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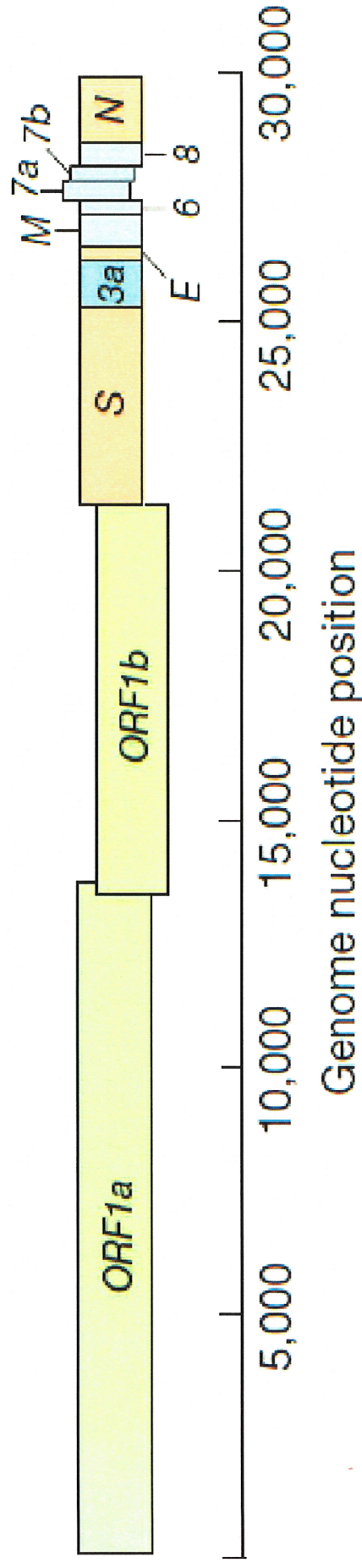
SARS-COV-2 GENOME ANALYSIS

(b)(3)10 USC 424, (b)(6)

June 17, 2020

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SARS-CoV-2 Genome



The next page is withheld in full citing (b)(1) and (b)(3) 50 USC 3024(i) and is not provided.

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Methods to construct a Coronavirus Full-Length Clone

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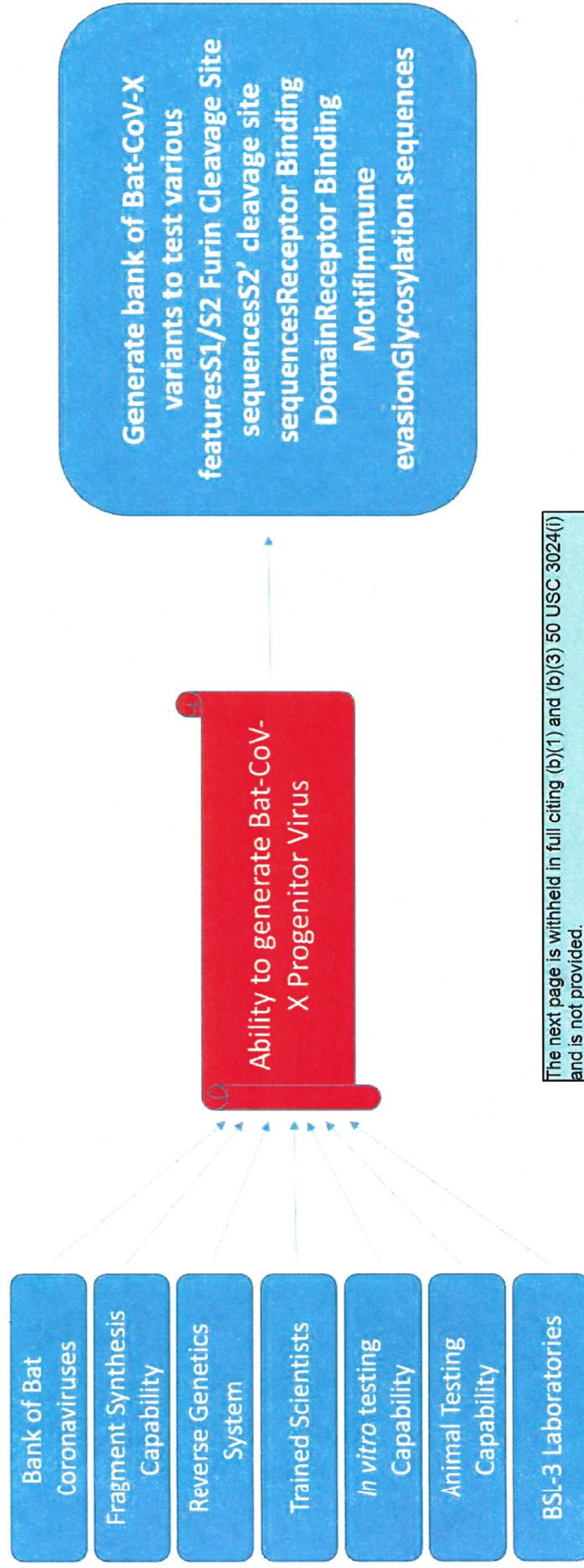
CORONAVIRUS INFECTIOUS CLONE CONSTRUCTION

