# Study m6A Modifications Like Never Before

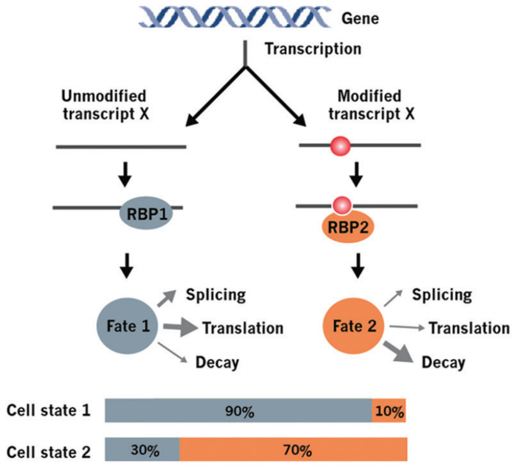



**Fig. 1.** m6A modified RNAs are immunoprecipitated and compared with the input RNAs in two-color channels of the Epitranscritomic Array to accurately measure the modification percentage and abundance level for each transcript. The percentage of modification of "transcript a" RNA determines its different cell fates, e.g. for protein translation or RNA decay.

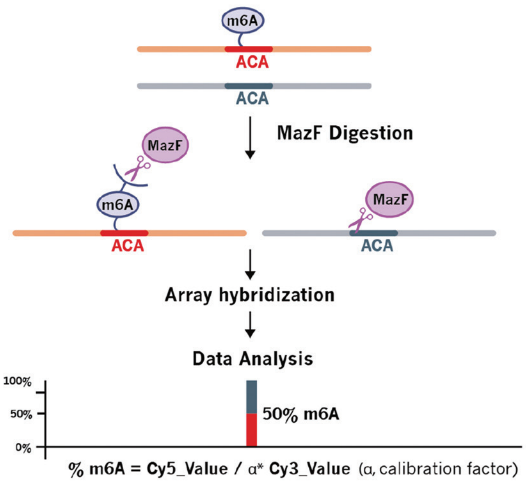



**Fig. 2.** Unmethylated (ACA) sites, but not methylated (m6ACA) sites, are cleaved by RNase MazF. The MazF treated and corresponding untreated sites are compared in two-color channels of the m6A Single Nucleotide Array to accurately quantify the m6A modification percentage, and abundance level at precise single nucleotide resolution.

## Epitranscriptomic Array

- *Quantifying the percentage of modification for each transcript*
- *Coverage of mRNAs, lncRNAs, circRNAs and more*
- *RNA modifications at transcript-specific level*
- *Low sample amount, starting from 1 ug total RNA*

## m6A Single Nucleotide Array

- *A new orthogonal methodology for m6A detection*
- *Single-Nucleotide resolution for m6A site location*
- *Quantifying the percentage of m6A site modification*
- *Reliable m6A site collection and systematic annotations*
- *Low sample amount, starting from 1 ug total RNA*

To learn more: **www.arraystar.com**

# Cold Spring Harbor Laboratory 2020 Meetings & Courses


Meeting social event at CSHL

## Meetings

Systems Biology: Global Regulation of Gene Expression March 11 - 14 / January 20

Neuronal Circuits March 18 - 21 / January 10

From Neuroscience to Artificially Intelligent Systems March 24 - 28 / January 10

Celebrating the Life and Science of Sydney Brenner March 29 - 31 / January 31

The PARP Family & ADP-ribosylation
April 1 - 4 / January 17

JAK-STAT Pathways in Health & Disease
April 6 - 9 / January 17

Gene Expression and Signaling in the Immune System April 14 - 18 / January 24

Protein Homeostasis in Health & Disease
April 21 - 25 / January 31

Genome Organization & Nuclear Function
April 28 - May 2 / February 7

The Biology of Genomes
May 5 - 9 / February 14

Regulatory & Non-Coding RNAs
May 12 - 16 / February 21

Retroviruses May 18 - 23 / February 28

85th Symposium: Genome Stability & Integrity
May 27 - June 1 / March 6

Glia in Health & Disease July 16 - 20 / May 1

Mechanisms & Models of Cancer
August 11 - 15 / May 22

Genome Engineering: CRISPR Frontiers
August 19 - 22 / May 29

Single Biomolecules & their Cellular Context
August 25 - 29 / June 5

Translational Control September 1 - 5 / June 12

Molecular Mechanisms of Neuronal Connectivity September 8 - 12 / June 19

Epigenetics & Chromatin
September 14 - 18 / June 26

Mechanisms of Aging
September 21 - 25 / July 3

Germ Cells
September 29 - October 3 / July 10

Transposable Elements
October 6 - 10 / July 17

Microbiome October 20 - 24 / July 31

Fifty Years of Reverse Transcriptase
October 28 - 31 / August 7

Biological Data Science
November 4 - 7 / August 14

Neurodegenerative Diseases: Biology & Therapeutics
December 2 - 5 / September 18

## Courses

Cryoelectron Microscopy
March 9 - 22 / January 15

Quantitative Imaging: From Acquisition to Analysis March 24 - April 7 / January 31

