Ak, Ceylan
Presenter: Kilic Eren, Mehtap
Oncogenic PPM1D/WIP1 Phosphatase enhances the induction of basal and chemoterapy-induced autophagy in cancer cells

Albitz, Evelin
Bioothogonal ligation-activated fluorogenic FRET dyads

Antonenko, Anastasiia
New efficient enzymatic strategy for the semisynthesis of metallothionein

Ballhaus, Florentine
Presenter: Dauphinee, Adrian
Leveraging chemical genetics to modulate and unravel plant autophagy

Bartsch, Simon
Characterization of PPIP5Ks using pharmacological and chemical biology approaches

Beaussart, Audrey
Presenter: Rahuel-Clermont, Sophie
Probing the mechanism of the peroxiredoxin decamer interaction with its reductase sulfiredoxin from the single molecule to the solution scale

Bhattacharjee, Rajanya
Film-like designer membraneless organelles enable spatial separation of eukaryotic translation

Bilgen, Nüket
Identification with a synthetic DNA barcode, DNAidCode

Bottone, Sara
A chemogenetic fluorescent reporter for observing ternary interactions

Brustur, Delia
Discovery and development of Rab27A covalent inhibitors

Busquets, Carla
Using hydroxylamines for the study of S-acylation
Caesar, Lindsay  
Presenter: Dainko, David  
**Correlative-based metabologenomics strategy for identification of fungal secondary metabolite and gene cluster family linkages**  
51

Canyelles, Francesca  
**Fluorescent probes for the simultaneous detection of pairs of analytes in live cells**  
52

Ceeney, Georgia  
**Monitoring the kynurenine pathway using fluorescence spectroscopy**  
53

Chen, Yong  
**Multivalent PROTACs comprising two ubiquitin E3 ligase recruiters and two target protein ligands exhibit strongly improved targeted protein degradation efficiency**  
54

Chen, Yushu  
**Defining the key role of trehalose in mycolic acid biosynthesis and transport in mycobacteria**  
55

Cheng, Xinlai  
**Targeting splicing factor 3B1 by a proteolysis-targeting chimeras (PROTAC)**  
56

Claudel, Anne-Lise  
**In vitro and in cellulo characterization of the sulfide oxidation unit (SOU) complex using fluorescence methods**  
57

Cook, Alex  
**Hybrid Molecular Probes for Photoacoustic Imaging**  
58

Cortez, Jeremy  
**Biosensor for branched-chain amino acid metabolism in yeast and applications in isobutanol and isopentanol production**  
59

Coupland, Claire  
Presenter: Andrei, Sebastian  
**Structure and mechanism of hedgehog acyltransferase**  
60

Date, Amrita  
Presenter: Wall, Archie; Date, Amrita  
**Affinity-based protein profiling of MDM2 inhibitors**  
61
De Vita, Elena

**Structure-based design of the first targeted covalent inhibitors that engage the small GTPase Rab27 in cellulo**

Debon, Aaron

**Directed evolution using microfluidic droplet sorting**

Deen, Matthew

**A versatile fluorescence-quenched substrate for quantitative measurement of glucocerebrosidase activity within live cells**

Dehghan Harati, Helia

**Defining the machinery underlying up- and down-regulation by miRNA**

Durairaj, Thiyagarajan

**Combinatorial effect of PqsR inhibitors with tobramycin-loaded squalene hydrogen sulphate nanoparticles on Pseudomonas aeruginosa 14 biofilm**

Eid, Mohammad

**Using the heme peroxidase APEX2 to probe intracellular H2O2 flux and diffusion**

El Hajji, Lina

**Directed evolution of near-infrared fluorescent chemogenetic reporters for deep tissue imaging in vivo**

Ferro, Elsi

**Mapping the surface organization of endocytic structures using biomolecular switches**

Freund, Niklas

**Unlocking enzymatic synthesis and evolution of 2’-O-methyl- and 2’-O-(2-methoxyethyl)-RNA by polymerase engineering**

Fujioka, Hiroyoshi

**Multicolor activatable Raman probes for detecting enzyme activities in live-cells or tissues**
Fujita, Kyohhei  
Identification and utilization of α-mannosidase 2C1 as a biomarker enzyme for rapid and clinical fluorescence imaging of breast tumors  

