

GOBIND BEHARI LAL

1889-1982

INDIAN-AMERICAN >> SCIENCE WRITER

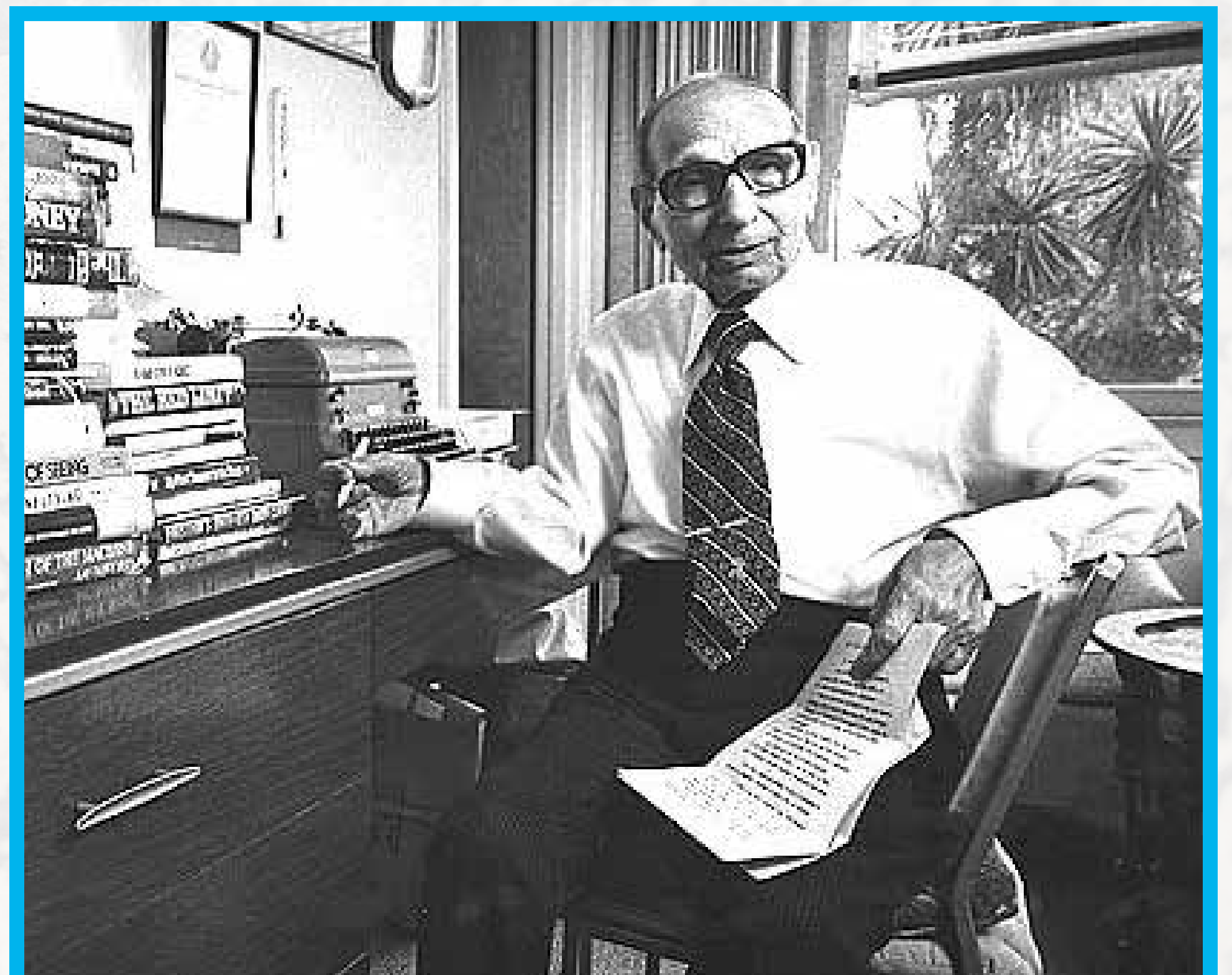


“My interest is to create among the readers a lust for the knowledge of science, which destroys superstition and all kind of false assumption and raises the power of the human brain.”

Gobind Behari Lal was the first journalist to refer to himself as a “Science Writer”. Born in British-controlled Delhi, Lal attended Punjab University at Lahore, Pakistan before moving to California in 1912. Originally planning to return to India, the start of World War I in 1914 forced him to remain in the US while writing for Hearst newspapers and working for Indian Independence.

Lal was one of a dozen journalists to form the National Association of Science Writers in 1934. Believing that scientific writing could change the world, Lal wanted to help the public better understand the lethal and international nature of science at a time when scientific research was largely driven by warfare.