- 1) Synthesize or PCR amplify 6-10 segments of a Bat Coronavirus Build a 5' transcription initiation fragment "stitch" the fragments together using an infectious clone technology 3' to the transcription initiation fragment Restriction-enzyme-based fragment cloning system Overlapping Fragment system Guided RNA Recombination Clone in a suitable host (E. coli, yeast, etc.) Sequence verify cloned insert

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CAPABILITIES NEEDED TO CONSTRUCT A BAT-LIKE CORONAVIRUS INFECTIOUS CLONE



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Type IIS Restriction Enzymes and Golden Gate Assembly System

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Type II Restriction Enzymes

- Non palindromic recognition site
Cuts at sites outside of recognition site
Each digested location has unique nucleotide overhangs
Example BsaI

5' – GGTCTC NNNNN – 3'

3' – CCAGAG NNNNN – 5'



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Eleven Tips For Optimizing Your Golden Gate Assembly Reactions

Looking for example outside the classroom in a daily routine? Here are activities and ways to use them when planning your Golden State Assembly experience.

- 4. Choose your payment plan**
The first step in setting up a plan is to decide how you want to pay for the plan. You can choose to pay for the plan in a lump sum, or you can choose to pay for the plan in installments. If you choose to pay in installments, you will need to decide how much you want to pay each month. The amount you pay each month will depend on the amount of the loan and the interest rate. You can use the following formula to calculate the monthly payment:
$$M = \frac{P \cdot r \cdot (1 + r)^n}{(1 + r)^n - 1}$$

where M is the monthly payment, P is the principal amount, r is the interest rate, and n is the number of months.
- 5. Determine your company's needs**
Before you can set up a plan, you need to know what your company needs. This includes knowing how much money you need, how long you need it for, and how much you can afford to pay. You can use the following formula to calculate the total amount of money you need:
$$T = \frac{M \cdot (1 + r)^n}{r}$$