Ghonaim, Lobna  
Presenter: Ziko, Laila  
Mining biosynthetic gene clusters for detecting novel bioactive molecules from microbial metagenomes  

Gilormini, Pierre-André  
Activity-based high-throughput screening in live cells for the discovery of biological modulators of lysosomal glycosidase glucocerebrosidase  

Ging, Kathi  
Identification of transcription factors regulating β-glucocerebrosidase activity  

Giofrè, Sabrina  
Halogen-containing non-canonical amino acids as genetically encoded tool for measuring intrinsically disordered protein dimensions through (A)SAXS measurement  

Gorski, Christopher  
The structure of the physcomitrium patens photosystem I reveals unique Lhca2 paralog replacing Lhca4  

Gray, Janine  
Novel inhibitors of efflux pump NorA to target antimicrobial resistance  

Green, Ori  
Activity-based molecular CO2 sensing  

Grenier, Vincent  
Chemigenetic mapping of neurotransmission using a split self-labeling protein  

Grethe, Christian  
Presenter: Gersch, Malte  
Structural basis for specific inhibition of the deubiquitinase UCHL1
Grethe, Christian
Structural basis for specific inhibition of the deubiquitinase UCHL1 82

Gülseren, Gülcihan
Highly versatile carbon platform for mimicking and understanding of natural enzymes 83

Gutierrez-Rus, Luis I
Presenter: Risso, Valeria A
Rapid engineering of efficient de novo catalysis using ancient proteins 84

Halfiln, Olga
Artificial protein-protein communication with bifunctional molecules that exchange binding partners 85

Harmel, Robert
EU-OPENSCREEN ERIC: A collaborative approach to accelerate chemical tool discovery 86

Hassan, Sarah
Deconvoluting prenylation switch dynamics of Ras oncogenes using dual chemical isoprenoid probes 87

He, Nianzhe
Identifying the targets of (oxy)sterols by targeted protein degradation 88

Hegedus, Zsofia
Influence of CITED2 backbone modifications on the allosteric regulation of the p300/HIF-1alpha inhibition 89

Hellweg, Lars
ChemoX-NAD – a palette of multicolor biosensors to multiplex subcellular NAD+ pools in real-time 90

Hellweg, Lars
Presenter: Hiblot, Julien
ChemoX: a chemogenetic platform of FRET pairs for the rapid development of biosensors offering tunable wavelengths and multi-modal readout 91
Hennigan, Sean Thomas
**Fluorinated rhodamine dyes as ligands for self-labeling proteins**  

Holland, Katie
**Rational design and synthesis of tuned hydroxymethyl-Si-rhodamines for single-molecule localization microscopy**  

Huang, Kuan-Ting
**Zebrafish-REX enables precision interrogation into electrophilic metabolite/drug-regulated pathways**  

Ito, Ren
**Fluorescence imaging of LAT1-expressing cancer cells based on intracellular click reaction**  

Jain, Prashant
**Directed evolution approach to study complex kinase signaling**  

Jansen, Suzanne
**Toward a phenotypic selection platform for the continuous evolution of biocatalysts**  

Jimenez Lopez, Cristina
**Reconstituting lipid asymmetry in a minimal model membrane**  

Kallemeijn, Wouter
**From foe to friend: In vivo reprogramming of tumor-associated macrophages to an anti-cancer phenotype by modulating N-myristoyltransferase activity**  

Karpenko, Julie
**Fluorogenic probes for background-free live-cell imaging of GPCRs**  

Ketprasit, Nutpakal
**Targeting Plasmodium falciparum tRNA charging to combat malaria**  