In 1937 Lal became the first South Asian winner of the Pulitzer Prize for distinguished reporting on science. Over his career, Lal interviewed notable figures including Edna St. Vincent Millay, Albert Einstein, and Mahatma Gandhi.



MARY JEWITT PRITCHARD

1905 - 1992

AMERICAN SAMOA >> TRADITIONAL ARTIST



“Mary’s living experience and extensive expertise in siapo-making, gained under personal tutelage of past masters of this native art, are examples of how Samoans gain knowledge and build character. Her drive and dedication in revitalizing siapo-making among our Samoan young people is born of her fierce pride in her Samoan heritage.”

- Peter Tali Coleman, Governor of American Samoa

Mary Jewett Pritchard almost single-handedly revived the Samoan practice of making siapo, the bark cloth of Polynesia. While the making of siapo floor mats and clothes was common in Samoa during her childhood, World War II cut off exports from Samoa and women were unable to continue to make a living with the handicraft. Increasing Westernization in the postwar years led to further decline of the practice.

As a young adult, Pritchard researched the centuries-old practice by studying with two master artisans who lived in the village of Leone, Tui’uli Leoso and Kolone Faiivae Leoso. For the rest of her life she campaigned to preserve the artistic qualities and traditions of Samoan siapo.

In 1971, Pritchard was included in the PBS television series “Artists in America,” which launched her message to a broad audience. She went on to share her knowledge of siapo to audiences around the world.



JOHN M. CHUN

1928-2013

KOREAN-AMERICAN >> INDUSTRIAL DESIGNER

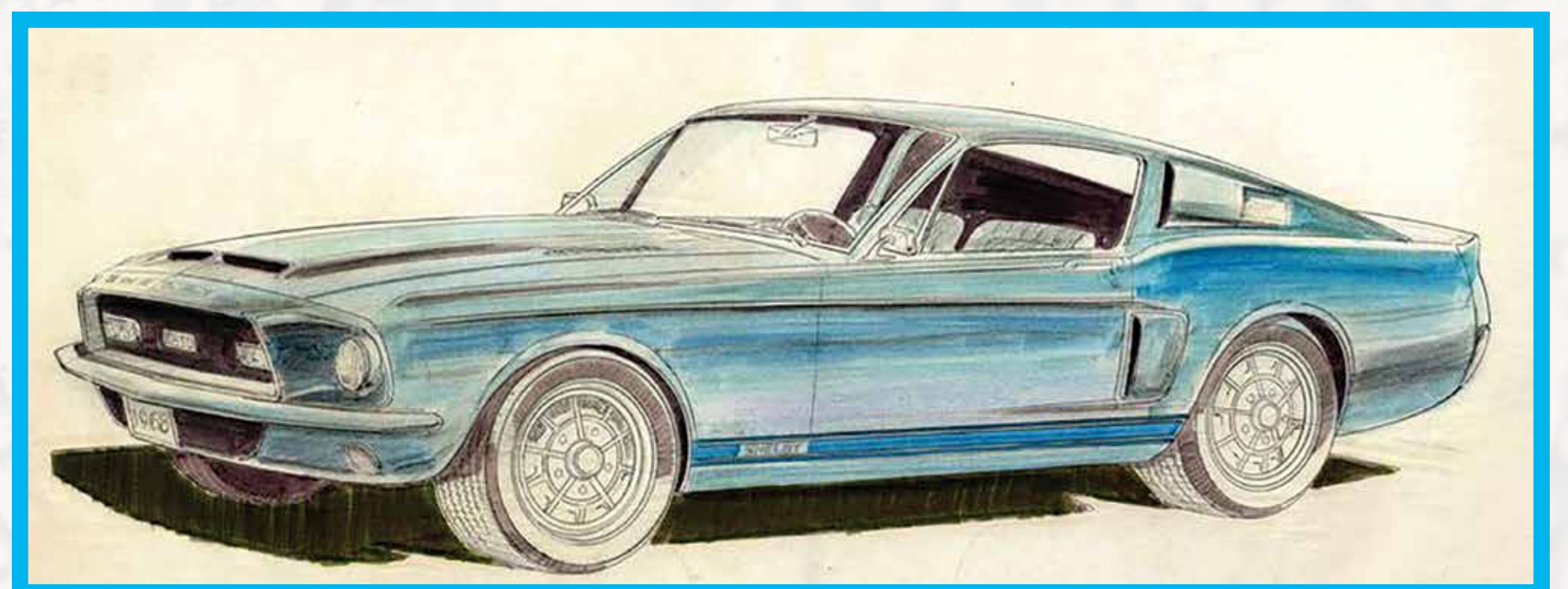


“They don’t think I’m real. They don’t believe that I’m really the guy. Here I am, claiming to have designed a famous American car, and I’m Asian. Not only Asian, I’m from North Korea! That really gets them.”

