LECTURE SCHEDULE

Training Course

Solid state and Crystallization of Small Molecules

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2 days

Université Cote d'Azur
Parc Valrose
28 Avenue Valrose
06000 Nice
France

Day 1

8h45-9h00	Attendees Welcome
9h00-10h30	**Lecture 1: Solid states basic notions** - Polymorphs - Hydrates - Solvates - Salts - Cocrystals - Solid solutions - Amorphous particle size - Morphology
10h30-10h45	Coffee break
10h45-12h15	**Lecture 2: Crystallization basic notions** - Nucleation - Growth - Supersaturation
12h15-14h00	Lunch
14h00-15h30	**Lecture 3: Analytical characterizations states and transformations** - XRPD - IR/Raman, - THz - SSNMR - DSC - TGA - DVS - PSD - BET
15h30-15h45	Coffee break
15h45-17h15	**Lecture 4: Thermodynamics of heterogeneous equilibria** - Basic notions - Stability hierarchy and transformations - Focus on hydrates - Phase diagrams

Day 2

9h00-10h30	**Lecture 5: Pharmaceutical solid states** - Bioavailability, processes, patents - Focus on amorphous - Investigations from pure API to final formulation
10h30-10h35	Coffee break

10h45-12h15	**Lecture 6: Solid state screenings** - Why and how - Post-screening studies - Selection of solid state
12h15-14h00	Lunch
14h00-15h30	**Lecture 7: Crystallization process (part 1)** - Solubility investigations - Retrieving product, chemical purification, control of solid state - Particle engineering and filtration
15h30-15h45	Coffee break
15h45-17h15	**Lecture 8: Crystallization process (part 2)** - **R**obustness and critical parameters - Process analytical technology (PAT) - Troubleshooting