Lung cancer remains a deadly disease with very limited treatment options. Efforts in anti-lung cancer drugs development resulted in a discovery of the epidermal growth factor receptor thymine kinase domain (EGFR TK) inhibitors. The key of this class is erlotynib (Tarceva^{TM}). It binds to TK domain of EGFR at ATP binding site and suppresses proliferation of the cancer cell. Unfortunately certain mutations in EGFR TK make cancer cells erlotynib-resistant. If that happen further treatment prognosis is bad. The goal of the herein grant proposal is due to obtain a group of metal-containing erlotynib compounds which are able to overcome erlotynib resistance in lung cancer cells. After chemical synthesis step obtained molecules will be anticancer tested against a panel of erlotynib sensitive and resistant cancer cells and the mechanism of action of the most active compounds will be revealed by a combination of biological techniques.