Pharmaceutical Industry in 21st Century; Challenges and Threats.

Role of Research Institutions
Global Pharmaceutical Companies
Problems being faced and
how being addressed
Global Pharma Industries

- Decline in In-house R&D
- Patent Expiration of Blockbusters
- Competition in Generics
- High Cost to develop and utilise scientific knowledge to derive new drugs
- Mergers and Acquisition: Created Substantial management challenges and Organizational complexities
- Purchase and supply management
- Outsourcing and Off-shoring
- Contract Manufacturing and R&D
Problem, Threats and Challenges for Global Pharmaceutical Companies spell opportunities for our Industry.
## Pakistan Pharmaceutical Industry

<table>
<thead>
<tr>
<th>Current growth rate</th>
<th>19-20%</th>
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<tbody>
<tr>
<td>Market Size</td>
<td>around 2 billion US Dollar</td>
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<td>Global rank</td>
<td>Volume wise – in Top ten</td>
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<td>Value wise – 50</td>
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<tr>
<td>Employ</td>
<td>½ Million people directly or indirectly</td>
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Great potential for Export.
Meet more than 80% local demand of pharmaceutical products.
Challenges for growth and Development

- Research and Development
- Threats from Cheap imports
- Need Change in Industry Focus from import substitution to Export oriented
- Local Active Pharmaceutical Ingredient
  90% demand being imported
- Bio-availability and bio-equivalence
Needs to be done:

- Synergise the strength of Pakistan Pharmaceutical Industry and Publicly funded R&D institution
- Create an enabling infrastructure and linkage to facilitate Pharma Industry to improve process technique
- Stimulate skill development of Human Resource in Pharmaceutical R&D
- Enhance nation’s self-reliance in drugs and pharmaceuticals, especially in areas of national health requirements
- Provide technical support to pharma companies for export
Setting up a centre for Pharmaceutical development and a WHO accredited Laboratory will provide great support to the Industry to meet the challenges.
- Product R&D
- Development of New Dosage Forms
- Standardization of formulation, Process, Testing methods etc.
- Calibration and Validation
- Improvement in API manufacturing process
- Bio-availability and Bio-equivalence studies
- Clinical Trial on commercial scale etc.