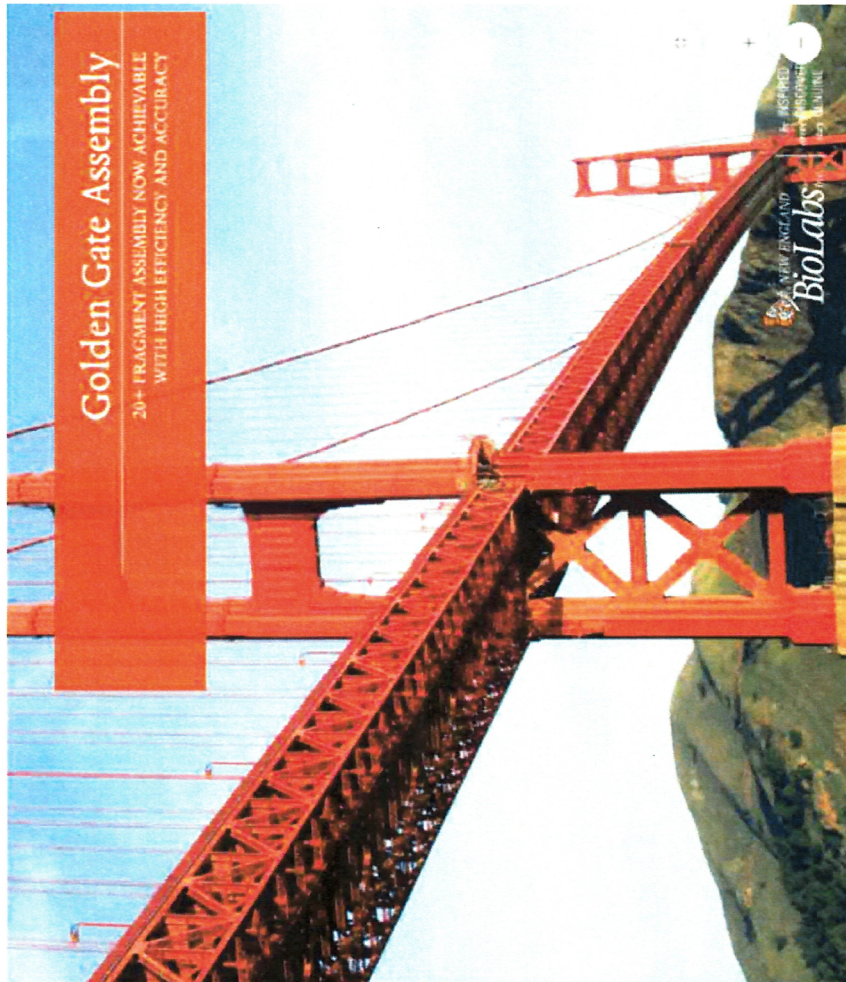
where T is the total amount of money needed, M is the monthly payment, r is the interest rate, and n is the number of months.
- 6. Set up your payment plan**
Once you know how much money you need and how much you can afford to pay, you can set up your payment plan. This involves choosing a lender, negotiating the terms of the loan, and making the first payment. You can use the following formula to calculate the total amount of money you will pay over the life of the loan:
$$L = \frac{M \cdot (1 + r)^n}{r}$$

where L is the total amount of money paid, M is the monthly payment, r is the interest rate, and n is the number of months.
- 7. Monitor your plan**
Once you have set up your payment plan, you need to monitor it to make sure it is working as intended. This includes keeping track of the amount of money you are paying and the amount of money you are receiving. You can use the following formula to calculate the net amount of money you are receiving:
$$N = L - T$$

where N is the net amount of money received, L is the total amount of money paid, and T is the total amount of money needed.
- 8. Review your plan**
Finally, you need to review your plan to make sure it is still working as intended. This includes checking the interest rate and the amount of the loan. You can use the following formula to calculate the interest rate:
$$r = \frac{L - T}{T}$$

where r is the interest rate, L is the total amount of money paid, and T is the total amount of money needed.

Golden Gate Assembly



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Featured Tools



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• *Human Ecology Review*, 1(2)

is a recognized indicator of *Stenopoma* diversity.

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• **Spares:** Spares required for boiler high-stability assembly

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WIV Bat Coronavirus Collection Efforts

• WIV possesses a large bank of Bat Coronaviruses isolated from various bat species in Yunnan Province ChinaGe et al., 2013Yang et al., 2016Hu et al., 2017Five-year longitudinal study to isolate Bat Coronaviruses (April 2011 – October 2015)Only a few sequences have been published

Table 1. Summary of SARS-CoV detection in bats from a single habitat in Kunming, Yunnan.

Sampling time	Sample type	Sample Numbers		SARS-CoV +	SARS-CoV + bat species (No.)
		Total	CoV +		
April, 2011	anal swab	14	1	1	<i>R. sinicus</i> (1)
October, 2011	anal swab	8	3	3	<i>R. sinicus</i> (3)
May, 2012	anal swab & feces	54	9	4	<i>R. sinicus</i> (4)
September, 2012	- feces	39	20	10	<i>R. sinicus</i> (16) <i>R. ferrugineus</i> (3)
April, 2013	feces	52	21	18	<i>R. sinicus</i> (16)
July, 2013	anal swab & feces	115	9	8	<i>R. sinicus</i> (8)
May, 2014	feces	131	8	4	<i>A. stoliczkanus</i> (3) <i>R. affinis</i> (1)
October, 2014	anal swab	19	4	4	<i>R. sinicus</i> (4)
May, 2015	feces	145	3	0	
October, 2015	anal swab	25	6	5	<i>R. sinicus</i> (5)
Total		602	84	64	<i>R. (S)A</i> (3)

