

## NUCLEIC ACID PURIFICATION – PURE AND SIMPLE™

# Finally, get what you need from your FFPE samples

The revolutionary Ionic™ Purification System from Purigen Biosystems uses isotachophoresis to extract, purify, and concentrate nucleic acid from biological samples. Nucleic acids remain in their native form, not denatured or dehydrated, and there is also no binding to, or stripping from, fixed surfaces. Get pure, abundant, and ready-to-use nucleic acid with < 3 minutes of hands-on time per sample.

### A better way to extract nucleic acid from FFPE samples

- ▶ **More Quantity**  
3.5x higher yield on average from FFPE
- ▶ **No Beads, Columns, or Surface-binding**  
Less fragmentation and no risk of contamination from beads or wash solvents
- ▶ **More Efficiency**  
Fewer manual steps with <3 minutes of hands-on time per FFPE sample
- ▶ **Better Data**  
More material with no bias towards length or GC content means more actionable data

For more information, please contact  
[info@purigenbio.com](mailto:info@purigenbio.com).



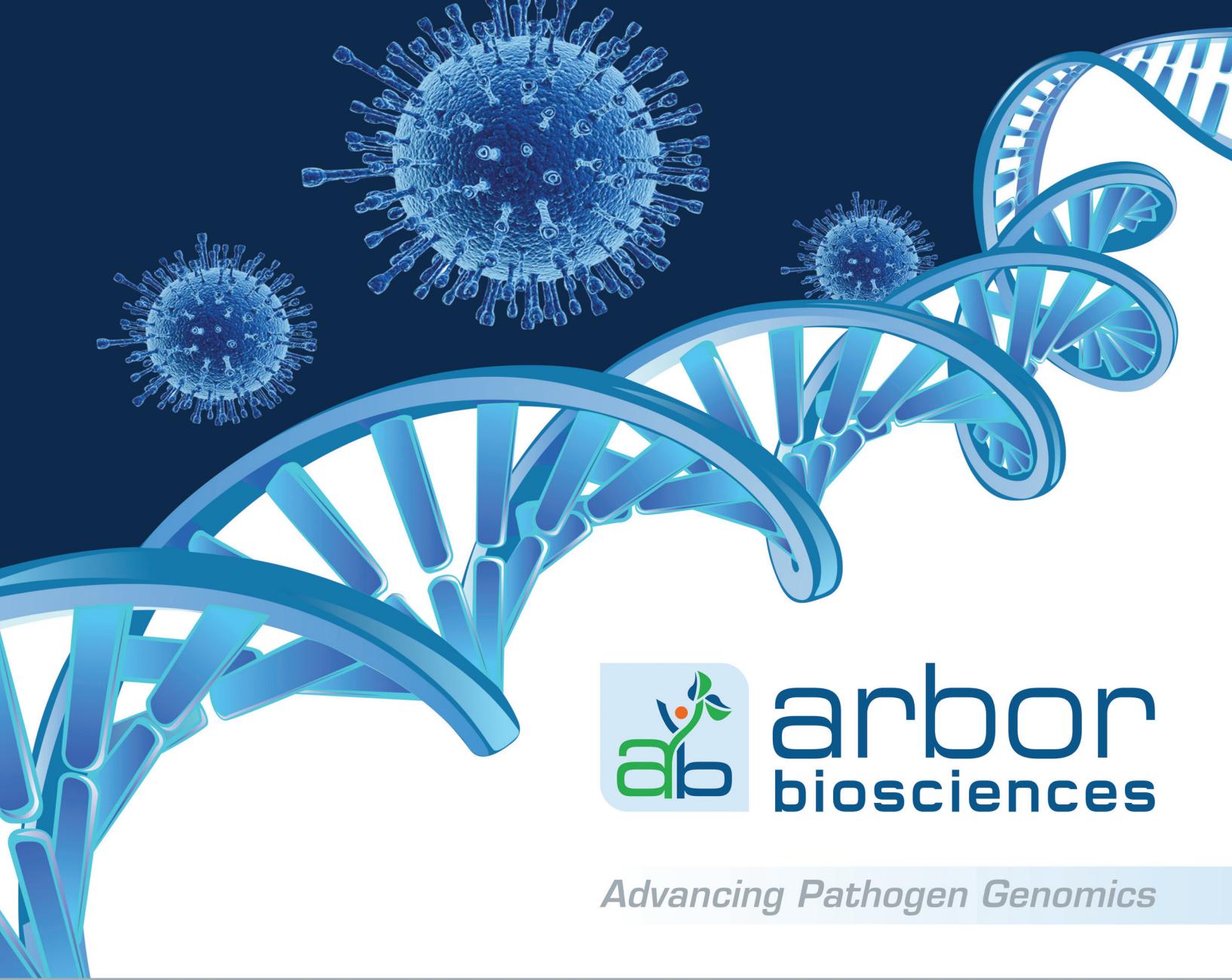
 Visit us at  
**ABRF 2020 | BOOTH 106**

