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Khan, S., Jabbar, A., Hasan, C.M. and Rashid, M.A. 2000.
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Rashid, M.A., Gustafson, K.R., Crouch, R.C., Groweiss, A., Pannell, L.K., Van, Q.N. and Boyd, M.R. 2002. Application of high-field NMR and cryogenic probe technologies in the structure elucidation of poecillastrin A, a new antitumor macrolide lactam from the sponge *Poecillastra* species. *Org. Lett.* 4, 3293-3296.

Harborne, J.B. and Williams, C.A. 2000. Advances in flavonoid research since 1992. *Phytochemistry* **55**, 481-504.

Mabry, T., Markham, K.R. and Thomas, M.B. 1971. *The Systematic Identification of Flavonoids*. Springer Verlag, New York, p. 43.

Harborne, J.B. 1983. In: *Chemistry and Chemical Taxonomy of the Rutales* (Waterman, P.G. and Grundon, M.F., Eds.), Academic Press, London, Chapter 2, pp. 147-173.

Hasan, C.M. 1982. Phytochemical studies on some African Annonaceae. Ph. D. Thesis, University of Strathclyde, U.K., p. 35.

Davis, R. 1998. US Patent 5, 708,591.

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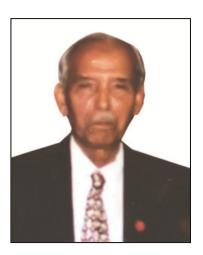
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This Issue is Dedicated to Emeritus Professor Dr. Abdul Jabbar

- Obituary



Emeritus Professor Dr. Abdul Jabbar (1921-2016)

Emeritus Professor Dr. Abdul Jabbar, born in Debidwar, Comilla on 21 February 1921, is the founder of Pharmacy education in Bangladesh. He did his graduation from the University of Dhaka in 1945 and post graduation from the same university in 1946. He obtained his PhD, DIC in 1953 from the Imperial College of Science and Technology, London, UK. He started his academic career as a Lecturer in the University of Dhaka in 1947. He served as the Head of the Department of Pharmacy from 1966 to 1978. In 1984 he was honored as the Professor Emeritus of the Department of Pharmacy, University of Dhaka. His tireless efforts and hard work brought the Department of Pharmacy to a full-fledged Faculty of Pharmacy in 1995. He was the founder President of the Pharmaceutical Society of the then East Pakistan (Present Bangladesh). As a pioneer academician, researcher and leader of the Pharmacy community he invested all his efforts to bring the pharmacy education and profession to its highest status in Bangladesh. His vision and mission were to produce quality pharmacy graduates, whose sincere efforts, skills and dedication have turned Bangladesh to a drugs exporting country.

Emeritus Professor Jabbar died on January 30, 2016 at the age of 95 years due to old age complications (Innalillahi Wa Innailahi Rajiun). He will be in the hearts and memories of Pharmacy Family forever. We salute him for his outstanding contribution and pray to the Almighty Allah for salvation of the departed soul.