



# Principal Component Regression and Artificial Neural Network: The Prediction of Air Pollution Index (API)

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## Dear Editor-in-Chief

Our intentions by presenting this study were to apply the principal component regression (PCR) method or artificial neural network (ANN) technique and combination on both statistical techniques in predicting the air quality status at a particular study area.

So far, however, there has been little discussion about the issues of multi-collinearity (1), selected technique of PCR which includes the combination of multivariate linear regression (MLR) and principal component analysis (PCA) will benefit in optimization of spatial patterns and examine the variation of environmental pollution (2, 3). In general, the ANN technique is flexible and accurate as well as efficient to train the non-linear patterns between value of input and output especially complex data in define the solutions (4). Therefore, embody the PCR and ANN techniques for combination methods would provide better performance in forecasting and predicting the environmental pollution (5-7).

Thus, we agreed that by having several techniques combine with different methods to predict the air pollution index (API) will definitely enhance and contribute much better accuracy compared to individually model of prediction.

## Conflict of interest

The authors declare that there is no conflict of interest.

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