



## Yanan Feng

Sr. Research Scientist - Basic Life, Genetics

### Bio

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#### BIO

Dr. Yanan Feng is a Senior Research Scientist working at Dr. Stanley N. Cohen's lab in the Department of Genetics, Stanford University. She earned her PhD degree in the Cancer Biology Program from the Stanford University. For the past few years, her research has been focusing on the functions of a transcription elongation factor SUPT4H1 which is required for the transcription of the expanded nucleotide repeats. Such repeats are present and the cause of many genetic neurodegenerative diseases such as Huntington's Disease and ALS. Through a high throughput screening which was done at Stanford by her and her colleagues, they discovered a few small molecule compounds which are able to interrupt the interaction between SUPT4H1 and its crucial partner SUPT5H. The interruption results in the defect of the transcription elongation function during RNA polymerase II mediated mRNA transcription. These compounds have the potential to be the therapeutic agents to the above-mentioned neurodegenerative diseases. From 2016 to 2019, she joined a start-up biotech company, Nuredis Inc, aiming to push the candidate compounds toward to clinical trials. In Nuredis, she set up the entire research facility and served as Director in Huntington's Disease. She led the research team to optimize the lead compounds through Structure Activity Relationship (SAR) efforts and develop various assays for clinical applications. After returning to Stanford, she continues her interest in studying SUPT4H1 and its role in FMR1 gene transcription. The expanded CGG repeats at the 3'UTR of FMR1 is the cause of Fragile X syndrome, Fragile X-associated tremor/ataxia syndrome, and other ovarian problems.

#### CURRENT ROLE AT STANFORD

Senior Research Scientist, Department of Genetics, Dr. Stanley N. Cohen's lab

#### EDUCATION AND CERTIFICATIONS

- Ph D, School of Medicine, Stanford University (2000)

#### PATENTS

- Stanley N. Cohen, Ning Deng, Yanan Feng, Tzu-Hao Cheng, Yun-Yun Wu, Wen-Chieh Hsieh. "United States Patent US20180064744A1 Nucleoside agents for the reduction of the deleterious activity of extended nucleotide repeat containing genes", National Yang Ming Univ Leland Stanford Junior University, Mar 18, 2018
- Stanley N. Cohen, Daniel Rock, Annie Chang, Yanan Feng, Laszlo Zsak, Maria Elisa Piccone. "United States Patent US20080176962A1 Methods and compositions for identifying cellular genes exploited by viral pathogens", Leland Stanford Junior University US, Jul 24, 2008
- Stanley N. Cohen, Ning Deng, Yanan Feng, Tzu-Hao Cheng, Thomas W. Sun. "United States Patent US20200147069A1 Compounds for The Reduction of The Deleterious Activity of Extended Nucleotide Repeat Containing Genes", Leland Stanford Junior University, Jun 19, 2018

### Professional

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#### WORK EXPERIENCE

- Director, Huntington's Disease Research - Nuredis Inc (May 2017 - January 2019)

## Publications

### PUBLICATIONS

- **Spt4 selectively regulates the expression of C9orf72 sense and antisense mutant transcripts.** *Science*  
Kramer, N. J., Carlomagno, Y., Zhang, Y., Almeida, S., Cook, C. N., Gendron, T. F., Prudencio, M., van Blitterswijk, M., Belzil, V., Couthouis, J., Paul, J. W., Goodman, L. D., Daugherty, et al  
2016; 353 (6300): 708-712
- **Effects on murine behavior and lifespan of selectively decreasing expression of mutant huntingtin allele by supt4h knockdown.** *PLoS genetics*  
Cheng, H., Chern, Y., Chen, I., Liu, C., Li, S., Chun, S. J., Rigo, F., Bennett, C. F., Deng, N., Feng, Y., Lin, C., Yan, Y., Cohen, et al  
2015; 11 (3)
- **Upregulation of the Host SLC11A1 Gene by Clostridium difficile Toxin B Facilitates Glucosylation of Rho GTPases and Enhances Toxin Lethality** *INFECTION AND IMMUNITY*  
Feng, Y., Cohen, S. N.  
2013; 81 (8): 2724-2732
- **Identification of Cellular Genes Affecting the Infectivity of Foot-and-Mouth Disease Virus** *JOURNAL OF VIROLOGY*  
Piccone, M. E., Feng, Y., Chang, A. C., Mosseri, R., Lu, Q., Kutish, G. F., Lu, Z., Burrage, T. G., Gooch, C., Rock, D. L., Cohen, S. N.  
2009; 83 (13): 6681-6688
- **Retention of core catalytic functions by a conserved minimal ribonuclease E peptide that lacks the domain required for tetramer formation** *JOURNAL OF BIOLOGICAL CHEMISTRY*  
Caruthers, J. M., Feng, Y., McKay, D. B., Cohen, S. N.  
2006; 281 (37): 27046-27051
- **Phenotype-based identification of host genes required for replication of African swine fever virus** *JOURNAL OF VIROLOGY*  
Chang, A. C., Zsak, L., Feng, Y., Mosseri, R., Lu, Q., Kowalski, P., Zsak, A., Burrage, T. G., Neilan, J. G., Kutish, G. F., Lu, Z., Laegreid, W., Rock, et al  
2006; 80 (17): 8705-8717
- **RraA: a protein inhibitor of RNase E activity that globally modulates RNA abundance in E. coli** *CELL*  
Lee, K. S., Zhan, X. M., Gao, J. J., Ji, Q., Feng, Y. A., Meganathan, R., Cohen, S. N., Georgiou, G.  
2003; 114 (5): 623-634
- **The catalytic domain of RNase E shows inherent 3' to 5' directionality in cleavage site selection** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Feng, Y. A., Vickers, T. A., Cohen, S. N.  
2002; 99 (23): 14746-14751
- **Escherichia coli poly(A)-binding proteins that interact with components of degradosomes or impede RNA decay mediated by polynucleotide phosphorylase and RNase E** *JOURNAL OF BIOLOGICAL CHEMISTRY*  
Feng, Y., Huang, H. J., Liao, J., Cohen, S. N.  
2001; 276 (34): 31651-31656
- **Unpaired terminal nucleotides and 5' monophosphorylation govern 3' polyadenylation by Escherichia coli poly(A) polymerase I** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Feng, Y. N., Cohen, S. N.  
2000; 97 (12): 6415-6420