**Candidates Targeted Therapy of Epidermal Growth Factor Receptor for Lung Cancer: In Silico Study**

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**Background and aims.** Lung cancer is the highest death rate among other cancers. Available targeted therapy for its treatment is tyrosine kinase inhibitors for Epidermal Growth Factor Receptor (EGFR) – one of the receptors on the lung surface. Gefitinib is one of the EGFR tyrosine kinase inhibitors used for lung cancer. However, 60% of patients developed resistance at 9 to 11 months after treatment. Currently, molecular docking is provided in silico models for discovering novel drugs targeting the EGFR. This study aims to develop a candidate agent as an alternative to gefitinib from natural ingredients for lung cancer targeted therapy using in silico study.

**Methods.** We conducted research using Molecular Operating Environment 2015 V.10 software, and the EGFR used was obtained from the Repository for Biological Molecular Information database.

**Results.** . As the study result, it was found that eight ligands interact with EGFR through the hydrogen, aromatic, and carbonyl bond with amino acids. The other two ligands interact with the receptor by ligand exposure. Procyanidin A2 is the compound that has lower S value energy (-15.1153 Joule/Kg.mol), which produces the strongest binding to the EGFR.

**Conclusion/Discussion.** We concluded that Procyanidin A2 from the Telang flower (Clitroia ternatea) had close interaction with gefitinib for targeting EGFR. This compound can be used as a candidate for lung cancer therapy. However, further studies in vitro and in vivo in the laboratory are needed to confirm its activity

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