One of America’s most iconic cars was designed by John Chun, born in Japanese-occupied Korea. After the 1953 armistice of the Korean War, Chun’s father encouraged him to move to Seoul in American-controlled South Korea, where he earned a degree in engineering.

Chun immigrated to California in 1957, enrolling at Sacramento Junior College because his Seoul credentials were not recognized. A professor encouraged Chun to apply to the Art Center College of Design, earning a second bachelor’s in industrial design while working as a mechanic for International Harvester to pay tuition.

He was hired by the chief engineer of a new company called Shelby American. At Shelby, Chun worked on designs for the 1968 and 1969 Shelby Mustang GT350 and GT500 models, prioritizing design that streamlined the manufacturing process. Chun went on to design for Chrysler, consult for Hyundai, and create for Tonka Toys.



ISABELLA AIONA ABBOTT

1919 - 2010

HAWAIIAN >> BOTANIST



“I look upon it as a Western scientist’s viewpoint of the Hawai’ian way of doing things. Why is this necessary? So that Hawai’ians are not put in second- or third-class status of Native people who don’t know anything. Hawai’ian culture is unbelievably sophisticated.”

Isabella Aiona Abbott was born Isabella Kauakea Yau Yung Aiona in Hana, Maui. She was the child of a Chinese immigrant father and a native Hawai’ian mother. Dr. Abbott was the first native Hawai’ian woman to earn a PhD in science.

As a child, her mother taught her about Hawai’i’s native plants and edible Hawai’ian seaweeds. She went on to study botany, earning her PhD from the University of California, Berkeley at the age of 31. In 1971, she became the first woman on Stanford’s biological sciences faculty.

After moving back to Hawai’i in 1982, she was hired by the University of Hawai’i to study ethnobotany, the interaction of plants and humans. Her work bridged the gap between

indigenous knowledge and marine botany studies.

During her career, she wrote eight books and over 150 scientific articles. She was considered the world’s expert on Hawai’ian seaweeds, discovering over 200 species.



