

## Letter to Editor

# Annexin 1 and its evolving role in systemic carcinogenesis besides its role in the pathogenesis of breast carcinomas

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I read with great interest the recent article by Wu et al in a recent issue of your esteemed journal [1]. The article is highly thought provoking. Interestingly, the past few years have seen the emergence of data that points towards the fact that annexin 1 (ANXA1) plays a significant role in systemic carcinogenesis besides its role in the pathogenesis of breast cancers.

For instance, ANXA1 enhances metastasis in urothelial carcinomas [2]. Similar effects are seen in laryngeal carcinomas where ANXA1 plays a modulatory role in tumor growth as is evident by inhibition of tumor growth in Hep-2 human larynx epidermoid carcinoma cell lines [3]. Similarly, nearly 70% of undifferentiated thyroid carcinomas demonstrate attenuated expression of ANXA1 [4]. On the contrary, up regulation of the protein is seen in papillary thyroid carcinomas.

Similarly, over expression of ANXA1 is seen in nearly 85 % of pancreatic ductal adenocarcinomas [5]. Simultaneously, decreased differentiation is seen in pancreatic adenocarcinomas that demonstrate accentuated expression of ANXA1. Similarly, ANXA1 is expressed along with peroxiredoxin 2 in the saliva of oral cancer patients [6]. Hairy cell leukemia also exhibits up regulation of ANXA1. In fact, ANXA1 serves as a remarkably specific test for hairy cell leukemia [7]. Interestingly, agents such as eurycomanone modulate ANXA1 levels and affect tumor growth in cancers such as pulmonary carcinomas [8].

Clearly, ANXA1 has a major role to play in tumor

growth. Further, large scale studies are needed to further elaborate its effects.

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