

Saturday

8.45-9.00 **Welcome** **School directors & organizers** SD

Session 01M **Complex systems and Drug Design** SD

9.00-9.45 Engineering GPCRs for use in Drug Design M. Congreve

9.45-10.30 Structural insights into activation and allosteric modulation of G protein coupled receptors A. Kruse SD

10.30-11.00 coffee break SD & SR

11.00-11.45 *Membrane Protein Structures* R. Stroud SD

11.45-12.30 Epigenetics – the promise, the challenges, the use of target-based approaches C.-w. Chung SD

12.30-14.30 Lunch

Session 01A SD

14.30-15.15 Crystallography and Biopharmaceuticals R. Pauptit SD

15.15-16.00 **Workshop introduction** SD
C. Groom / I. Giangreco / Irwin / Tramontano / Lamzin / Prlic / Smart

16.00-16.30 coffee break SD&SR

Session 01C **Workshops**

16.30-18.00 Using the Cambridge Structural Database System in Drug Discovery C. Groom / I. Giangreco TBD

16.30-18.00 Computational Ligand Discovery J. Irwin TBD

16.30-18.00 How do we know how good a protein structural model is A. Tramontano TBD

18.00-18.30 An introduction to Erice M. Schmidt SD

20.00- Welcome buffet SF

June 01			hall
Sunday			

Session 02M	From hits to Drugs		SD
9.00-9.45	Applying Molecular Modeling to Structure-Based Drug Design (SBDD)	J. Blaney	SD
9.45-10.30	<i>Structural bioinformatics</i>	A. Tramontano	SD
10.30-11.00	coffee break		SD&SR
11.00-11.45	Molecular docking for ligand discovery	J. Irwin	SD
11.45-12.30	Drug discovery: from lab bench to life cycle management.	G. Scapin	SD
12.30-14.30	poster preview lunch		SF
Session 02A	Poster Preview		SD
14.30-15.15	Short (2-3 minutes) poster presentations (odd numbers)		SD
15.15-16.00	Designing compounds against lipid kinases: NVP-BKM120 – a pan class 1 PI3K inhibitor	D. Bussiere	SD
16.00-16.30	coffee break		
Session 02C	Workshops		
16.30-18.00	Using the Cambridge Structural Database System in Drug Discovery	C. Groom / I. Giangreco	TBD
16.30-18.00	Computational Ligand Discovery	J. Irwin	TBD
16.30-18.00	How do we know how good a protein structural model is	A. Tramontano	TBD
18.00-20.00	Poster Session – Odd numbers		SF
20.00-	Pasta Party		SF

June 02

hall

Monday

Session 03M Antivirals

SD

9.00-9.45 Towards novel anti-influenza drugs targeting the viral RNA-dependent RNA polymerase. S. Cusack SD

9.45-10.30 Drug design targeting HIV-1 reverse transcriptase: overcoming resistance via inhibitor strategic flexibility E. Arnold SD