AYUB OMMAYA

1930 - 2008

PAKISTANI-AMERICAN >> NEUROSURGEON

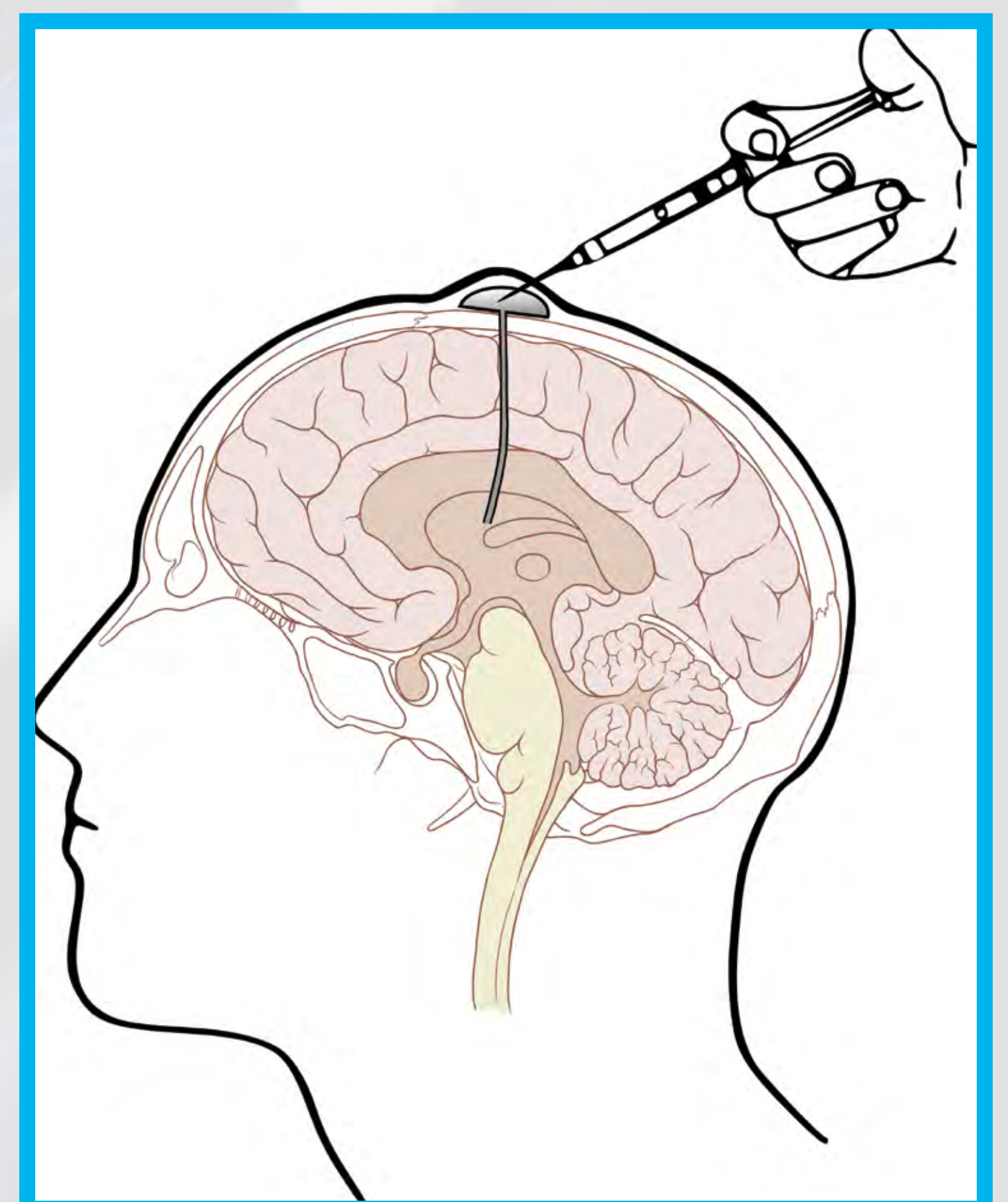


“The evolution of brains, languages, and consciousness are associated with the capacities not only for survival but also with a desire for religion and spirituality. This capacity is coupled with our emotions and reasoning based on biological necessity for belief.”

Ayub Khan Ommaya was a Sufi Muslim, Rhodes Scholar, champion swimmer, diabetic, and operatic tenor. His professional career included the study of traumatic brain injuries and philosophy of mind and consciousness.

Dr. Ommaya received media fanfare in 1977 when he was part of the team that successfully removed a tangle of blood vessels from the base of the brain of a Rochester, NY teacher in a grueling 18-hour surgery.

In 1963, Ommaya first presented the Ommaya Reservoir, a system used to deliver drugs directly to the brain for tumor treatment. A soft dome-shaped device placed under the scalp and connected to a catheter in the brain allowed for repeated injections. Ommaya's was the first medical port to use silicone and influenced all medical ports in use today. Ommaya reservoirs have recently been used to measure intracranial pressure in astronauts in research to combat failing eyesight experienced after prolonged zero-gravity conditions.



ROSELI OCAMPO-FRIEDMANN

1937-2005

FILIPINO-AMERICAN >> MICROBIOLOGIST



“The hypolithic microbial growth form (which lives under stones of a desert pavement) could be used as a model for development of technologies for large-scale Martian farming.”

- from “A primitive cyanobacterium as pioneer microorganism for terraforming Mars”

