



ВЕКТОР

Мыши – модель заражения коронавирусной инфекцией для биомедицинских исследований

Алексей Дейкин
НИУ «БелГУ»

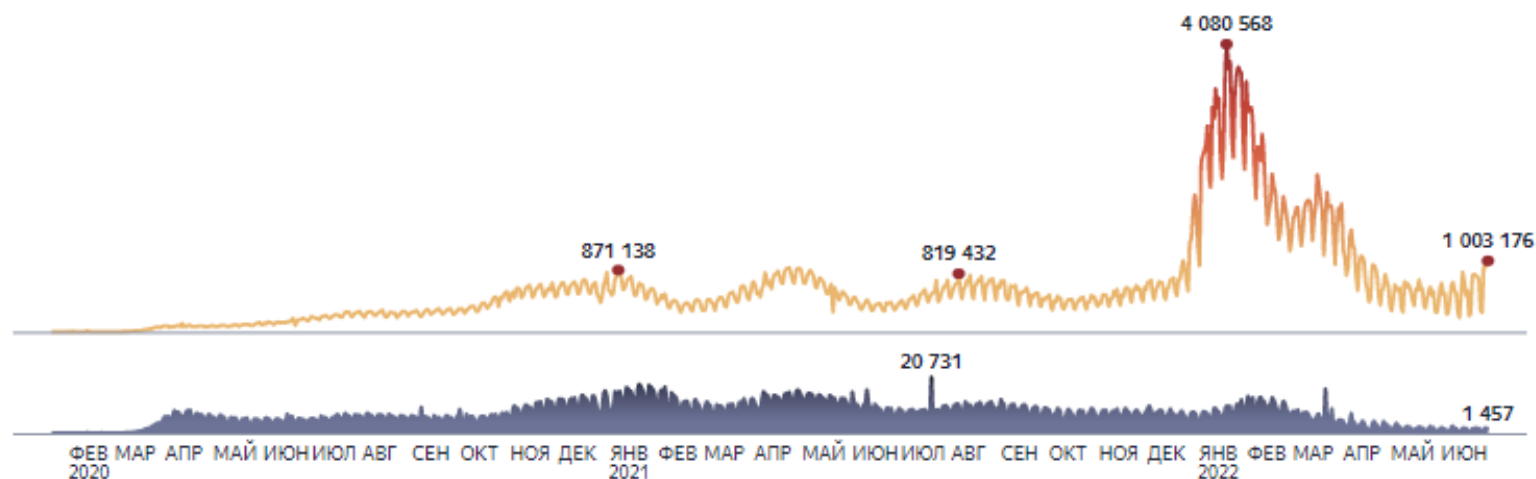
Коронавирус: статистика

Главные цифры
на 30 июня

	Заражений	Смертей
За сутки	+1 003 176	+1 457
Всего	547 470 114	6 335 808

Число новых **заражений** и смертей, весь мир

Яндекс



SARS-CoV2 binding site

Identity	SARS-CoV2 binding site																									
1. ACE2_HUMAN	Glu	Glu	Gln	Ala	Lys	Thr	Phe	Leu	Asp	Lys	Phe	Asn	His	Glu	Ala	Glu	Asp	Leu	Phe	Tyr	Gln	Ser	Ser	Leu	Ala	Ser
2. ACE2_MOUSE	Glu	Glu	Asn	Ala	Lys	Thr	Phe	Leu	Asn	Asn	Phe	Asn	Gln	Glu	Ala	Glu	Asp	Leu	Ser	Tyr	Gln	Ser	Ser	Leu	Ala	Ser

SARS-CoV2 binding site

Identity	SARS-CoV2 binding site																									
1. ACE2_HUMAN	Glu	Gln	Ser	Thr	Leu	Ala	Gln	Met	Tyr	Pro	Leu	Gln	Glu	Ile	Gln	Asn	Leu	Thr	Val	Lys	Leu	Gln	Leu	Gln	Ala	Leu
2. ACE2_MOUSE	Glu	Gln	Ser	Lys	Thr	Ala	Gln	Ser	Phe	Ser	Leu	Gln	Glu	Ile	Gln	Thr	Pro	Ile	Ile	Lys	Arg	Gln	Leu	Gln	Ala	Leu