**FOR RESEARCH USE ONLY.** Not for use in diagnostic procedures.

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**PURIGEN**™  
BIOSYSTEMS

NUCLEIC ACID PURIFICATION – PURE AND SIMPLE™



**arbor**  
**biosciences**

*Advancing Pathogen Genomics*



**my Baits<sup>®</sup>**

**myBaits<sup>®</sup> Custom Panels for Pathogen Sequencing**  
*Whole genome enrichment of pathogens from native environments*

Generate orders of magnitude enrichment of pathogen DNA or RNA from naturally complex samples, including bacterial, fungal, and viral pathogens, with hybridization-based target capture kits.

- Generate whole genome sequences of bacteria, fungi, and viruses
- Achieve >250-fold enrichment of pathogens from NGS libraries
- Easily detect any type of mutation; SNPs, indels, rearrangements



## **Bulk M-MLV and RNasin at competitive prices**

### ◎ Thermo-stable M-MLV (H-) Reverse Transcriptase US\$1.5 per KU for more than 1,000 KU

- H minus Moloney Murine Leukemia Virus (M-MLV) Reverse Transcriptase is a recombinant M-MLV reverse transcriptase. RNase H activity has been eliminated by a point mutation in the RNase H domain of M-MLV RTase, ensuring high yields.
- Deficient RNase H activity to reduce RNA template degradation during the first-strand cDNA synthesis.
- Thermal stability of the reverse transcriptase is improved and the optimal reaction temperature is therefore 50°C.

### ◎ RNasin (RNase inhibitor) US\$10 per KU for more than 100 KU

RNasin is a ribonuclease inhibitor extracted from human placenta with a molecular weight 51 kDa. It inhibits the activity of RNase by specifically binding up to RNase with a non-covalent bond. RNasin, free of RNase or Nickase, can maintain its activity at pH from 5 to 8, and the highest one at pH7.8.

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**AACR** American Association  
for Cancer Research®  
**ANNUAL  
MEETING**  
2020 · SAN DIEGO

APRIL 24-29

**TURNING SCIENCE  
INTO LIFESAVING CARE**

Join us in San Diego for the latest innovative and inspiring cancer research from around the world...the AACR ANNUAL MEETING 2020!

**REGISTER TODAY!**

**Become a Member!**

Join the AACR and receive a discount on registration.



Continuing Medical Education Activity -  
AMA PRA Category 1 Credits™ available

The AACR Annual Meeting highlights the work of the greatest minds in cancer science and medicine from institutions all over the world. This meeting presents the many scientific discoveries across the breadth of cancer research—from prevention, early detection, and interception; to cancer biology, translational, and clinical studies; to survivorship, population science, and advocacy. This year's program, with the theme of "Turning Science into Lifesaving Care," will be a comprehensive, cutting-edge scientific event that you will not want to miss!