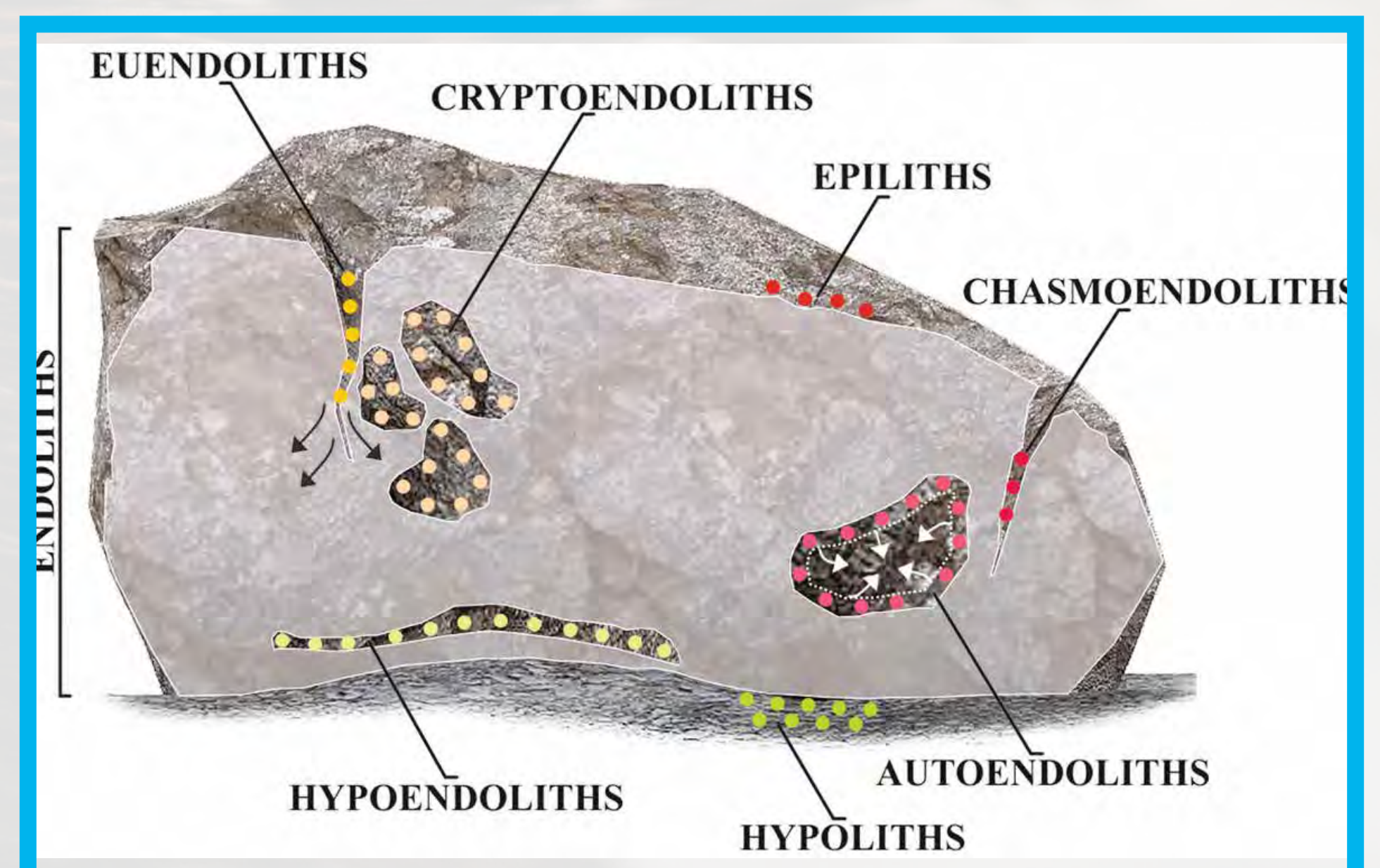
Roseli Ocampo-Friedmann specialized in microbiology and extreme environments. Her work on extremophiles in Antarctica is cited as the basis for continuing research on the possibilities of terraforming Mars.

Born in Manila, Ocampo-Friedmann studied botany at the University of the Philippines and Hebrew University in Jerusalem before returning to the Philippines to the National Institute of Science and Technology. In 1968, she moved to Florida State University to complete her PhD.

Ocampo-Friedmann traveled extreme desert environments studying endoliths – microorganisms living inside stone. Said to have a “blue-green thumb,” Ocampo-Friedman was the first person to successfully grow

cultures of Antarctic blue-green algae in a laboratory setting. Her research was cited by NASA as the basis for life on Mars.

