activity, using MLR and ANN methods. Our results could be summarized as follow:

- The MLR correlation coefficient (r_{MLR} = 0.887) is adequate , but when compared with the results given by the ANN (r_{ANN} =0.98), we notice that the predictions fulfilled by this latter were more effective.
- The model proposed in this study is statistically significant and shows a high predictive power (r_{cv} = 0.92).
- The descriptors selected to represent the majority of classes of descriptors proposed to build the QSAR model show that the antimalaria activity is closely dependent of the parachor, the density, the softness, the molecular weight and the dipole moment of aurones derivatives.

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