**We look forward to seeing you!**

[AACR.ORG](http://AACR.ORG) • #AACR20



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For more information please visit  
[meetings.cshl.edu](http://meetings.cshl.edu)



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



## Postdoctoral Positions

### About SCISSOR

Single-Cell In Situ Spatial Omics at subcellular Resolution (SCISSOR) is a well-supported multidisciplinary program that aims to introduce new paradigms for cancer biology and diagnostics, using spatial and non-spatial omics technologies. Our team comprises of computational biologists (lead: Shyam Prabhakar), oncologists (lead: Iain Tan), biotechnologists (lead: Kok Hao Chen), and pathologists (lead: Tony Lim) with a track record of combining cutting-edge computational and experimental approaches to infer disease mechanisms and develop clinical applications (Chen et al., *Science* 2015; Li et al., *Nat Genet* 2017; Sun et al., *Cell* 2016; Fukawa et al., *Nat Med* 2016; del Rosario et al., *Nat Methods* 2015; Kumar et al., *Nat Biotechnol* 2013; Ku et al., *Lancet Oncol* 2012).

We are looking for bright, motivated individuals who are interested in working on cutting-edge research projects that leverage single cell and spatial omics. Our interdisciplinary team combines experimental biology, technology development and computational biology to address major questions in cancer biology.

### Position 1

#### Postdoctoral fellow: Machine Learning and Mathematical Analysis of Spatial Transcriptomics Data

Successful candidates will develop and apply algorithms for the analysis of large-scale cancer data. This will be a unique opportunity to lead computational analysis of new types of data in the nascent field of spatial transcriptomics.

##### **Requirements:**

- Strong programming skills
- Expertise in mathematics, computer science, statistics, engineering, machine learning, signal processing, computational genomics, or a related field
- General quantitative intuition
- Strong publication record
- Strong communication skills
- The ability to work closely with clinicians and experimental biologists

### Position 2

#### Postdoctoral fellow: Assay Development, Cancer Markers and Mechanisms

Successful candidates will have the opportunity to lead experimental design and execution for a spatial transcriptomics study looking at DNA and RNA changes in a variety of human cancers at subcellular resolution.

##### **Requirements:**

- Expertise in cancer biology, immunology, genomics or related fields
- Skilled in molecular and cellular assays
- Strong publication record
- Team player and strong communication skills (oral and written)
- The ability to work closely with clinicians and computational biologists

##### **Benefits:**

The Genome Institute of Singapore offers a competitive salary and a complete benefits package that ensures a very high living standard in one of the most modern cities in the world.

### **About the Organisation**

The Genome Institute of Singapore (GIS), A\*STAR Research Entities is the national flagship program for genomic science in Singapore. GIS is located within the Biopolis, the biomedical research hub of Singapore, which houses in close proximity research institutes under the Agency of Science, Technology and Research (A\*STAR), biotech startups and international pharmaceutical corporations. The applicant would have the opportunity to interact with scientists, bioinformaticians, clinicians, engineers and other professionals from all over the world in a vibrant, intellectually stimulating and scientifically curious setting. You will be part of a vibrant scientific community where you will have the opportunity to share your ideas and demonstrate your skills and passion for scientific research. You can find out more about the Genome Institute of Singapore online: <https://www.a-star.edu.sg/gis/>.

### **Why Singapore?**

Singapore, a city-state with one of the highest standards of living in the world, is an international hub for the biomedical sciences. Singapore is a tropical city with a rich Asian heritage and modern style of living, and is an ideal gateway to explore Asia providing a unique experience and an excellent quality of life.

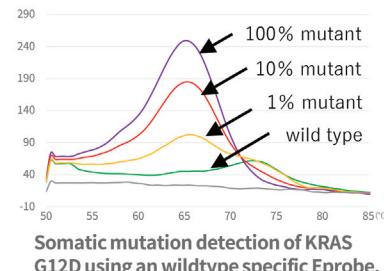
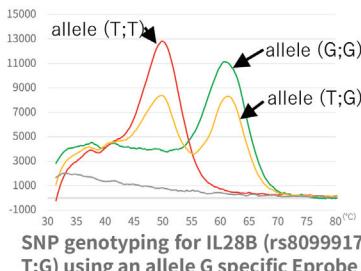
### **How to Apply**

To apply, please email your CV and names of references to: [prabhakars@gis.a-star.edu.sg](mailto:prabhakars@gis.a-star.edu.sg), [arulrayan@gis.a-star.edu.sg](mailto:arulrayan@gis.a-star.edu.sg)

# A novel solution for SNP/somatic mutation detection

Eprobe is a **DNA-based fluorescent probe** which emits fluorescence when specifically binding to a complementary strand. Melting curve analysis after PCR can detect **SNP genotype** and **somatic mutations**. Two fluorescent dyes (thiazole orange and thiazole pink) are available.