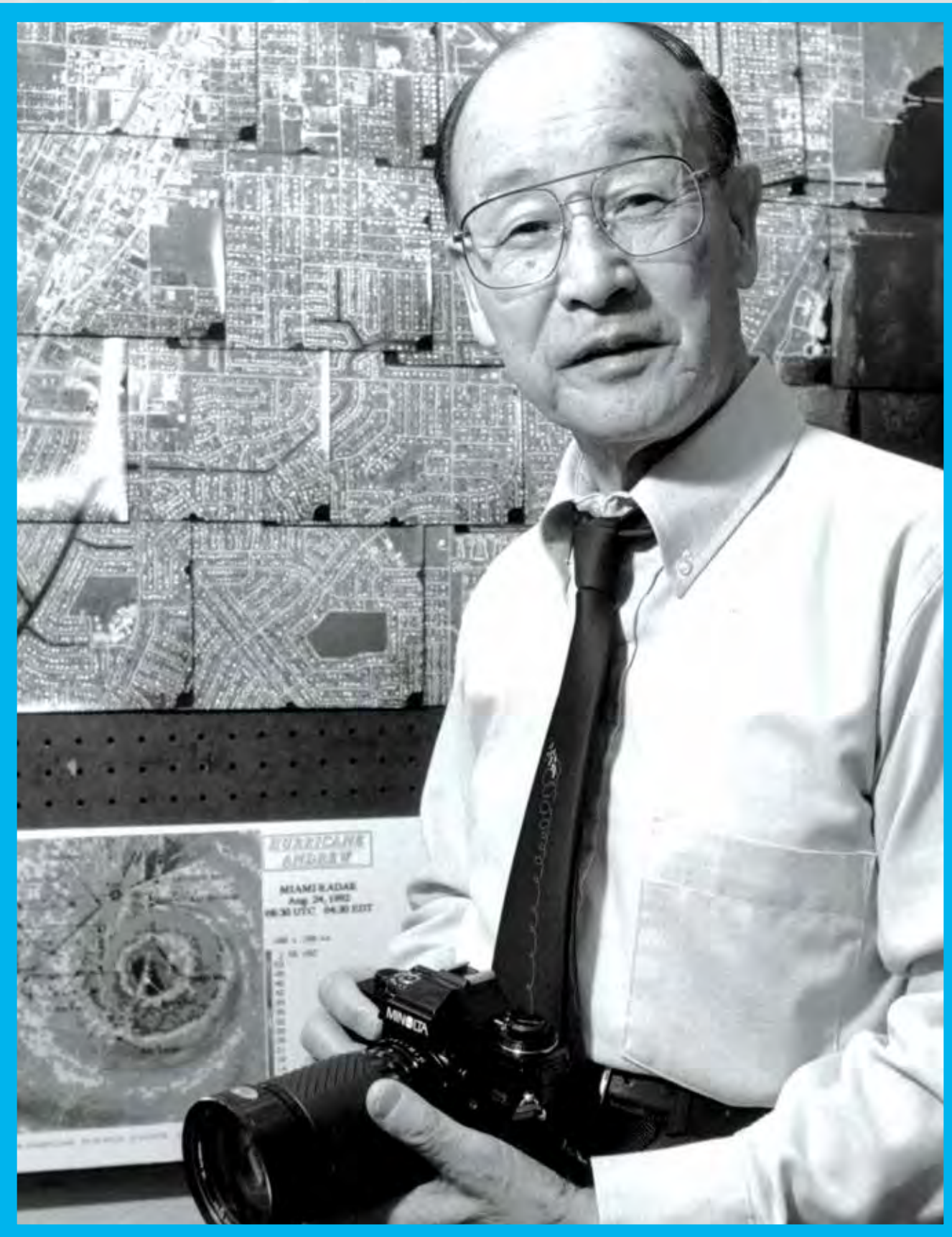
By the end of her career, Ocampo-Friedmann’s collection of cryptoendolith cultures included nearly 1,000 different types. She continued to work at both Florida State University and Florida A&M University until 2001.



TED FUJITA

1920-1998

JAPANESE-AMERICAN >> METEOROLOGIST



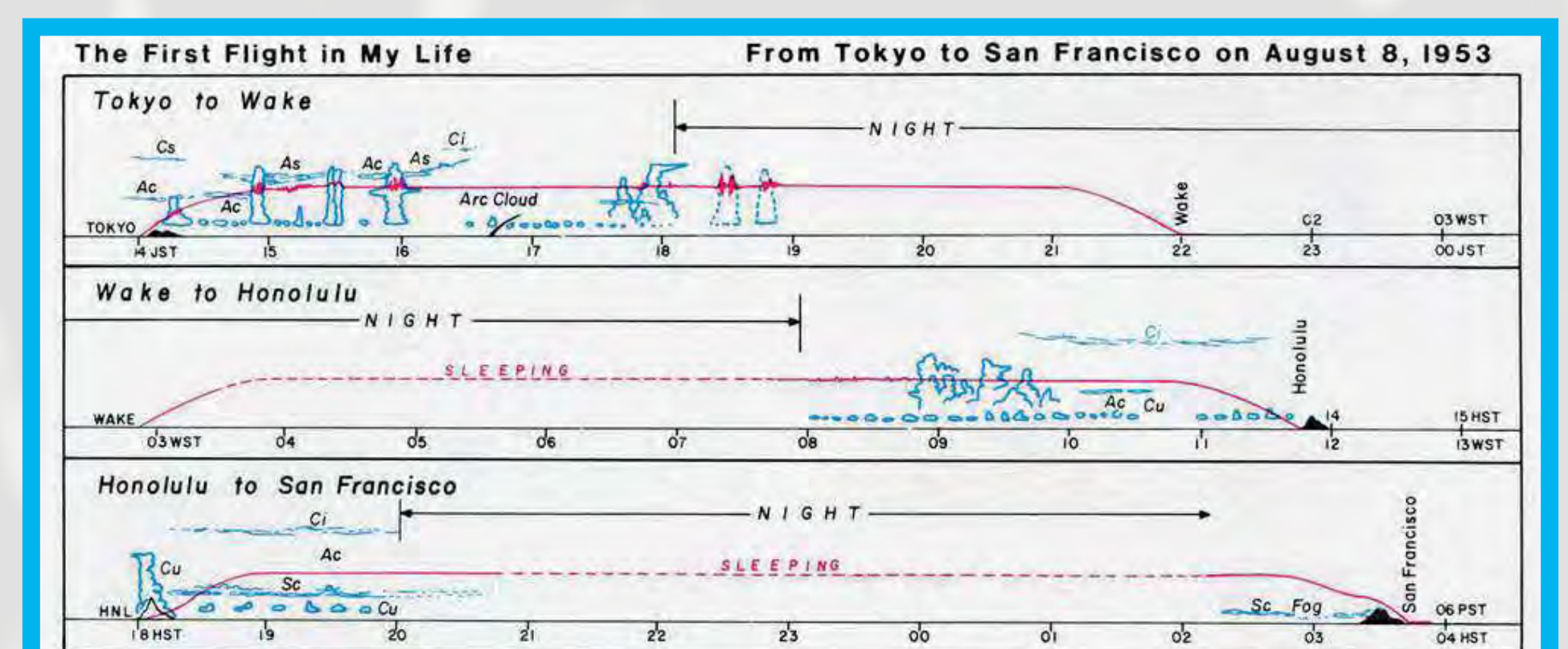
“Without wasting the expensive flight time, I began sketching the vertical time cross section of clouds along the flight path. Shortly before 1600 JST, the aircraft flew into towering cumuli, encountering severe turbulence. I heard crashing sounds of dishes and utensils in the flight kitchen. A moment after, the flight became smooth and I saw a beautiful arc of low clouds.”