SARS-CoV2 binding site

Identity	SARS-CoV2 binding site																									
1. ACE2_HUMAN	Thr	Ala	Trp	Asp	Leu	Gly	Lys	Gly	Asp	Phe	Arg	Ile	Leu	Met	Cys	Thr	Lys	Val	Thr	Met	Asp	Asp	Phe	Leu	Thr	Ala
2. ACE2_MOUSE	Thr	Ala	Trp	Asp	Leu	Gly	His	Gly	Asp	Phe	Arg	Ile	Lys	Met	Cys	Thr	Lys	Val	Thr	Met	Asp	Asn	Phe	Leu	Thr	Ala

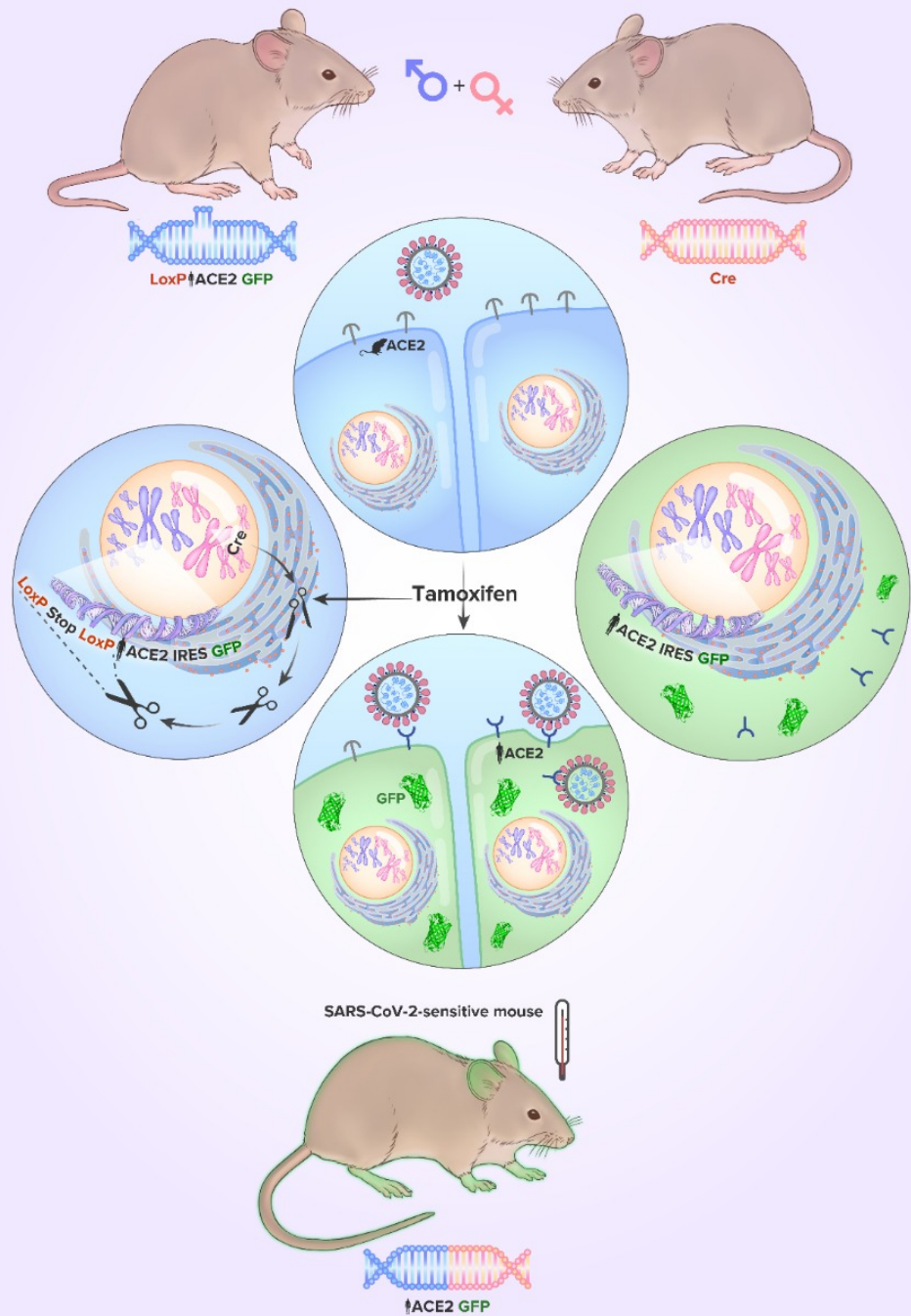
Cleavage site (by TMPRSS2)

