

## Polybromo-1 loss in cholangiocarcinoma development: Expressional analysis

Sir,

Dear editor, the cholangiocarcinoma is a deadly hepatobiliary cancer. It results in high fatality in affected persons in endemic Southeast Asia. The patient usually manifests at large stage of cancer and has severe obstructive jaundice.<sup>[1]</sup> The underlying genetic pathophysiology of cholangiocarcinoma is very interesting. As a cancer, the mutation can be expected (such as KRAS mutation).<sup>[2]</sup> In a recent publication by Luchini *et al.*, the loss of Polybromo-1 (PBRM1) was observed during the development of cholangiocarcinoma.<sup>[3]</sup> The similar finding was also reported by another Japanese scientist group.<sup>[4]</sup> Here, the authors use the standard gene ontology technique to assess the effect of PBRM1 loss comparing to the naïve case. The protocol for gene ontology analysis is the same as previously gene ontology analysis studied.<sup>[5-7]</sup> According to analysis, the identified main affected function due to PBRM1 loss is “regulation of chromatin association.” This implies that loss of PBRM1 during cholangiocarcinoma development is the important pathobiological process that promotes the abnormal cell division and might stimulate the cancer development. In fact, the loss of PBRM1 is proposed as an important predictor for poor outcome in several cancers such as renal cancer.<sup>[8]</sup>

Sora Yasri<sup>1</sup>, Viroj Wiwanitkit<sup>2</sup>

<sup>1</sup>Department of Medicine, KMT Primary Care Center, Bangkok, Thailand,

<sup>2</sup>Department of Tropical Medicine, Hainan Medical University, China

Correspondence to: Sora Yasri, KMT Primary Care Center, Bangkok, Thailand. E-mail: sorayasri@outlook.co.th

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