Cell & Dev Biology of *Xenopus*: Gene Discovery & Disease
March 25 - April 7 / January 31

Expression, Purification & Analysis of Proteins & Protein Complexes
March 25 - April 7 / January 31

Advanced Bacterial Genetics
June 2 - 22 / March 1

Ion Channels in Synaptic & Neural Circuit Physiology June 2 - 22 / March 1

Schizophrenia & Related Disorders
June 3 - 10 / March 1

Mouse Development, Stem Cells & Cancer
June 3 - 22 / March 1

Metabolomics
June 6 - 22 / March 1

Pancreatic Cancer
June 15 - 21 / March 1

Statistical Methods for Functional Genomics
June 26 - July 9 / March 15

Advanced Techniques in Molecular Neuroscience June 26 - July 11 / March 15

Single Cell Analysis
June 26 - July 11 / March 15

*Drosophila* Neurobiology: Genes, Circuits & Behavior June 26 - July 16 / March 15

Frontiers & Techniques in Plant Science
June 26 - July 16 / March 15

Computational Neuroscience: Vision
July 12 - 25 / March 15

Synthetic Biology July 21 - August 3 / April 1

Chromatin, Epigenetics and Gene Expression
July 21 - August 9 / April 1

Imaging Structure & Function in the Nervous System July 21 - August 10 / April 1

Yeast Genetics & Genomics
July 21 - August 10 / April 1

Genetics & Neurobiology of Language
July 27 - August 2 / April 1

Brain Tumors August 4 - 10 / April 1

Proteomics August 5 - 18 / April 1

Neuroscience of Addiction
September 27 - October 4 / May 31

Macromolecular Crystallography
October 13 - 28 / June 15

Programming for Biology
October 13 - 28 / July 15

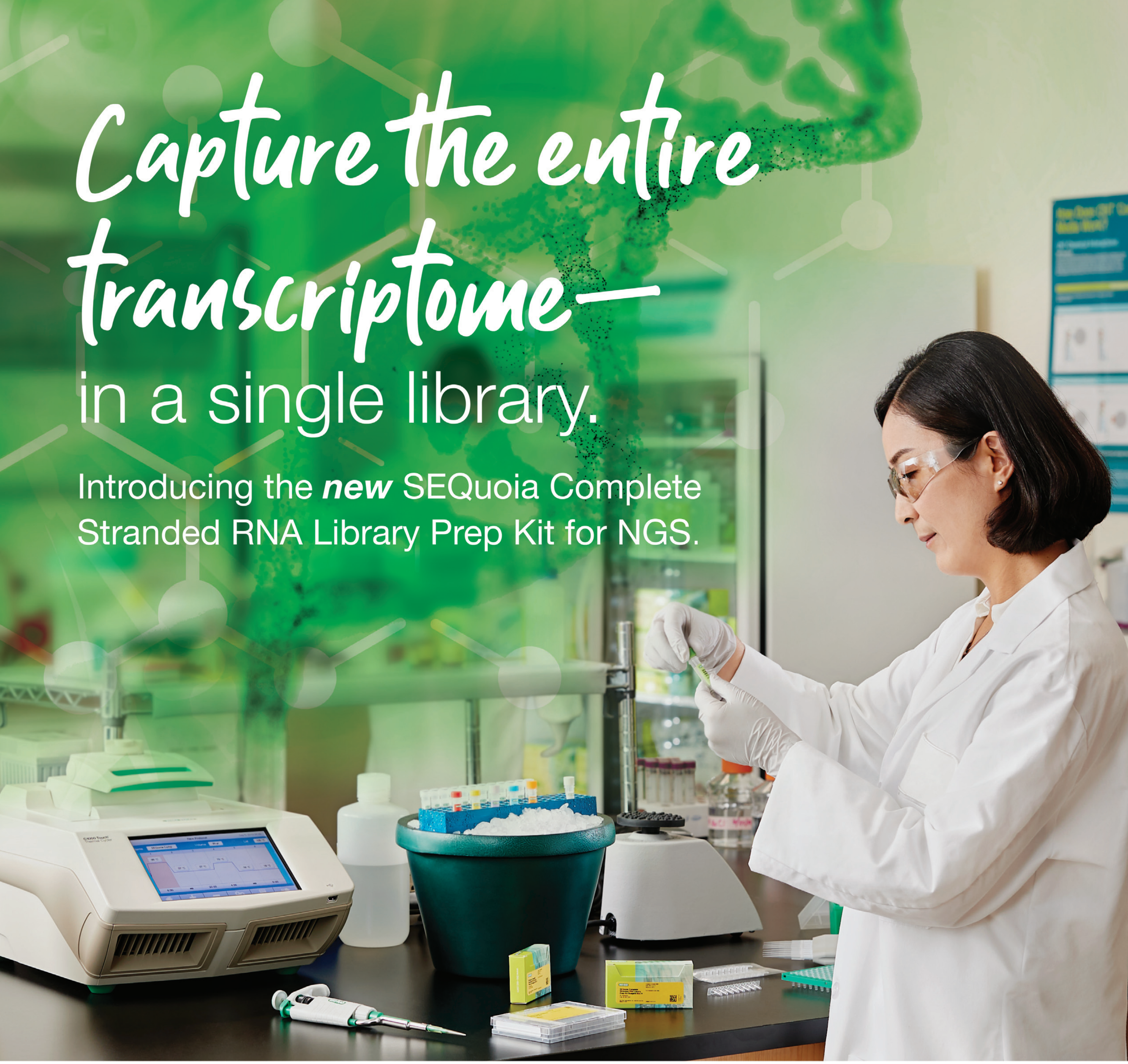
Antibody Engineering, Phage Display & Immune Repertoire Analysis
October 15 - 28 / July 15