Kirchgässner, Sören
**Acetyl-lysine mimicking amino acids for bromodomains**
Kompa, Julian
**Exchangeable HaloTag Ligands (xHTLs) for multi-modal super-resolution fluorescence microscopy** 103

Kröber, Tim
**Identification of an isoform-selective IP6K inhibitor by unconventional gatekeeper mutation and high-throughput screening** 104

Kuhn, Sascha
**Quantitative calcium imaging & information processing in GPCR mediated signalling** 105

Kühn, Stefanie
**Engineering toward SNAP-tag 2.0 for super-resolution imaging** 106

Laurent, Arthur
**Photoactivatable Spexin derivatives to study the implication of GALR2 in non-opioid pain pathways** 107

Lenz, Thomas
**Utilizing similar isothermal dose-responses from thermal proteome profiling to determine protein-protein interactions in living cells by smarTPCA** 108

Leveson-Gower, Reuben
**Artificial enzyme iminium catalysis** 109

Li, Lanxin
**Chemoenzymatic probes reveal peptidoglycan recognition and uptake mechanisms in Candida albicans** 110

Presenter: Qiao, Yuan

Lim, Zhong Hui
**Enantioselective engineering at the single-molecule level** 111

Lin, Weifeng
**Unique chemoselective probes for discovery and investigation of metabolites in human samples with enhanced mass spectrometric sensitivity** 112
EMBO Workshop: Chemical biology 2022

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lin, Yin-Hsi</td>
<td>113</td>
</tr>
<tr>
<td><strong>Toward efficient endogenous protein tagging using a peptide-based</strong></td>
<td></td>
</tr>
<tr>
<td><strong>split HaloTag</strong></td>
<td></td>
</tr>
<tr>
<td>Mahia Moros, Alejandro</td>
<td>114</td>
</tr>
<tr>
<td><strong>A stable α-lactam as electrophilic warhead for bioconjugation and</strong></td>
<td></td>
</tr>
<tr>
<td><strong>proteomic profiling</strong></td>
<td></td>
</tr>
<tr>
<td>Majid, Aatikah</td>
<td>115</td>
</tr>
<tr>
<td><strong>Switch-on/switch-off optical probes for different DNA topologies</strong></td>
<td></td>
</tr>
<tr>
<td>Malde, Roshni</td>
<td>116</td>
</tr>
<tr>
<td><strong>Novel quantitative methodology for studying inhibition of</strong></td>
<td></td>
</tr>
<tr>
<td><strong>protein-protein interactions</strong></td>
<td></td>
</tr>
<tr>
<td>Mandi, Chandra Sova</td>
<td>117</td>
</tr>
<tr>
<td><strong>Targeting DNA abasic sites with aminoquinoxaline compound</strong></td>
<td></td>
</tr>
<tr>
<td><strong>induces cytotoxicity and DNA damage in combination with</strong></td>
<td></td>
</tr>
<tr>
<td><strong>chlorambucil in HCT116 cells</strong></td>
<td></td>
</tr>
<tr>
<td>Mao, Runyu</td>
<td>118</td>
</tr>
<tr>
<td><strong>Robust methodology for assembling peptides and proteins with</strong></td>
<td></td>
</tr>
<tr>
<td><strong>tryptophan C-mannosylation</strong></td>
<td></td>
</tr>
<tr>
<td>Marker, Teresa</td>
<td>119</td>
</tr>
<tr>
<td><strong>Zinc finger proteins are novel targets of proton pump inhibitors</strong></td>
<td></td>
</tr>
<tr>
<td>Mathieu, Julie</td>
<td>120</td>
</tr>
<tr>
<td><strong>Comparative analysis of the regulation of saccharomyces cerevisiae</strong></td>
<td></td>
</tr>
<tr>
<td><strong>thiol peroxydases Tsa1 and Tsa2 by sulfinylation</strong></td>
<td></td>
</tr>
<tr>
<td>Menon, Anjana Peethambaran</td>
<td>121</td>
</tr>
<tr>
<td><strong>Mycobacterial membrane-derived liposomes for high throughput</strong></td>
<td></td>
</tr>
<tr>
<td><strong>drug screening</strong></td>
<td></td>
</tr>
<tr>
<td>Mortishire-Smith, Ben</td>
<td>122</td>
</tr>
<tr>
<td><strong>A photoredox reaction for the selective detection of</strong></td>
<td></td>
</tr>
<tr>
<td><strong>5-carboxycytosine in DNA</strong></td>
<td></td>
</tr>
<tr>
<td>Moyano Villameriel, Jaime</td>
<td>123</td>
</tr>
<tr>
<td><strong>Understanding the activity of polyether ionophore lasalocid acid</strong></td>
<td></td>
</tr>
</tbody>
</table>
Mukherjee, Mandrita
**CircRNAs act as let-7 miRNA decoy in fetal hemoglobin regulation** 124

