-2024 (16). In 2024, Professors Feng Wang and Civelek at Nanjing University received the Foreign Researcher Award from the Chinese government.

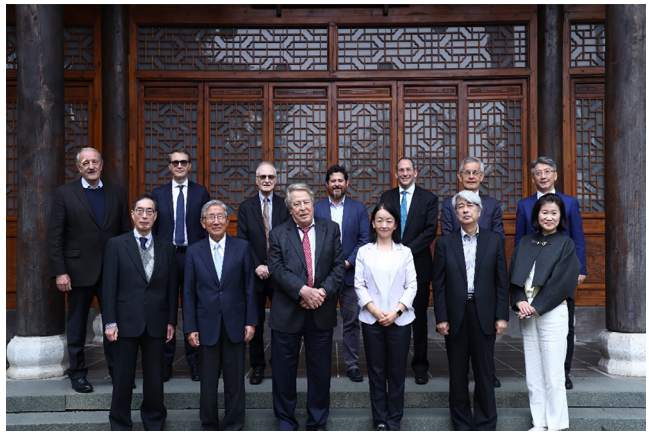

Figure 4. Hangzhou International Molecular Imaging (HIMIC2024):
First Row from left to right: Prof. Koji Murakami, Keigo Endo, Heinrich Schelbert, Mei Tian, Yasuyoshi Watanabe, Mijin Yun. Second Row from left to right: Prof. Markus Schwaiger, Arturo Chiti, Cahid Civelek, Charles Manning, Ulaner Gary, Nagara Tamaki, Hong Zhang. At the front of Moganshan Li Shan Yun Ju Hotel
The use of the images was made with the explicit consent of Dr. A. Cahid Civelek

Dr. A. Cahid Civelek is a beacon of excellence, seamlessly blending patient care, staff education, groundbreaking clinical research, and a commitment to sharing knowledge globally.

References

1. Wagner HN. A personal history of nuclear medicine. London: Springer. 2006.
2. Linton OW, Gayler BW. Johns Hopkins Radiology, 1896-2010. Baltimore, Md: Johns Hopkins Radiology, Johns Hopkins Hospital. 2011.
3. Civelek AC. Patient safety and privacy in the electronic health information era: Medical and beyond. Clinical Biochemistry. 2009;42:298-299.
4. Talbott S, Bhatt G, Li XF, Civelek AC. Dose related decreased image quality of CT doesn't degrade the diagnostic quality of PET-CT. J Nucl Med. 2014;55 (Supplement 1):423-423.
5. Civelek AC, Talbott S. A new paradigm: How to reduce the medically induced patient radiation burden without compromising the image quality. J Nucl Med. 2011;52 (Supplement 1):1018-1018.
6. Clausen M, Bice AN, Civelek AC, Hutchins GM, Wagner HN Jr. Circumferential wall thickness measurements of the human left ventricle: reference data for Thallium 201 single-photon emission computed tomography. Am J Cardiol. 1986;58:827-883.
7. Clausen M, Civelek AC, Bice A, Petronis J, Koller D, Loncaric S, Weiss J, Wagner HN Jr. Comparison of short axis circumferential profiles by Tl-201 myocardial SPECT and 2D-echocardiography in normal volunteers. Radiology. 1988;168:723-726.
8. Civelek AC, Shafique I, Brinker JA, Durski K, Weiss JL, Links JM, Natarajan TK, Ozguven MA, Wagner HN Jr. Reduced left ventricular cavitary activity ("black hole sign") in Thallium-201 SPECT perfusion images of antero-apical transmural myocardial infarction. The Am J Cardiol. 1991;68:1132-1137.
9. Civelek AC, Ozalp E, Donovan P, Udelsman R. Prospective evaluation of delayed technetium-99m sestamibi SPECT scintigraphy for preoperative localization of primary hyperparathyroidism. Surgery. 2002;131:149-157.
10. Civelek A C, Niglio S A, Malayeri A A, Lin J, Gurram S, Chalfin HJ, Turkbey B, Valera V, Steinberg SM, Apolo AB. Clinical value of 18FDG PET/MRI in muscle-invasive, locally advanced, and metastatic bladder cancer. Urologic oncology: Seminars and Original Investigations. Elsevier. 2021;39:787.e17-787. e21.
11. Huang T, Civelek AC, Li J, Jiang H, Ng CK, Postel GC, Shen B, Li XF. Tumor microenvironment–dependent 18F-FDG, 18F-fluorothymidine, and 18F-misonidazole uptake: a pilot study in mouse models of human non–small cell lung cancer. J Nucl Med. 2012;53:1262-1268.
12. Huang T, Civelek AC, Zheng H, Ng CK, Li J, Postel GC, Shen B, Li XF. 18F-misonidazole PET imaging hypoxia in micrometastases and macroscopic xenografts of human non-small cell lung cancer: correlating with autoradiographic and histological findings. Am J Nucl Med Mol Imaging. 2013;3:142-153.
13. Li XF, Huang T, Jiang H, Wang X, Shen B, Wang X, Ng CK, Postel GC, Civelek AC. Combined injection of (18)F-fluorodeoxyglucose and 3'-Deoxy-3'- [(18)F] fluorothymidine PET achieves more complete identification of viable lung cancer cells in mice and patients than individual radiopharmaceutical: a proof-of-concept study. Transl Oncol. 2013;6:775-783.
14. Jha A, Ling A, Millo C, Gupta G, Lin FI, Herscovitch P, Adams KT, Wakim P, Taïeb D, Kebebew E, Lodish M, Civelek AC, Pacak K. Superiority of 68Ga-DOTATATE over 18F-FDG and anatomic imaging in the detection of succinate dehydrogenase mutation (SDHx)-related pheochromocytoma and paraganglioma in the pediatric population. Eur J Nucl Med Mol Imaging. 2018;45:787-797.
15. Tian M, Chai ZF, Chen L, Chiti A, Civelek C A, Endo K, Gary U, Jin L, Manning C, Murakami K, Schelbert H, Schwaiger M, Tamaki N, Tan WH, Watanabe Y, Yun MJ, Zhang H. Moganshan international consensus on further strengthening global scientific collaboration in the field of molecular imaging. EJNMMI. 2025:1-4.
16. Zhang Z, Winston GP, Zhao HT, Oei EH, Ai Q, Loffroy R, Lin T, Shen Y, Ng CK, Liu H, Civelek AC, Han Z, He YM, Ji LY, Wáng YX. Focus on China: should clinicians engage in research? and lessons from other countries. Quant Imaging Med Surg. 2014;4:413-425.