10.30-11.00 coffee break SD&SR

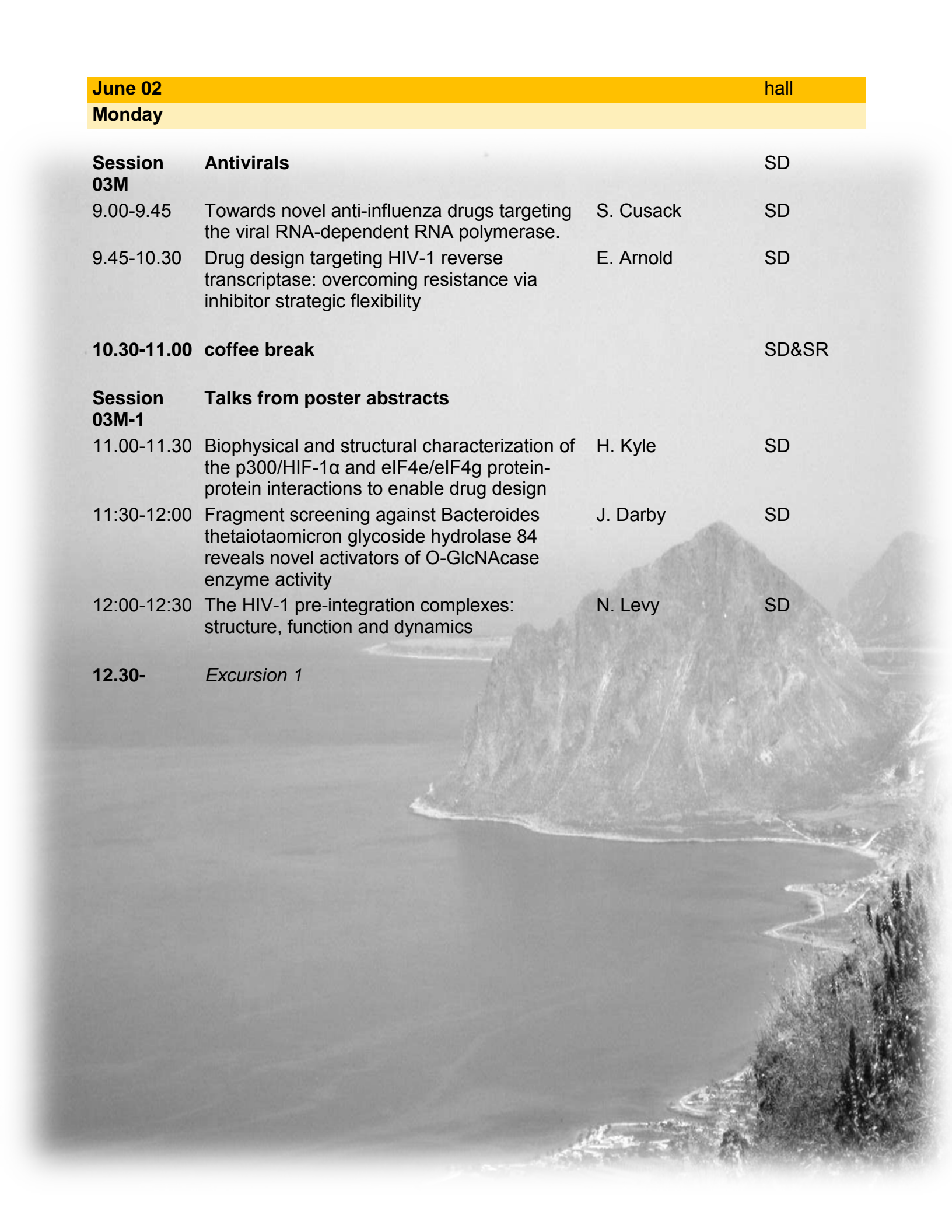
Session 03M-1 Talks from poster abstracts

11.00-11.30 Biophysical and structural characterization of the p300/HIF-1 α and eIF4e/eIF4g protein-protein interactions to enable drug design H. Kyle SD

11:30-12:00 Fragment screening against Bacteroides thetaiotaomicron glycoside hydrolase 84 reveals novel activators of O-GlcNAcase enzyme activity J. Darby SD

12:00-12:30 The HIV-1 pre-integration complexes: structure, function and dynamics N. Levy SD

12.30- Excursion 1



June 03 hall

Tuesday

Session 04M Protein-protein and protein-ligand interactions 1 SD

9.00-9.45 Protein-ligand interactions as the basis for drug action G. Klebe SD

9.45-10.30 The use of small molecule crystal structures in drug discovery and development C. Groom SD

10.30-11.00 Coffee break

11.00-11.45 Prediction of aggregation in protein sequences and structures S. Ventura SD

11.45-12.30 Determination of protonation states in protein complexes using neutron and high resolution X-ray diffraction. A. Podjarny SD

12.30-14.30 Lunch

Session 04A Protein-protein and protein-ligand interactions 1-cntd. SD

14.30-15.15 Protein-protein interactions: general aspect of druggability T. Blundell SD

15.15-16.00 DEMO: Using the Cambridge Structural Database System in Drug Development C. Groom / I. Giangreco SD

