



CANCER PREVENTION & RESEARCH
INSTITUTE OF TEXAS

Award ID:
RP140152

Project Title:
Natural Product for Treatment of Non Small Cell Lung Cancer

Award Mechanism:
Individual Investigator

Principal Investigator:
MacMillan, John

Entity:
The University of Texas Southwestern Medical Center

Lay Summary:

This proposal aims to develop a novel therapeutic for the treatment of lung cancer, which is the largest cancer killer of both men and women in the United States. The development of therapies targeted to specific mutations in cancer, such as EGFR mutations in lung cancer, has greatly increased our ability to treat cancer. We have discovered a natural product from a marine-derived bacteria, called discoipyrrole A, that selective kills cancer cells that have oncogenic mutations in a protein called the discoidin domain receptor 2. These mutations are present in about 4% of squamous cell carcinomas, a percentage similar to EML4-ALK fusion and other targeted mutations. We will use a combination of synthetic chemistry, pharmacology, animal models and biochemistry efforts to develop the discoipyrroles into novel lung cancer therapies.