



## Professor Mahmut Gazi Yasargil: Memories from Little Rock 1994-2003

Kenan I. ARNAUTOVIC, MD, PHD, FAANS, FACS

Professor of Neurosurgery and Professor of Neurology  
Semmes-Murphey Clinic and Department of Neurosurgery, University of Tennessee, Memphis, TN, USA

**T**his invitation by the Turkish Neurosurgery Journal Co-Editors Professors Oguz Baran and Hayri Kertmen to contribute to the special journal issue on Professor M. Gazi Yasargil provides an immense honor for me to reflect on my time working with him over a 9-year period (1994-2003) at the Department of Neurosurgery, University of Arkansas for Medical Sciences (UAMS), Little Rock, AR, USA (Figure 1).

I was invited to come to Little Rock by Professor Al-Mefty to spend 6 months as part of an observational research skull base fellowship. I came after the conclusion of my Bosnian-Herzegovinian neurosurgical residency, at the end of the war in Bosnia and Herzegovina. I had endured many hardships and witnessed the cruel destruction of my country. It was surreal to land in the Little Rock airport on August 3<sup>rd</sup>, 1994 in the late afternoon. Dr Almefty greeted me at the airport and took me to dinner on the way to the dormitory. We went to dinner at a local Mexican restaurant, and he mentioned that Professor Yasargil has just arrived



**Figure 1:** Aerial view of university of Arkansas for Medical Sciences (UAMS)



This work is licensed by "Creative Commons Attribution-NonCommercial-4.0 International (CC)".

in town to join the program. I knew that Professor Yasargil, as Professor Al-Mefty mentioned that night, “with his introduction of microsurgery, had propelled neurosurgery into the modern era from dark ages.” A potential meeting with such a well known figure in neurosurgery was unfathomable for a young, recently graduated neurosurgeon from Sarajevo, Bosnia and Herzegovina.

The next morning, while walking into Dr Almefty’s office to complete the onboarding paperwork, I introduced myself to the Professor. Although I was very intimidated by the event, I remember that he introduced himself to me as “Yasargil.” We spent some 30 minutes in conversation. He told me that he never visited Bosnia and Herzegovina, although he remembered his family’s stories of his grandmother who was born in Sarajevo. He was proud of his Bosnian roots, as he often mentioned that his family is of “Bosniac” ancestry.

He also mentioned that he recently retired from practice in Zurich and that many chairmen, whom he considered his trainees, had invited him to work in USA. None of these options had ever materialized into viable options. He said Dr Almefty only visited him in Zurich for a few days, however was the only one to provide him with a position. Later I learned that Dr Almefty presented the opportunity of hiring Yasargil to the University of Arkansas Medical Sciences leadership, who agreed on principle. However, the limiting step was him getting an Arkansas neurosurgical license, an impossible task for someone who did not complete neurosurgical training in the USA. Somehow, Professor Almefty did the unimaginable. The president of the Arkansas Medical Board at that time was Dr Ray Jouett, a famous and very respected neurosurgeon in Little Rock (Figure 2). Dr Jouett pulled some impossible strings and sealed the deal. This magnificent task extended the professional neurosurgical life of Professor Yasargil for some 30 years. This allowed him to present his incredible work and teaching talents not only to his contemporaries in Little Rock at various levels, but also to the global neurosurgical community. Among the many incredible neurosurgical accomplishments of Dr Al-Mefty, this would prove to be one of most important ones.

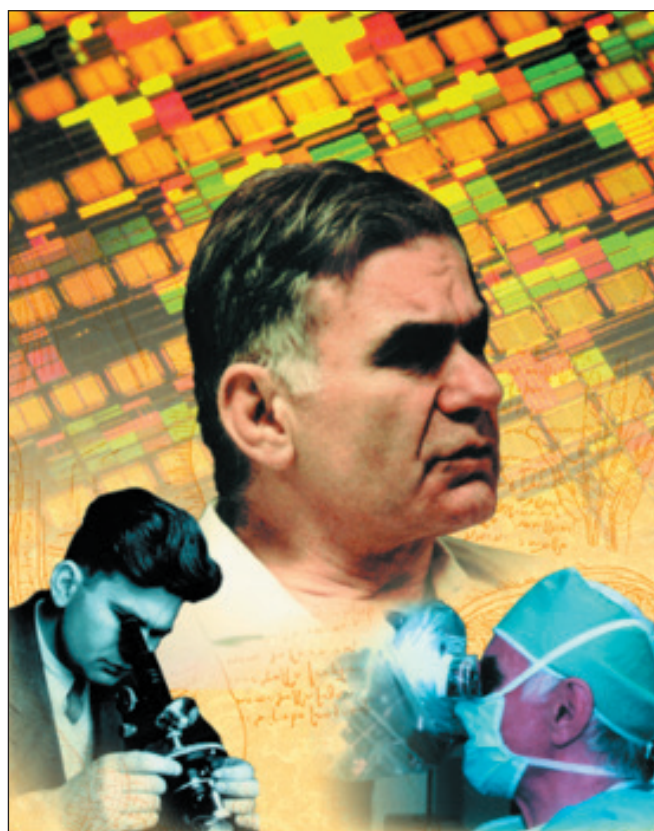
Three years later, Professor Yasargil would be named the neurosurgeon of the second half of 20<sup>th</sup> Century by the Neurosurgery Journal (Figure 3).