16.00-16.30 Coffee break

Session 04C International Year of Crystallography Celebration SD

16.30-18.00 *Talks* T. Blundell, H. Berman, J. Howard, E. Arnold SD

18.00-20.00 *Game* All TBD

20.00- Dinner party TBD

June 04 **hall**

Wednesday

Session 05M	Enzymes		SD
9.00-9.45	Drug Discovery at Challenging Interfaces: “the high hanging fruit”	J. Wells	SD
9.45-10.30	Molecular interaction analysis for discovery of drugs targeting enzymes	H. Danielson	SD
10.30-11.00	Coffee break		SD&SR
	Methods		SD
11.00-11.45	Achieving high quality protein-ligand X-ray structures for drug design	O. Smart	SD
11.45-12.15	New tools for precise genome editing (from poster abstracts)	S. Stella	SD
12.15-12.45	Ligand discovery from GPCR crystal structures and homology models (from poster abstracts)	J. Carlsson	SD
12.45-14.30	Poster preview lunch		SF
Session 05°	Poster Preview		SD
14.30-15.15	Short (2-3 minutes) poster presentations (even numbers)		SD
15.15-16.00	Co-Evolution of Structural Biology and the Protein Data Bank	H. Berman	SD
16.00-16.30	Coffee break		SD&SR
Session 05C	Workshops		
16.30-18.00	Getting the most out of the RCSB PDB	A. Prlic	TBD
16.30-18.00	Achieving high quality ligand chemistry in protein X-ray structures	O. Smart	TBD
18.00-20.00	Poster Session – Odd numbers		SF
20.00-	Pizza Dinner (Sponsored by EmeraldBio)		SF

June 05

hall

Thursday

**Session
06M**

SD

9.00-9.45 Structural insights for targeted drug design:
from proteins to ribosomes R. Zarivach SD

9.45-10.30 Molecular Obesity, Potency and other
addictions in Medicinal Chemistry M. Hann SD

10.30-11.00 Coffee break SD&SR

**Session Talks from poster abstracts
06M-1**

11.00-11.30 Structure of Saffold virus at 2.5 Å resolution P. Plevka SD

11:30-12:00 Design of novel aspartic protease inhibitors
from fragments exploiting dynamic
combinatorial chemistry N. Radeva SD

12.00- EXCURSION to SELINUNTE and SEGESTA
or at S. Vito lo Capo Beach



June 06

hall

Friday

Session 07M	SBDD: Applications		SD
9.00-9.45	New Protein Engineered Tools for Signaling	J. Wells	SD
9.45-10.30	Enabling the Best Structure-Based Design Engine: a Human Expert	J. Blaney	SD
10.30-11.00	Coffee break		SD&SR
11.00-11.45	Bromodomains – from phenotypic hits to FT1H	C.-w. Chung	SD
11.45-12.30	Joys of X-ray Crystallographic Fragment Screening	J. Bauman	SD
12.30-14.30	Lunch		
Session 07A	Hot topics – From Poster Abstracts		SD
14.30-15:00	A new generation of more potent virus inhibitors resulting from structure based analysis of human Enterovirus71 (HEV71) capsid-binding molecule	L. De Colibus	SD
15:00-15:30	The mycobacterial F1Fo-ATP synthase as the target of a novel TB drug against tuberculosis	L. Preiss	SD
15:30-16:00	Structural basis for the inhibition of the eukaryotic ribosome	I. Prokhorova	SD
16.00-16.30	Coffee break		SD&SR
Session 07C	Workshops		
16.30-18.00	<i>The PDB</i>	A. Prlic	TBD
16.30-18.00	Achieving high quality ligand chemistry in protein X-ray structures	O. Smart	TBD
18.00-20.00	Free		
20.00-	Dinner		

June 07

hall

Saturday

Session 08M	Protein-protein and protein-ligand interactions 2		SD
9.00-9.45	Targeting PPI: examples	T. Blundell	SD
9.45-10.30	Importance of protonation states for the binding of ligands to pharmaceutical targets	A. Podjarny	SD
10.30-11.00	Coffee break		SD&SR
11.00-11.45	Molecular interaction analysis for resolving biological function	H. Danielson	SD
11.45-12.30	Structural Chemistry and Molecular Modeling in the design of DPP4 inhibitors	G. Scapin	SD
12.30-14.30	Lunch		
Session 08A	Protein-protein and protein-ligand interactions 2-cntd.		
14.30-15.15	Structure-based drug design to perturb function of a tRNA-modifying enzyme by active site and protein-protein interface inhibition	G. Klebe	SD
15.15-16.00	Benzoxaborole compounds targeting leucyl-tRNA synthetase as novel anti-infectives	S. Cusack	SD
16.00-16.30	Coffee break		SD&SR
Session 08C			
16.30-17.15	Round Table		SD
17.15-18.00	Closing remarks and Awards	Directors	SD
18.00-20.00	Free		
20.00-	Good Bye Buffet Dinner		SF

HALLS:

SD: San Domenico Lecture Hall

SR: San Rocco

SF: San Francesco

TBD: to be determined