Advanced Sequencing Technologies & Bioinformatics Analysis
November 3 - 15 / August 15

Scientific Writing Retreat
November 11 - 15 / August 15

Computational Genomics
December 2 - 9 / August 15

The Genome Access Course
April 26 - 28 & November 17 - 18 / rolling




## It's new. It's different. And it's only from Bio-Rad.

The SEQuoia Complete Stranded RNA Library Prep kit gives you a truly holistic view of the transcriptome, capturing all types of RNAs (long, short, and everything in between) from all types of samples in less than 4 hours. With unparalleled uniformity of coverage, strandedness, and efficiency, what you will discover will definitely surprise you.

**Are you ready for a new approach to transcriptomics?**
**Get the details at bio-rad.com/SEQuoiaCompleteRNA**

#ScienceForward

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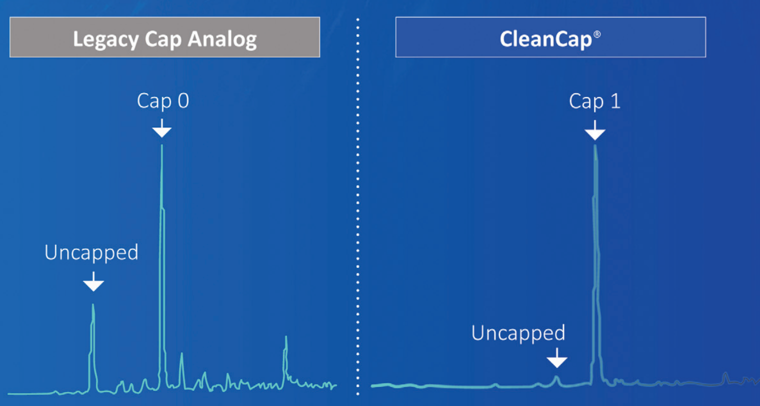
# A REVOLUTION in Co-Transcriptional mRNA Capping

## CleanCap® demonstrates superior performance versus legacy co-transcriptional capping methods

| | Legacy Cap Analogs | CleanCap® |
|---|---|---|
| Natural Cap | No ⊖ | Yes ⊕ |
| Immunogenic | Yes ⊖ | Reduced Immunogenicity ⊕ |
| Capping Efficiency | ~70% ⊖ | ~95% ⊕ |
| Yield/mL Transcription | 1.5 mg/mL ⊖ | 4 mg/mL ⊕ |
| Cost | 3 X ⊖ | 1 X ⊕ |
| Available Therapeutic Licenses | No ⊖ | Yes ⊕ |

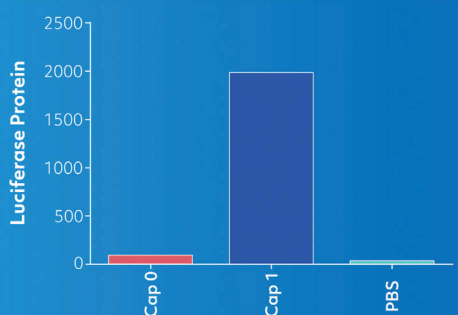
CleanCap®

Successful development of mRNA therapeutics relies on reproducible, high-efficiency production of capped mRNA. CleanCap® uses a new co-transcriptional chemical process for the highest level of mRNA capping:




*LC-MS Capping Analysis*

## CleanCap® gives superior activity *in vivo* by mimicking a natural cap




*Luciferase mRNA was formulated with Lunar Lipids and injected by tail vein into mice. At 6 hours, luciferase was measured by western blot in mouse liver. Data courtesy of Arcturus Therapeutics.*

CleanCap® results in a natural Cap 1 structure that does not stimulate the innate immune system of the host, resulting in unparalleled efficiency *in vivo*. Legacy co-transcriptional capping methods yield a Cap O, an immunogenic cap structure that is poorly expressed *in vivo*. The results speak for themselves: **CleanCap®, the next generation of cap analogs, provide the most active and least toxic mRNA for your *in vivo* applications.**

Be part of the revolution.

For more information visit: **trilinkbiotech.com/cleancap**

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