UNITED STATES	S PATENT AND TRAD	DEMARK OFFICE
BEFORE THE PA	ATENT TRIAL AND A	APPEAL BOARD

TWINSTRAND BIOSCIENCES, INC. Petitioner,

v.

GUARDANT HEALTH, INC. Patent Owner.

\_\_\_\_\_\_

Case IPR2022- 01115 U.S. Patent No. 10,801,063

# PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 10,801,063

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Patent Trial and Appeal Board U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450



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		The presence of cell-free tumor DNA in human blood was well known	
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	A.	Claim 1	26
		1. "A method for classifying consensus sequences generated from sequencing reads derived from double-stranded cell-free deoxyribonucleic acid (cfDNA) molecules from a sample of a human subject"	26
		2. "(a) non-uniquely tagging a population of double-stranded cfDNA molecules from the sample with more than a 10x molar excess of adapters comprising	20



	molecular barcodes, relative to the double-stranded	
	cfDNA molecules in the population, to generate non-	
	uniquely tagged parent polynucleotides"	27
3.	"wherein the double-stranded cfDNA molecules that	
	map to a mappable base position of a reference	
	sequence are tagged with a number of different	
	molecular barcodes ranging from at least 2 to fewer	
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	from among the set of consensus sequences as (1)	
	paired consensus sequences generated from	
	sequencing reads representing a Watson strand and a	
	Crick strand of a non-uniquely tagged parent	
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		double-stranded cell-free deoxyribonucleic acid	
		(cfDNA) molecules from a bodily fluid sample of a	44
	2.	human subject"	44
	۷.	molecules from the bodily fluid sample with more	
		than a 10x molar excess of adapters comprising	
		molecular barcodes, relative to the double-stranded	
		cfDNA molecules in the population, to generate	
		tagged parent polynucleotides, wherein at least 20%	
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		comprising the molecular barcodes at both ends of a	
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	0.	of mapped sequencing reads based at least on the	
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		polynucleotide from among the tagged parent	
		polynucleotides"	46
	7.	"(f) classifying one or more of the unique sequencing	
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	Crick strand of a tagged parent polynucleotide of unpaired sequences generated from sequencing	or (2)	
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