Methods and Compositions for Controlled Release of Drugs

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Description of Technology

This technology provides a method and compositions for the controlled release of drugs that have been attached by means of a covalent bond to a polymer or other moiety that blocks activity of the drug until it has been released. A two-stage process is provided in which an unmasking reaction results in the formation of a chemical group that can then undergo a second reaction to release the drug.

Applications

This technology can be used for any drugs which have an amine, alcohol or thiol moiety through which they can be bonded to the remainder of the drug-delivery molecule. A non-exhaustive list of drugs that can use this technology include narcotic analgesic drugs (oxycodone, fentanyl, propoxyphene), drugs incorporating secondary amines, cholesterol-lowering drugs, and many others.

Features & Benefits

This technology will improve drug delivery once the drug reaches the stomach. Because the drug will be released in the intestinal tract, absorption will be more effective and can be varied in a more predictable fashion.