Mutabdzija, Lana
**Unraveling diterpenoid alkaloid biosynthesis in Aconitum** 125

Nguyen Trung, Minh
**Unraveling inositol polyphosphate metabolism with 13C-isotopomers** 126

Ngwadom, Chiagoziem
**Engineering designer pyrroloquinoline quinone glucose dehydrogenase-based tools via functional complementation in auxotrophic E. coli** 127

Olesinska, Magdalena
**Development of photoswitchable probes for fluorescence imaging in deep tissue** 128

Oppewal, Titia Rixt
**Selection of chemically-upgraded macrocyclic peptides by phage display** 129

Perina, Miroslav
**Production of transferases for ligand discovery and structural biology** 130

Petracca, Rita
**RaPID selection of novel macrocyclic peptides as modulators of Rab27a-effector interactions** 131

Porebski, Bartlomiej
**Phenotypic screening in ALS - alleviating toxicity of di-peptide repeats** 132

Pöschko, Philipp
**Novel plant hormone-based chemical inducers of proximity for in vivo applications** 133
Quast, Robert B.
**Dissection of metabotropic glutamate receptor activation by single molecule FRET using minimally invasive click chemistry**

134

Rahaman, Motiur
**Single nucleotide polymorphisms (SNPs) as clinical predictors of phenotypic heterogeneity in HbE/β-thalassemia disease**

135

Rakotoarison, Louise-Marie
**Improving chemogenetic reporters of protein-protein interactions using orthologous proteins**

136

Rasmussen, Michelle Hundevad
**Studies of the biosynthetic machinery underlying a cryptic C-H oxidation within the lysocellin polyether ionophore family**

137

Rehkopf, Luisa
**Probing readers and erasures of protein acetylation with peptide substrates containing acetyl-lysine derivatives**

138

Resnick, Efrat
**Novel covalent technologies for challenging protein targets**

139

Revuru, Bharadwaj
**Transcription factor engineering to manipulate the expression of carnosol biosynthetic pathway genes to enhance the diterpenoid content in Salvia officinalis**

140

Richter, Annika
**Deciphering inositol polyphosphate-protein interactions using non-covalent probes**

141

Rimbault, Charlotte
**Directed protein evolution and engineering for the investigation of endogenous synaptic proteins**

Presenter: Darribere, Manon; Trivunovic, Ivana

142

Saibo, Nikita Veronica
**Study of the molecular basis of function and regulation of Hox transcription factors SCR and HoxA9**