Tetsuya Theodore “Ted” Fujita was also known as “Mr. Tornado” for his groundbreaking work developing and refining a system to classify tornado intensity. In college he studied mechanical engineering, completing an analytical study of typhoons for his PhD at Tokyo University.

Fujita was part of a team that observed and recorded shock wave patterns after the United States dropped atomic bombs on Nagasaki and Hiroshima in 1945. The starburst patterns of damage seen in Japan’s forests became the basis for his foundational research on the phenomena of downbursts and microbursts.

In 1953, Fujita joined the University of Chicago Meteorological Department

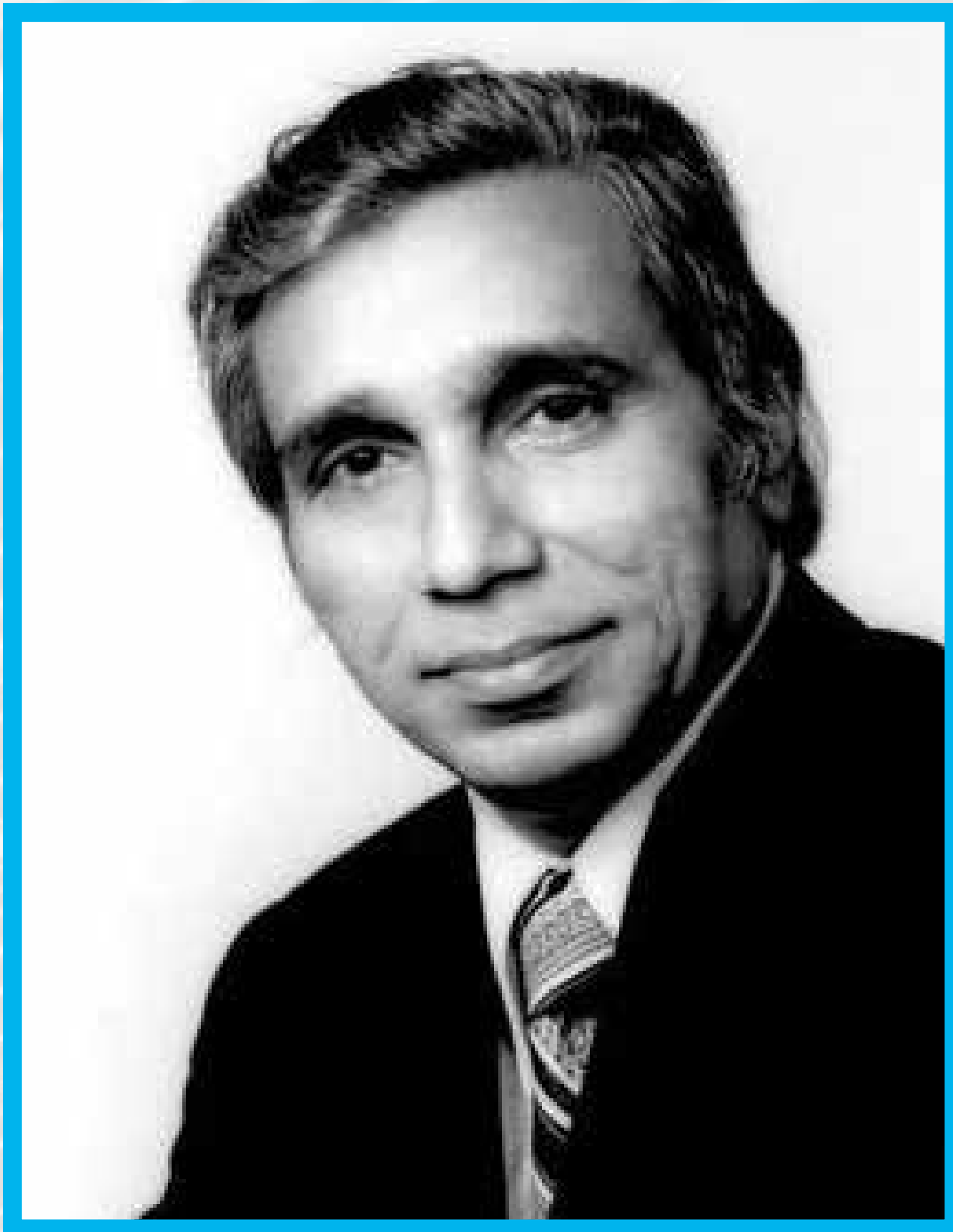
where he established the Fujita Scale. The Fujita Scale, or F-scale, presented a system for differentiating tornado intensity by ranking observed damage and has been used to track every tornado in the US since the 1950s.



