especially the properties regarding its carbohydrate recognition domain structure. As a consequence, it is absolutely essential to understand the structure of TM, in order to get into more functional details of its regulations in the aforementioned properties. Thrombomodulin (TM) forms a 1:1 complex with thrombin. Whereas thrombin alone cleaves fibrinogen to make the fibrin clot, the thrombin-TM complex cleaves protein C to initiate the anticoagulant pathway. Until present, the so-far available structures, either through NMR or through X-ray analyses, can not shed lights into the decent structural-functional interpretations for TM regulations. Crystallographic investigations of the complex between thrombin and TM-EGF456 did not show any changes in the thrombin active site. Therefore, research has focused recently on how TM may provide a docking site for the protein C substrate with different Ca²⁺ concentration. Previous work, however, showed that when the thrombin active site was occupied by substrate analogues labeled with fluorophores, the fluorophores responded differently to active (TMEGF1-6) versus inactive (TMEGF56) fragments of TM.

**Keywords:** Thrombomodulin, Structural analysis, Calcium-induced dimerization.

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**Crystal structure of 6- Methoxy- 4- bromomethylcoumarin.** Ramakrishna Gowda, K.V Arjuna Gowda, Mahantesh Basanagouda, Manohar V. Kulkarni. 7Department of Physics, Govt. College for Women, Kolar - 563 101, Karnataka, India. 8Department of Physics, Govt. First Grade College, K.R. Pura, Bangalore-560 036, Karnataka, India. 9Department of Chemistry, Karnatak University, Dharwad-580 003, Karnataka, India. E-mail: arjunagowda@indiainfo.com

Coumarins are a class of naturally occurring oxygen heterocycles which have been found to exhibit wide ranging biological activities [1-3] through its innumerable derivatives. Structural studies on coumarins have been focused on their solid state photochemical dimerization [4], hydrogen bonding [5], mode of packing [6], molecular self assembling [7] and photophysical properties [8]. Introduction of bromine has resulted in formation of hydrates, intermolecular hydrogen bonding, eclipsed conformation observed in 3-bromocoumarin [9], 6-bromo-3-acetylcoumarin [10] and 3-bromoacetylcoumarin [11] respectively. 3-Bromophenyl-6-acetoxyethyl-coumarin-3-carboxylates have been found to exhibit potential anticancer and antitumour activity [12]. Crystals suitable for diffraction studies were grown by slow evaporation technique using acetic acid as a solvent. The title compound is cyclic and planar but non-aromatic in nature due to the continuous delocalization of electrons around the coumarin ring. Skeleton is not possible. There is a significance deviation in bond angle at 01-C1-C2 (117.2(3) ° due to the electronic repulsion of oxygen (02) atom which is present at C1 carbon atom.


**Keywords:** x-ray, single crystal, coumarin.