This memorable event was celebrated at the Gala Dinner and Reception hosted at Little Rock Country Club (Figure 4).

At that time, I joined Dr Luis Borba, a neurosurgeon from Curitiba, Brazil who came several months before me to the program, as a research skull base fellow. We worked in a small makeshift skull base lab on the ninth floor of the hospital. We would often fight over one “good” microscope to fine tune our dissection approaches. A few months later, Dr Ugur Ture, a neurosurgeon from Istanbul, Turkey, joined us to create the “original research trio” of young neurosurgeons. This trio would go on to experience incredible neurosurgical journeys in the decades to follow. While Dr Borba returned to Curitiba, Brazil and dr Ture to Istanbul, Turkey, I developed my neurosurgical carrier in USA, but stayed closely connected with Sarajevo University Clinical Center Department of Neurosurgery where I started my neurosurgical journey (Figure 5).



**Figure 2:** Dr Ray Jouett (1928-2018), respected neurosurgeon from Little Rock, AR served 20 years as a Chairman of Arkansas State Medical Board, which granted Professor Yasargil an Arkansas neurosurgical license during his tenure.



**Figure 3:** Cover of Neurosurgery Journal dedicated issue on proclaiming M. Gazi Yasargil Neurosurgeon of second half of 19 century signed to me by Professor Yasargil



**Figure 4:** Picture of then UAMS neurosurgery residents taken at Yasargil Neurosurgeon of the Century Gala at Little Rock Country Club 1999- left to right Drs Muhammed Elnabtity, David Wrubel, Robert Ingraham, Kenan Arnautovic, Wade Ceola and Azedine Medhkour



**Figure 5:** Dr Ugur Ture, Dr Luis Borba and Dr Kenan Arnautovic photo taken in 1994 (above) and in 2023 during St. Louis Almefty Skull Base Course.

Dr Ture worked on research projects more with Dr Yasargil, while Dr Borba and I worked predominantly with Dr Almefty. Both professors would visit us at the lab daily, often late at night, to discuss various projects (Figure 6).

We spend numerous days, weeks, and months in Professors Yasargil and Almefty's operating theaters, observing their surgeries. I remember that Professor Almefty was the first to perform closures for Professors Yasargil, which was a great sign of respect and admiration. For us youngsters, this was a great lesson in humility and respect of the neurosurgical hierarchy (Figure 7).



**Figure 6:** My photo taken during dissections under the "good" microscope in the UAMS neurosurgery skull base lab. Please note the "less favorable" dissection microscope on the left.