143
<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sánchez, Maria Florencia</td>
<td>Ligand-free in situ confinement for GPCR activation and signal transduction</td>
<td>144</td>
</tr>
<tr>
<td>Sander, Philipp</td>
<td>PhenoDEL: towards Phenotypic DNA-encoded chemical library selections in mammalian cells</td>
<td>145</td>
</tr>
<tr>
<td>Schilling, Danny</td>
<td>Commonly used alkylating agents limit persulfide detection by converting protein persulfides into thioethers</td>
<td>146</td>
</tr>
<tr>
<td>Sharma, Gaurav</td>
<td>High-throughput screening for small molecule inhibitor of the PCNA ubiquitination cascade</td>
<td>147</td>
</tr>
<tr>
<td>Sharma, Sachi</td>
<td>Target-directed synthesis of α-helix mimetics</td>
<td>148</td>
</tr>
<tr>
<td>Singh, Avinash Kumar</td>
<td>Highly efficient sortase-A and Ulp1-mediated purification method for the expression and purification of recombinant human MT3 in bacterial system</td>
<td>149</td>
</tr>
<tr>
<td>Smalley, Joshua</td>
<td>Chemical degrader probes for class I histone deacetylase enzymes in a ‘complex’ environment</td>
<td>150</td>
</tr>
<tr>
<td>Sun, Deen</td>
<td>Engineering of chemogenetic integrators for imaging kinase activities</td>
<td>151</td>
</tr>
<tr>
<td>Svenningsen, Esben</td>
<td>The Covalent reactivity of functionalized 5-hydroxy-butyrolactams underlies is the basis for targeting of FABP5 by the neurotrophic agent MT-21</td>
<td>152</td>
</tr>
<tr>
<td>Swietlikowska, Anna</td>
<td>Conformational nanoswitches for continuous biosensing</td>
<td>153</td>
</tr>
</tbody>
</table>
EMBO Workshop: Chemical biology 2022

Tan, Yaw Bia
Molecular architecture of chikungunya virus replication complexes for antiviral therapeutic development 154

Tang, Cong
Natural product Piperlongumine inhibits SARS-CoV-2 by selectively ROS induction 155

Teslenko, Alexandra
Single-molecule enzymology study of chromatin ubiquitination by PRC1 156

Thoidingjam, Leishemba Khuman
Small molecule inhibitors of interferon-induced JAK-STAT signalling 157

Tobias, Janelle
Unraveling endocannabinoid signaling in pancreatic β-cells with Optically-Cleavable Targeted (OCT)-ligands 158

Tököli, Attila
Two anchor point binding of the SSB C-terminal to DNA metabolizing proteins facilitates development of enhanced inhibitors 159

Tomkins, Josh
Targeting DNA replication in cancer via peptide-based inhibition of origin licensing 160

Trobe, Melanie
A modular approach for the synthesis of a comprehensive library of teraryl-based alpha-helix mimetics 161

Vaidya, Kaveri
ABHD14B - a novel lysine deacetylase 162

van der Veer, Harm
RPA-LUNAS: rapid one-pot bioluminescent nucleic acid detection based on isothermal amplification and dCas9-induced split luciferase complementation 163
Walterspiel, Franziska  
**Hybrid photoswitchable fluorophores for biological imaging**  
164

Weiss, Lucille  
**Fluorescent turn-on detection of bacteria with targeted bioconjugates**  
165

Wendt, Mathias  
Presenter: Yeste Vazquez, Alejandro  
**β-Sheet mimetics that Target the Transcriptional Coactivator β-Catenin**  
166

Westberg, Michael  
**Photoswitchable repeat protein binders**  
167

Wilhelm, Jonas  
**Mapping neuronal connectivity and synaptogenesis with a computationally engineered split HaloTag**  
168

Yeh, Johannes  
**Reshaping kinase accessibility by peptide macrocycles to achieve target efficacy**  
169

Yönet, Nilay  
**Unraveling unknowns of plant secondary metabolites through retrosynthesis**  
170

Zanon, Patrick R. A.  
Presenter: Hacker, Stephan  
**Profiling the proteome-wide selectivity of diverse electrophiles**  
171

Zeisel, Lukas  
Presenter: Thorn-Seshold, Oliver  
**Probes for dithiol/disulfide oxidoreductase activity: regiocontrolled reactivity dictates enzyme-selectivity**  
172