- **High resolution SNP detection**—Increased Tm (approx.10°C) by the thiazole orange enables a shorter probe design and a clearer distinction of SNPs
- **Simple and highly sensitive somatic mutation detection**—sensitive detection of somatic mutations (down to 0.1%) can be achieved by suppression of PCR amplification of wild-type alleles by Eprobe (PCR clamping)
- **Compatible with most real time PCR instruments**—fluorescence emitted by Eprobe can be detected using a filter for SYBR® Green I\* \*SYBR® is a registered trademark of Molecular Probes, Inc.
- **Easy to use online design tools**—a design tool for a primer/Eprobe (E-design, [www.dnaform.com/edesign2/](http://www.dnaform.com/edesign2/)) and a thermodynamic calculation tool (ECHO, [www.dnaform.com/devel/echo/thermodynamics/](http://www.dnaform.com/devel/echo/thermodynamics/)) are available



Fluorophore (excitation/emission)	1.5 nmol	3.0 nmol	5.0 nmol	10.0 nmol
Thiazole orange (510 nm / 530 nm)	19,000 JPY 38,000 JPY	30,000 JPY 60,000 JPY	45,000 JPY 90,000 JPY	70,000 JPY 140,000 JPY
Thiazole pink (570 nm / 590 nm)	45,000 JPY	70,000 JPY	110,000 JPY	170,000 JPY

Special offer for new customers  
50% OFF the list price!  
All Thiazole orange-labeled products



Learn more at

[www.dnaform.jp/en/products/fluorescent\\_oligonucleotide/eprobe\\_eprimer/](http://www.dnaform.jp/en/products/fluorescent_oligonucleotide/eprobe_eprimer/)

# DISCOVER > NEXT

REVEAL STRUCTURAL VARIATION LIKE NEVER BEFORE  
WITH BIONANO GENOME IMAGING



The Saphyr System images and analyzes ultra-long, linearized DNA molecules labeled at specific sequence motifs for ultra-sensitive, ultra-specific structural variant detection.



#### Unparalleled Structural Variation Detection

Genome-wide detection of SVs >500 bp to chromosome-arm length at up to 99% sensitivity and <2% false positive rate



#### Powerful Complement to Sequencing

Discover novel disease-associated SVs missed by NGS and long-read sequencers with sensitivities down to 1% allele frequency



#### Confident Answers

High concordance to SVs reported by FISH, karyotyping and chromosomal microarrays



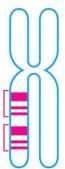
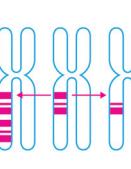
#### Comprehensive Workflow

Robust and streamlined assay, automated for a short turnaround time as little as 4 days

VISIT US AT AACR  
BOOTH #637

Attend our workshop at AACR to see how Genome imaging is a new breakthrough genomics tool for evaluating the molecular basis of cancer and for studying ecDNA  
MONDAY, APRIL 27 | 10:00AM - 11:00 AM  
SPOTLIGHT THEATER C

#### SAPHYR SYSTEM DETECTS VARIANTS OTHER TECHNOLOGIES MISS

				
<b>Homozygous insertions/deletions</b> larger than 500 bp	<b>Balanced and unbalanced translocations</b> larger than 50 kbp	<b>Inversions</b> large than 30 kbp	<b>Duplications</b> larger than 30 kbp	<b>Copy number variations</b> larger than 500 kbp
<b>99% sensitivity</b>	<b>95% sensitivity</b>	<b>99% sensitivity</b>	<b>97% sensitivity</b>	<b>97% sensitivity</b>

False-positive as low as 2%