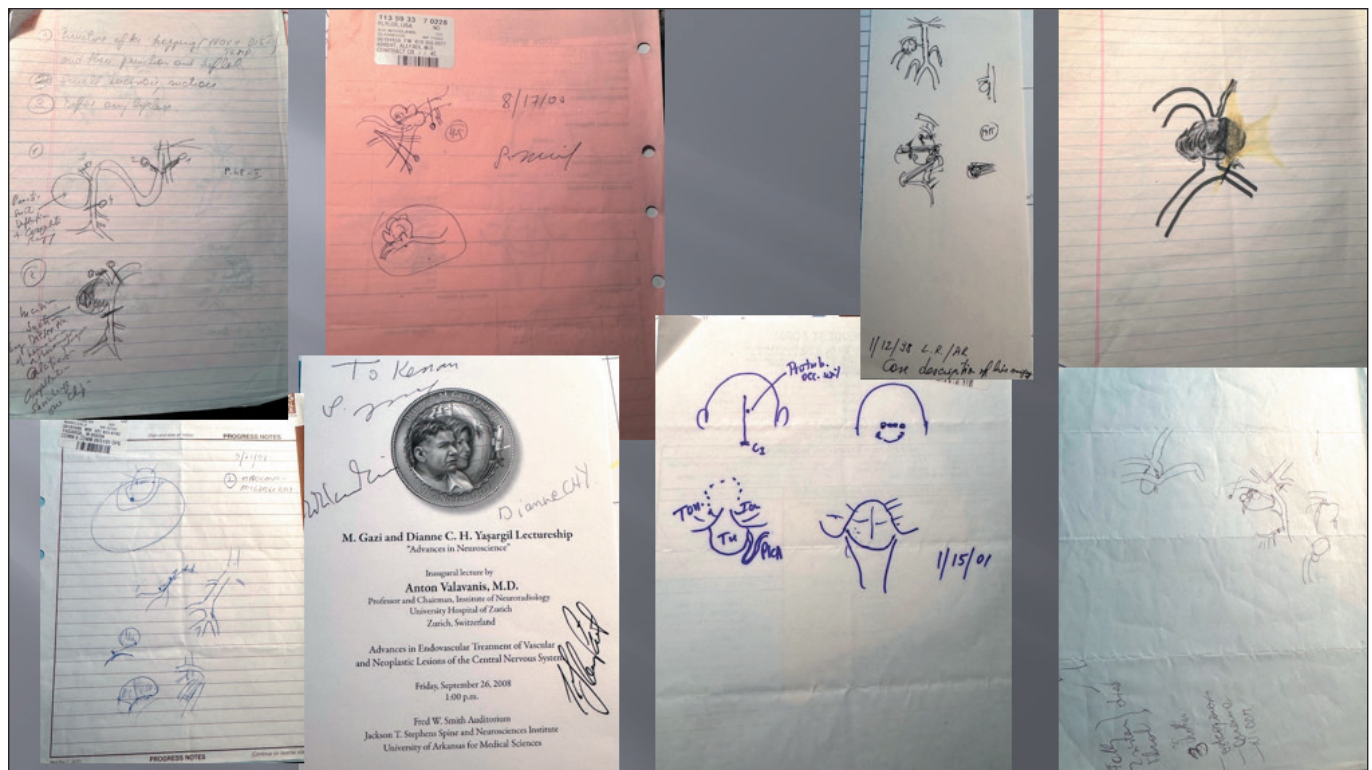
**Figure 7:** Professors Al-Mefty (left) and Yasargil (right) during the first surgery done in Little Rock when Professor Al-Mefty closed for Professor Yasargil. Photo is signed by Professor Yasargil to me

Later, surgical closures were performed by younger neurosurgery attendings in the department, most frequently Drs Krisht, Pait, Boop, Teo, Malik, Abdelrauf, among others. It was interesting and enlightening to watch these young attendings grow professionally over time, under the wing of two great professors. Afterwards, the closures would be performed by residents and for some reason, the professor frequently asked me to close cases for him. It was of pleasure that during the closures of Professor Yasargil's cases, I would work with Ms Dianne Yasargil. After the surgery, I would dictate his operative report based on the sketches of the procedure that he would draw for me. I kept many of these drawings, which I still treasure today (Figure 8).

One of the policies of Professor Almefty was to have frequent, often bimonthly, visiting professors from USA and around the world. I was introduced to Professors Jane, Kurze, Malis, Hakuba, Menezis, Pop, Hernesniemi, Spetzler, among many others. I will never forget attending the exciting neurosurgical discussions of Professors Yasargil and Almefty along with

these famous lecturers. The department became the Mecca of neurosurgery, and I remember scores of neurosurgery visitors from all over the world. They would spend anywhere from 1 week to one year or more with us, many repeating their visits. One of the benefits for the three of us, research fellows at that time, was developing lifelong friendships and relationships with neurosurgeons all over the World (Figures 9, 10 and 11).

I spent many hours with Dr Yasargil in various roles. I had to repeat neurosurgery residency in the USA, as this was the only pathway to practice neurosurgery. As a resident, my task was to provide daily updates to the attendings about their patients. Professor Yasargil was keen to have detailed reports on his patients. The reports were mostly great, with good patient progress, but on occasion they were not. The professor did not like to hear those less favorable updates and would become grouchy. We, the residents, learned over time how to minimize the "bad" updates.



