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**1** PCT Appl. No. PCT/PL2012050005

**Applicant:** Instytut Chemii Organicznej Polish Academy of Sciences

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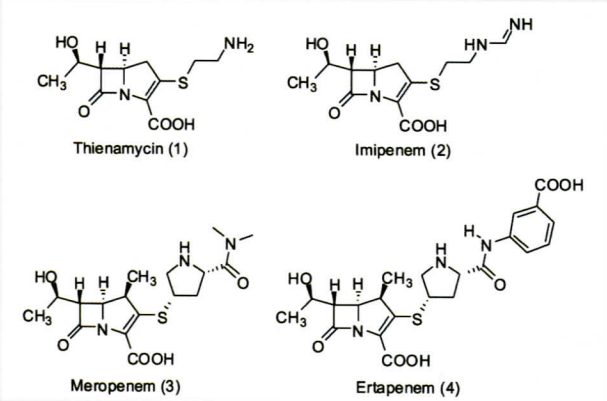
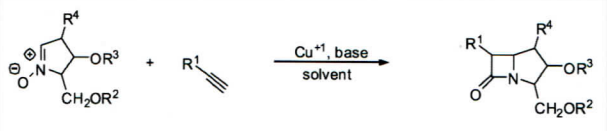
**Our ref.:**PZ/1150/AG/PCT

## Title: A method of the preparation of carbapenam compounds

Thienamycin (1) is the best known, natural carbapenam antibiotic with a high pharmacological activity. Derivatives of thienamycin such as Imipenem (2), Meropenem (3), Ertapenem (4) are the active ingredients of known pharmaceutical therapeutics with anti-inflammatory activity, and high resistance to β-lactamases, bacterial enzymes that destroy administered antibiotics.




The invention describes a new method of the preparation of compounds containing the core skeleton of carbapenam antibiotics, novel intermediate compounds used in this method as well as the use of the intermediate compounds in the production of carbapeneme antibiotics. The key step of the preparation of the core of carbapenams is the reaction of terminal acetylenes with cyclic five-membered nitrones in the presence of copper(I) salts.




**2** Polish patent appl. no. P-394619, PCT to be submitted in April 2012

**Applicant:** International Institute of Molecular and Cell Biology

**Inventors:** Izabela Sabała, Matthias Bochtler

## Title: A method of proteolisys, a peptidase, a composition for use as a bacteriostatic or bactericidal agent, a kit and the uses of the acive form of LytM of S. Aureus or a derivative thereof.

The subject of the offer is the recombinant catalytic domain of peptidoglycan hydrolase LytM from Staphylococcus aureus, which:

- lyses staphylococcal cells with high efficiency,
- sustains high activity in a wide range of temperatures (0-30°C),
- is unusually active in low conductivity conditions, including pure water,
- is very stable,
- can be produced in high yield and simply purified at low costs.

LytM can be applied as:

- active substance in bacteriostatic and bactericidal formulations against staphylococcal strains used for disinfection of surfaces and tools used in medicine, veterinary and diagnostics as well as equipment and tools used in food industry
- bacteriostatic or bactericidal agents in cosmetic production.
- tool for diagnostics of various Gram positive bacteria.
- component of kits for isolation of protoplasts, nucleic acids, proteins, lipids and other components of Gram positive bacterial cells.
- additive to food for human and animals
- component of other bio- and nanotechnological applications e.g. to impregnate or cover surfaces exposed to contact with Gram positive bacteria