Identity	Cleavage site (by TMPRSS2)																									
1. ACE2_HUMAN	Pro	Arg	Thr	Glu	Val	Glu	Lys	Ala	Ile	Arg	Met	Ser	Arg	Ser	Arg	Ile	Asn	Asp	Ala	Phe	Arg	Leu	Asn	Asp	Asn	Asn
2. ACE2_MOUSE	Pro	Arg	Ser	Glu	Val	Glu	Asp	Ala	Ile	Arg	Met	Ser	Arg	Gly	Arg	Ile	Asn	Asp	Val	Phe	Gly	Leu	Asn	Asp	Asn	Asn



On the way from SARS-CoV-sensitive mice to murine COVID-19 model

Vladislav O. Soldatov^{1,2}, Marina V. Kubekina¹, Yulia Yu. Silaeva¹, Alexandra V. Bruter¹, Alexey V. Deykin^{1,3,4}

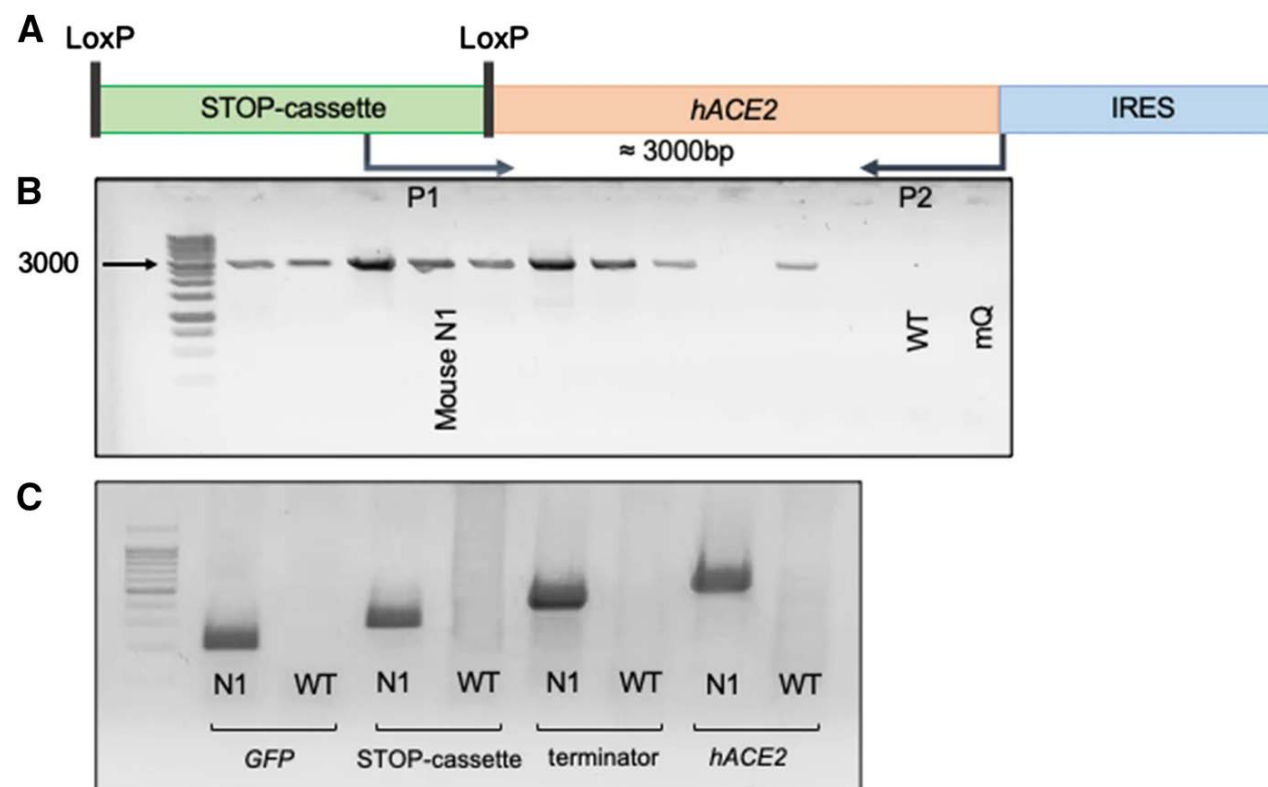
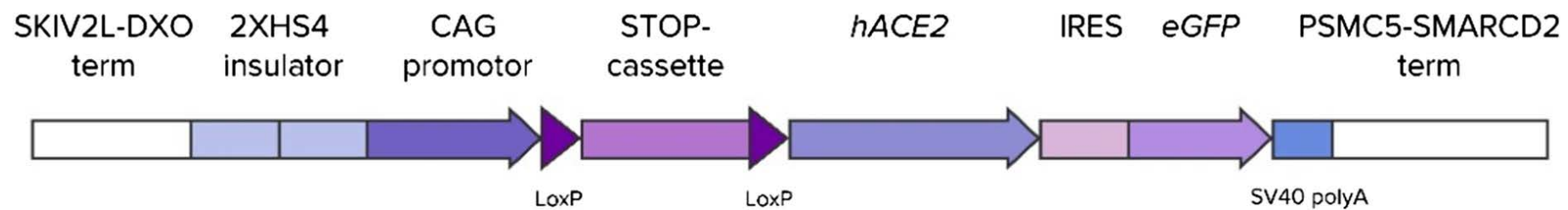


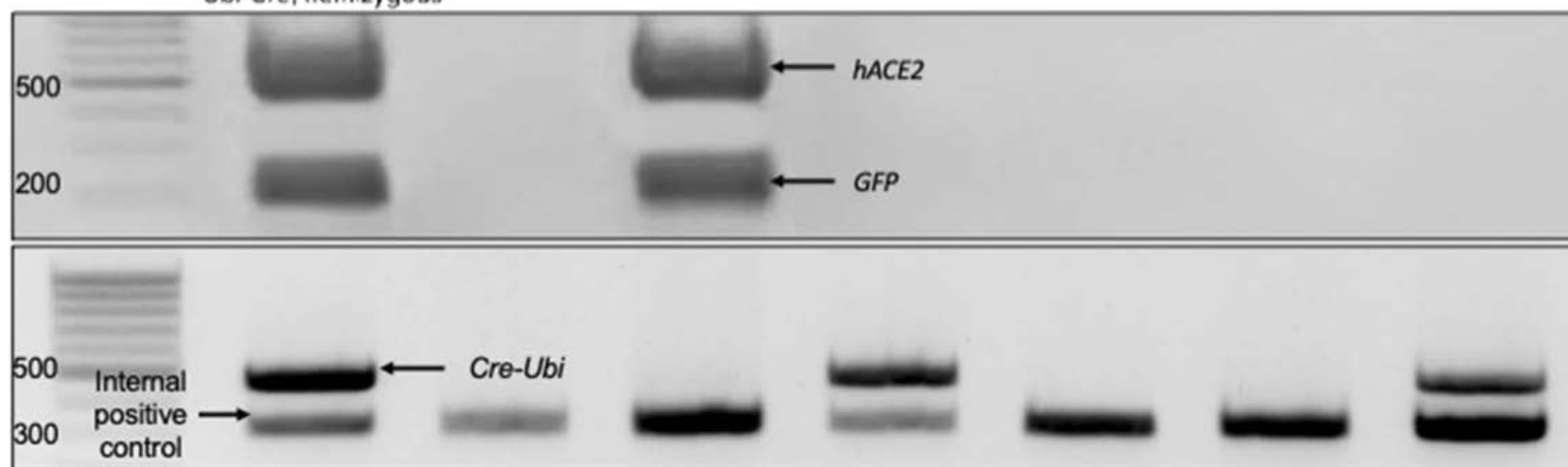
Transgenic Res (2021) 30:289–301
<https://doi.org/10.1007/s11248-021-00249-8>