**Figure 8:** Professor Yasargil signed operative drawings for my operative dictations of his cases.



**Figure 9:** Visiting Professorship of Professor John Jane.



**Figure 10:** Visiting Professorship of Professor Theodore Kurze. Photo taken in our skull base lab.



**Figure 11:** Visiting Professorship of Professor Ed Laws.

Once, there was a discussion about how neurosurgeons enjoy doing great cases. He stated that he never felt particular pleasure doing neurosurgery. I do not remember Professor Yasargil having a proper breakfast or lunch during the working days. However, I have seen him enjoying apples and on occasion oranges instead.

He also told me the story of the Leyla retractor. As a child, his oldest daughter Leyla, played with her mother’s pearls and accidentally broke the string. The pearls spread all over the floor and she started crying. The professor sat down with her on the floor and told her, “let’s fix this together.” He took the string, tied it, and started re-assembling the pearls. At that moment he noticed that whenever he pulled the string, the pearls became rigid. There, he got idea for the Leyla retractor and named it after his daughter. Interestingly, I never saw him use the Leyla retractor during his surgeries (Figure 12).

Once I asked him how he detects the border between a glioma and normal brain tissue when the texture is similar. He told me that his best guidance is his knowledge of brain anatomy. He would also listen to the suction, as tumor sounds different than brain tissue under suction. There were also tactile differences between normal brain and tumor he emphasized.



Figure 12: Photo of Leyla retractor in rigid position.

On a personal note, he felt some geographical bond with me due to his Bosnian family heritage. He found out that my grandfather Hidayet’s first cousins, my aunts Meserreta and Asifa, were his first cousins on father’s side. On that occasion, after finding out our distant family relationship of the 7<sup>th</sup> degree, he gifted me his signed photo and “Microsurgery, Part IV B”- his newest book at that time (Figure 13).

I met him for the last time in Istanbul, Turkiye in 2017 during the World Federation of Neurosurgical Societies (WFNS) Congress (Figure 14).

Often, during my surgeries, memories of my interactions with Professor Yasargil come to mind. Using the Yasargil bipolars with their progressive lengths and tip sizes, controlled suction of different sizes and lengths, micro scissors of progressive lengths, sizes and direction, the Yasargil surgical chair, semi mobile armrest, and many other instruments are part of my regular surgical armamentarium (Figure 15).

His surgical philosophy shaped mine. His personal story of a young man from Turkey, who endured difficult times furthering his education and career development in Germany and Switzerland, broke social, language and cultural barriers, and became a transforming figure in neurosurgery. He was a teacher for neurosurgeons across the world and always served as an inspiration to me in my American neurosurgical journey. He will forever live in the hearts and minds of neurosurgeons across the world.

