

# 講演会のお知らせ

## “PNA-programmed assemblies in Chemical Biology”

### Professor Nicolas Winssinger

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日時: 2017年7月14日(金) 14:00~16:00  
場所: 薬学部第2講堂

この度 University of Geneva の Nicolas Winssinger 先生が来日される機会に、本学でも講演をしていただけることになりました。  
多数のご来聴をお待ちしております。

#### <Recent Publications>

1. Facile access to modified and functionalized PNAs through Ugi-based solid phase oligomerization, J. Saarbach, D. Masi, C. Zambaldo, N. Winssinger, *Bioorg. Med. Chem.* **2017** online
2. Kinase-templated abiotic reaction, J. Saarbach, E. Lindberg, S. Folliet, S. Georgeon, O. Hantschel, N. Winssinger, *Chem. Sci.* **2017**, 8, 5119 - 5125.
3. Dynamic Cooperative Glycan Assembly Blocks the Binding of Bacterial Lectins to Epithelial Cells, T. Machida, A. Novoa, E. Gillon, S. Zheng, J. Claudinon, T. Eierhoff, A. Imberty, W. Römer, N. Winssinger *Angew. Chem. Int. Ed.* **2017**, 56, 6762-6766.
4. Critical Analysis of Rate Constants and Turnover Frequency in Nucleic Acid-Templated Reactions: Reaching Terminal Velocity, D. Chang, E. Lindberg, N. Winssinger, *J. Am. Chem. Soc.* **2017**, 139, 1444-1447.

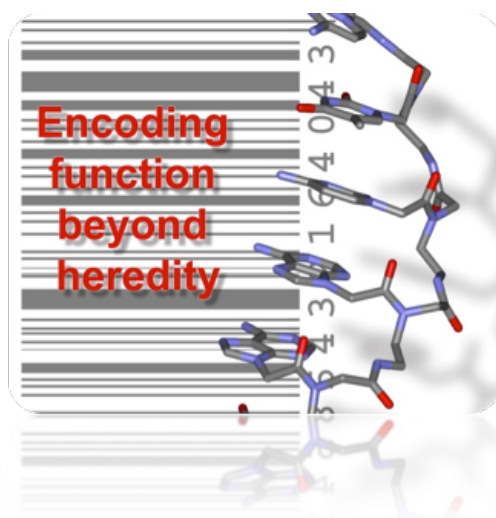
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# PNA-programmed Self Assemblies in Chemical Biology

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The programmable nature of nucleic acid hybridization has inspired a number of applications beyond their natural function in heredity. Peptide Nucleic Acids (PNA) are endowed with attractive properties for this endeavor as they are more robust and form more stable duplex than their natural counter parts. Several applications from our laboratory to program self-assemblies of small molecules, template chemical reactions or display multimeric ligands will be presented.



## References

1. PNA as a Biosupramolecular Tag for Programmable Assemblies and Reactions, S. Barluenga, N. Winssinger, *Acc. Chem. Res.* **2015**, *48*, 1319-1331
2. DNA display of fragment pairs as a tool for the discovery of novel biologically active small molecules, *Chem. Sci.*, **2015**, *6*, 739-744.
3. Identification of Covalent Bromodomain Binders from DNA Display of Small Molecules, *Angew. Chem. Int. Ed.* **2015**, *54*, 6057-61.
4. Allosterically Regulated Phosphatase Activity from Peptide-PNA Conjugates Folded Through Hybridization, T. Machida, S. Dutt, N. Winssinger, *Angew. Chem. Int. Ed.* **2016**, *55*, 8595-8.
5. Nucleic-acid templated chemical reaction in a live vertebrate, L. Holtzer, I. Oleinich, M. Anzola, K. K. Sadhu, M., E. Lindberg, Gonzalez-Gaitan, N. Winssinger, *ACS Central Science*, **2016**, *2*, 394-400.
6. Critical Analysis of Rate Constants and Turnover Frequency in Nucleic Acid-Templated Reactions: Reaching Terminal Velocity, D. Chang, E. Lindberg, N. Winssinger, *J. Am. Chem. Soc.* **2017**, *139*, 1444-1447.