**IPPH Research - Manufacturing**

Once a new drug has been discovered and formulated, it must be manufactured to produce the final product. Pharmaceutical **manufacturing** uses unit operations such as granulation, tablet coating, cell culture and lyophilization (freeze-drying) to achieve this goal. Research in pharmaceutical manufacturing includes the design of new and improved processes, the creation of new process monitoring and control strategies, and the development of scientific principles that guide the regulation of drug products. The **Department of Industrial and Physical Pharmacy** is a pioneer in pharmaceutical manufacturing research.

- **Stephen R. Byrn** (Charles B. Jordan Professor) – Solid state formulation and stability of small molecules
- **Rodolfo Pinal** (Associate Professor) – prefabricated dosage forms with different functional film configurations to optimize drug regimens for patient-centered precision medicine