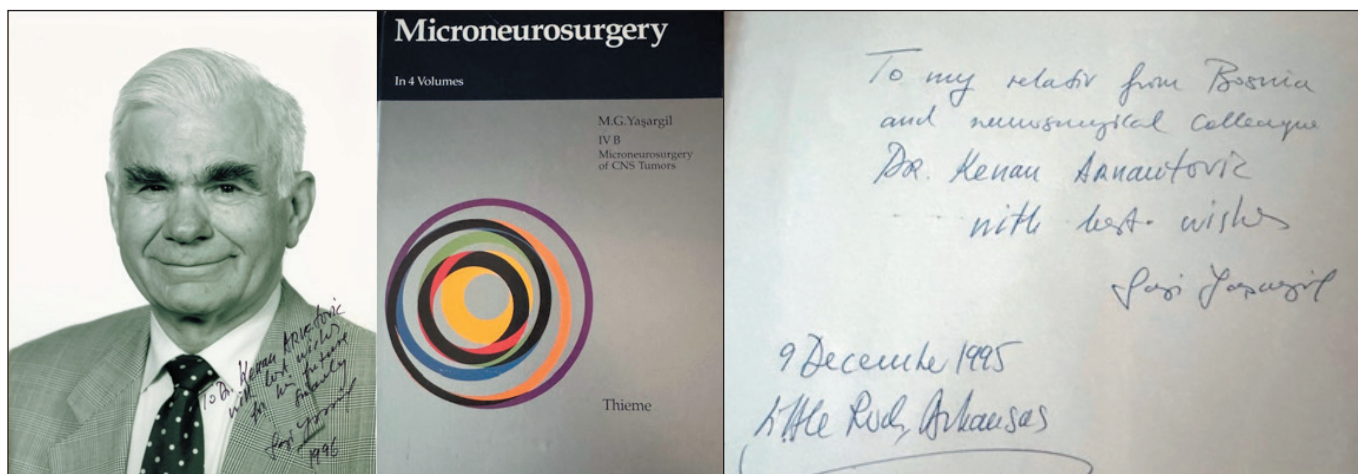
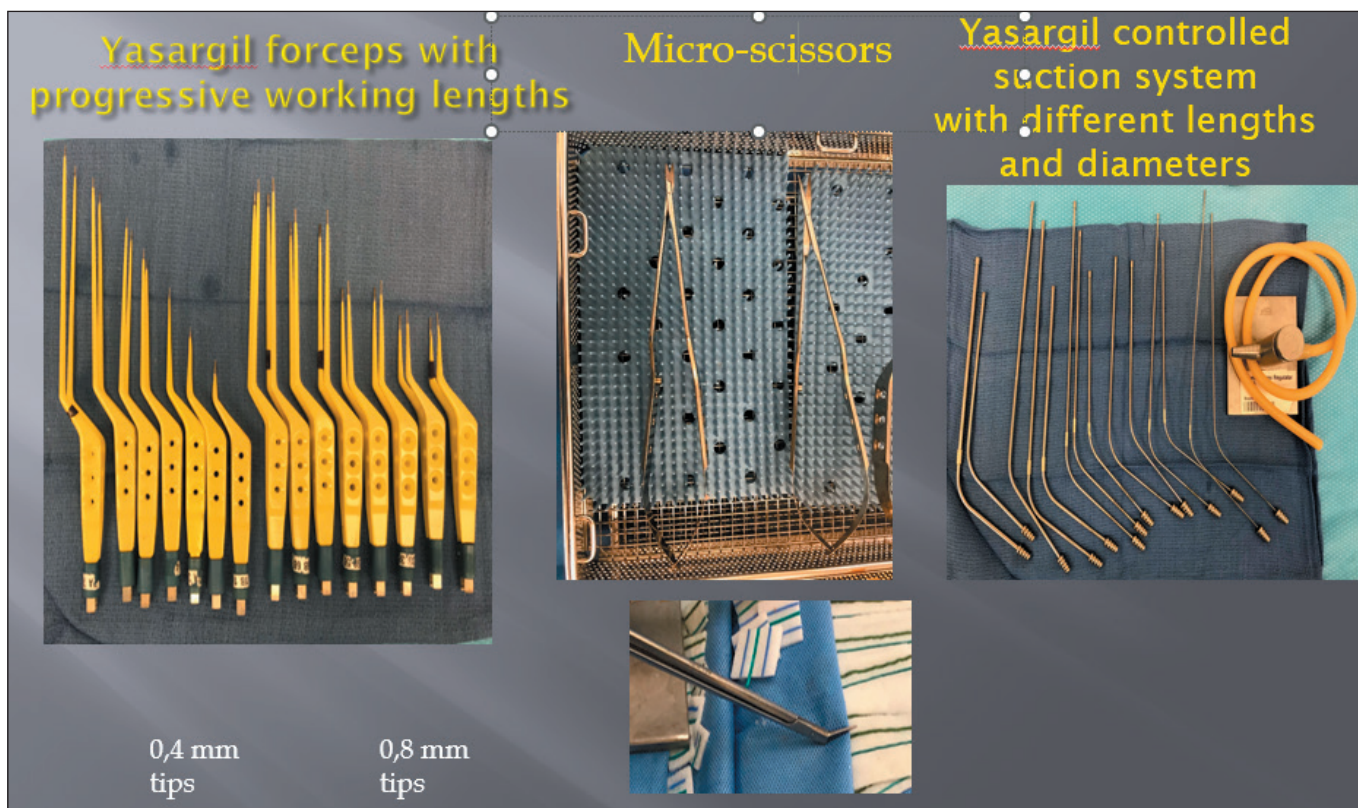


Figure 13: Signed personal photo and Microneurosurgery Volume IV B book by Professor Yasargil to his “relative from Bosnia.”



World Federation of Neurosurgical Societies (WFNS)  
Congress, Istanbul, Turkiye, 2017

**Figure 14:** Last time I saw Professor Yasargil at Istanbul Convention Center in 2017.



**Figure 15:** Photo of my regular surgical table with Professor Yasargil instruments.