FAZLUR RAHMAN KHAN

1929-1982

BANGLADESHI-AMERICAN >> STRUCTURAL ENGINEER



“Think logically and find the relationships which exist in every system, because it will help you understand nature itself, making living more meaningful and exciting.”

Today's soaring skylines would not be possible without the work of Fazlur Khan. The son of a Bangladeshi mathematician, Khan attended the University of Illinois to study structural engineering. From seeing his first skyscraper at 21, at age 35 he submitted plans for the world's second-tallest building, the 100-story John Hancock Center.

Khan's tubular systems were inspired by the natural strength and durability of bamboo. In framed tube structures, the building's weight is supported at the edges, leaving the center open as usable space. The exterior X-bracing on the Hancock Building and the bundled tube format Khan used for the Sears Tower are varieties of the tube structure concept.

By engineering buildings to act as hollow tubes, Khan's system allows buildings to resist forces like wind, while also allowing greater permeability for windows and natural light. Most buildings over 40 stories tall built after the 1960s use tubular structural engineering.



GHOLAM ALI PEYMAN

1937 -

IRANIAN-AMERICAN >> OPHTHOMOLOGIST



“I am gratified that our work has touched so many people. We work always to enhance treatments and improve the outcomes for patients. We continue to look forward since there are many more problems to solve.”

Dr. Peyman is an ophthalmologist and vitreoretinal surgeon most widely known as the inventor of LASIK eye surgery. His inventions include innovative medical devices, intra-ocular drug delivery, surgical techniques, laser and optical instruments, and new methods of diagnosis and treatment.

Born in Shiraz, Iran, Dr. Peyman completed his medical studies in Germany before moving to the US in 1970 to work at the University of California, Los Angeles Stein Eye Institute. In 1989, he was awarded the patent for LASIK, or laser-assisted in situ keratomileusis. Dr. Peyman's method cut a flap in the cornea and

operated underneath, preventing scarring and distortion on the surface of the cornea.

Dr. Peyman has published 900 articles, 10 books, been granted 200 US patents, and has been inducted into the Hall of Fame of Ophthalmology. His awards include the 2012 National Medal of Innovation & Technology and the American Academy of Ophthalmology Lifetime Achievement Award.



DR. MARGARET JESSIE CHUNG

1889-1959

CHINESE-AMERICAN >> PHYSICIAN



“Women of every nation, every country, should learn medicine, so that they can teach the women of their countries and their races how to care for themselves and their children—how to improve the coming generation.”

The eldest of 11 children in a Chinese immigrant family, Margaret Chung was the first American-born Chinese female doctor. While attending the University of Southern California Medical School, she was the only woman in her class. She dressed in masculine clothing, and called herself ‘Mike.’

Chung was denied work opportunities in numerous hospitals, but became an emergency surgeon in Los Angeles. In the early 1920s, she helped establish the first Western hospital in San Francisco’s Chinatown and led its OB/GYN and pediatrics unit where she treated the local Chinese American community along with various celebrities as a surgeon.

Chung also helped establish WAVES, Women Accepted for Volunteer Emergency Services, the women’s branch of the naval reserves during World War II. While WAVES helped lead to women’s integration into the US military, she was rejected from serving in it herself due to prejudice against her race and sexuality.

