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## Greening the pharmaceutical industry to afford Good Laboratory Practice

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**G**reening the Pharmaceutical Industry to Afford Good Laboratory Practice: Discovery and application of new chemistry/technology leading to prevention/reduction of environmental, health and safety impacts at source. Green Chemistry dates to the Pollution Prevention Act of 1990 that states the first choice for preventing pollution is to design industrial processes that do not lead to waste production. In 1993, the program was expanded to include greener solvents and safer chemicals. Recently, energy sparing chemistry in order to increase energy efficiency begins to use microwave techniques. The well-known 12 principles of green chemistry provide both a strategy for developing safer products and the normative standards for distinguishing desirable outcomes from less desirable ones. Ibuprofen is a case study in greening the pharmaceutical industry. BHC Company was formed to develop a new green synthesis of ibuprofen from the same starting materials in fewer steps. Several studies identified six key tools for designing greener chemicals/processes which are:

- Alternative feedstocks/starting materials (raw materials)
- Alternative reagents (substances added to bring about a chemical reaction)
- Alternative solvents (substance in which other substances are dissolved)
- Alternative product/target molecule (molecule on which research is focused)
- Alternative catalysts (reusable reagents that are not consumed during the chemical reaction)
- Finally, there is a correlation through process analytical chemistry (real time measurements of manufacturing processes for production and quality control)

Chemists must place a major focus on the environmental consequences of greening pharmaceutical products and the processes by which these products are made. We must consider our chemical ecological footprint.

### Biography

Salwa Elmeligie has completed her PhD at the age of 29 years from Cairo University and postdoctoral studies from Faculty of Pharmacy, Iowa University, USA. She is Head of Pharmaceutical Organic Chemistry Department, Faculty of Pharmacy, Cairo University. She is also Director of Quality Assurance Unit, Faculty of Pharmacy, October 6 University, also reviewer for Higher Education Institutions (HEIs), conducted by the National Authority of Quality Assurance and Accreditation of Education (NAQAAE), and credited trainer in Egypt. She has published more than 36 papers in reputed journals and has been serving as an editorial board member of repute in addition to attending more than 20 training courses in Quality Assurance systems.

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