

*"He that was dreaming...
Saw his dream through"*

[Didi Manoussi,
popular Israeli songwriter]

Michel Mirowski (1924–1990)

Frequently important innovations in medicine, and not only just in medicine, are the consequence of circumstances. No one will belittle Alexander Fleming's contribution to the discovery of the miraculous effects of penicillin because his breakthrough observation was realized when he stumbled upon mold falling from the roof of his laboratory which inhibited the growths of *Staphylococcus aureus*. On the other hand, other inventors carefully plan and diligently pursue an idea or a concept and Michel Mirowski, whose life and achievements will be described here, belongs to this category of geniuses. Michel had a dream and he spent years of labor struggling to see it through.

Mieczyslaw Friedman was born in 1924 in Warsaw, Poland to a Jewish family and his family background and roots were admirably described by John Kastor [1]. The change of their name to Mirowski came from the family's wish to blend easily into Polish society. In 1939, with the break out of WWII, Poland was in flames and 15 year old Mieczyslaw fled eastward and survived the next five years with false papers, hiding in small villages and forests while living in constant fear and danger. After the war, returning to Warsaw, Mieczyslaw did not find his father, brother or any other surviving relatives. Alone, he went to Gdansk and enrolled at the University to study medicine but after one year, in 1947, he immigrated to pre-State Israel. As there was no medical school there at the time, he traveled then to Lyon, France where he completed his medical training. Here he adopted the name Michel, and upon marrying Anna, they returned to Israel in 1954. Michel then started his residency in cardiology at the Tel Hashomer Hospital. He knew however, that in order to become a first rate car-



diologist, he needs top overseas training. Upon receiving a fellowship, Michel initially worked at the Instituto de Cardiologica in Mexico City under Enrique Cabreria and Sodi-Pallares then he transferred to Baltimore, Maryland as a fellow of Dr. Helen Taussig's department. Only in 1963, after this extensive post-graduate training, did he return to Israel with his wife and three children.

In Israel Michel's professional life was not without obstacles. His desire to work as a senior member at the large and prestigious Tel Hashomer Hospital's cardiology department, did not materialize. Despite this set back he became a respected member of Tel Hashomer's Department of Medicine and here started his life-long admiration of Prof. Harry Heller, Head of the Department. Later Michel became the Head and sole doctor of the Cardiology Unit at Assaf Harofe, a more peripheral government hospital. During these years my friendship with Michel started when he embarked upon several research projects with the Cardiology Department's experimental laboratory of my hospital in Jerusalem, Hadassah. This cooperation resulted in lectures and publications on his then main research interest, aberrant atrial rhythms [2].

A tragic event changed Mirowski's life and career in 1966, his mentor Prof. Heller died suddenly after an episode of ventricular tachycardia terminating in ventricular fibrillation while at home with his family. Michel realized that the life of Heller and many other patients could be saved if at the time of the VT/VF they were in a coronary care unit and defibrillated there, or, if a defibrillator would be permanently available for them, probably implanted into their body.

This revolutionary concept of having a device implanted permanently which can monitor and analyze cardiac rhythm and deliver promptly a low energy shock to the heart whenever VT or VF occurs, became Michel Mirowski's life's obsession. When he felt that his hospital position and facilities in Israel were too restricted to develop his idea, he was ready to sacrifice his position and family security to pursue his dream in America.

Sinai Hospital in Baltimore offered Michel the position of Head of the ICCU and there he found a close friend and collaborator in Dr. Morton Mower, with whom the first steps were taken in materializing his concept. In the animal laboratory they succeeded in implanting a defibrillator device in a dog and when it collapsed due to an induced VT/VF, the device automatically launched a shock to the heart, the animal immediately got up on its feet and walked away.

In spite of the dramatic videotape which most convincingly documented that an implanted device can recognize and terminate a VT/VF event and the consequent publishing of his first report [3], the scientific world not only rebuffed this concept but even attacked Michel in an unusually harsh manner. Lown and Axelrod [4] listed lengthily in a leading cardiology journal's Editorial their technical and ethical considerations, calling implanted standby defibrillators "an imperfect solution" and expressed their view that "it was developed because it was possible".

Michel was not only personally "bruised" by this editorial, as his daughter Ariella recalled [5], but the whole advancement of the project was slowed down by this vehement criticism. Only when a new partner appeared on the scene, Dr. Stephen Heilman who was ready to invest the necessary funds for the continuation of the research, could the project progress. In 1980 the first human implant of a much more sophisticated device was successfully conducted, and thereafter published in a most prestigious medical journal [6]. From now on the success of the ICDs, the name by which the "Mirowski device" became known all over the world, never ceased. Between 1980–1985, more than 5,000 ICDs were implanted on both sides of the Atlantic.

Michel Mirowski's achievements finally became accepted and highly regarded.

We in Jerusalem felt fortunate that Michel accepted my invitation to attend our International Holter Symposium in March 1986. All of us enthusiastically listened to his description of the "bumpy road" in developing the ICD, as we watched with fascination the video of its dramatic use on the dog and admired his first hand account of the clinical success and follow-up of 900 patients. My invitation was only one of many for Michel Mirowski who became an internationally sought after lecturer. Now he really enjoyed the appreciation expressed by all cardiologists and scientists in the world and he saw how the device he envisioned is now saving thousands of lives.

Fate was not gracious with Michel Mirowski. At the peak of his success, when he could see his dream come through, Michel was diagnosed with multiple myeloma. At the time of my last personal meeting with him and Anna in Italy, Michel hinted to me about his health problem. Michel Mirowski's life was cut off in his prime as he died at the age of 66, mourned by Anna, their three daughters, and his friends and patients all over the world.

References

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Shlomo Stern, MD
Emeritus Professor of Medicine
1 Shmuel Hanagid St.
Medicla Building, Room 201
Jerusalem 94592, Israel
e-mail: sh_stern@netvision.net.il