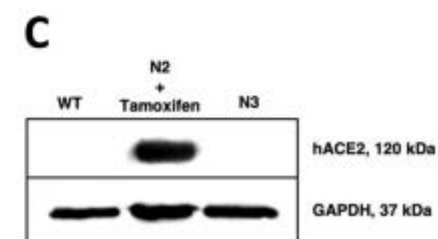
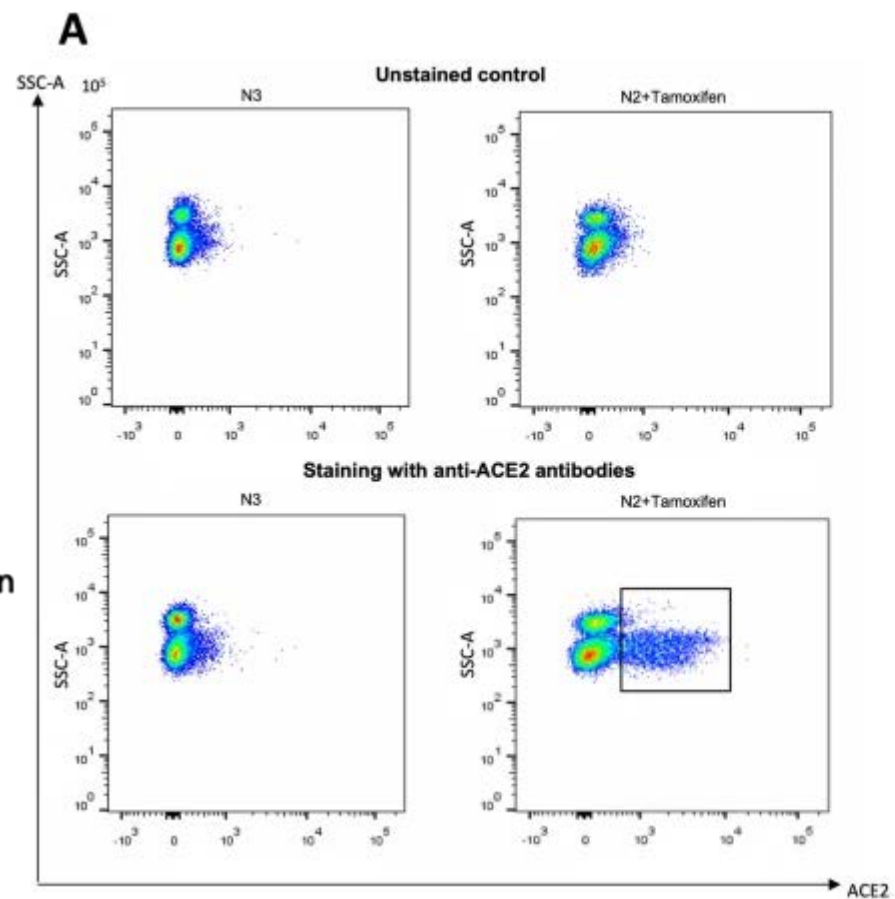
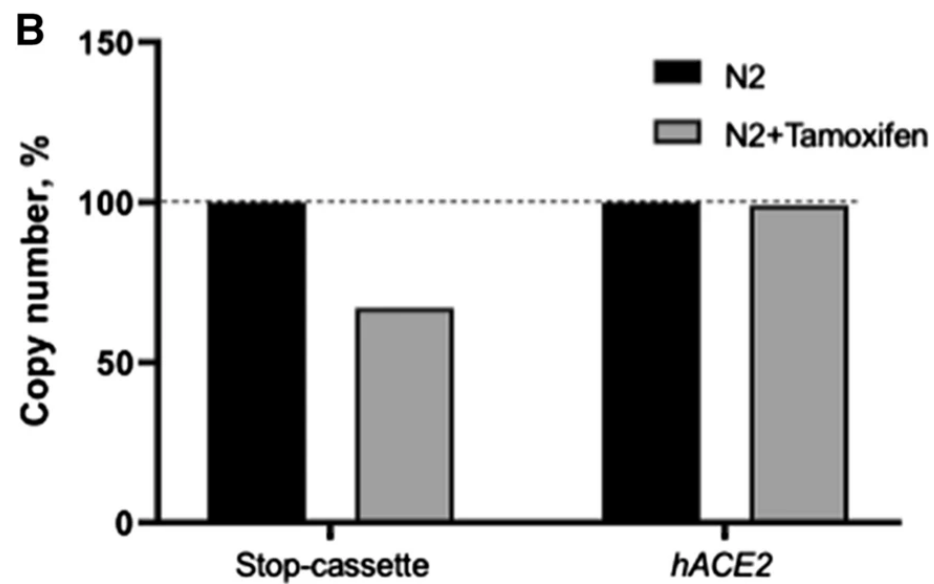
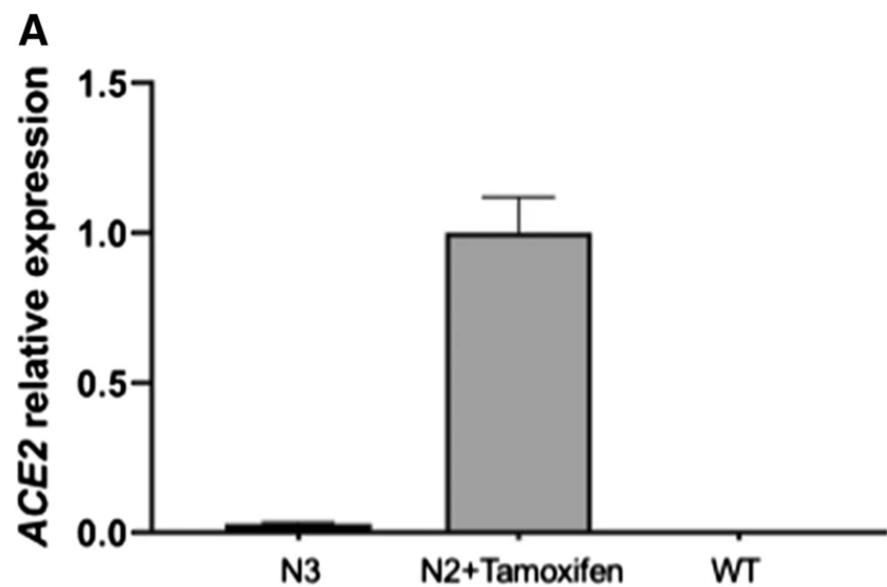
ORIGINAL PAPER

Novel transgenic mice with Cre-dependent co-expression of GFP and human ACE2: a safe tool for study of COVID-19 pathogenesis

Alexandra V. Bruter · Diana S. Korshunova · Marina V. Kubekina · Petr V. Sergiev · Anastasiia A. Kalinina · Leonid A. Ilchuk · Yuliya Yu. Silaeva · Eugenii N. Korshunov · Vladislav O. Soldatov · Alexey V. Deykin



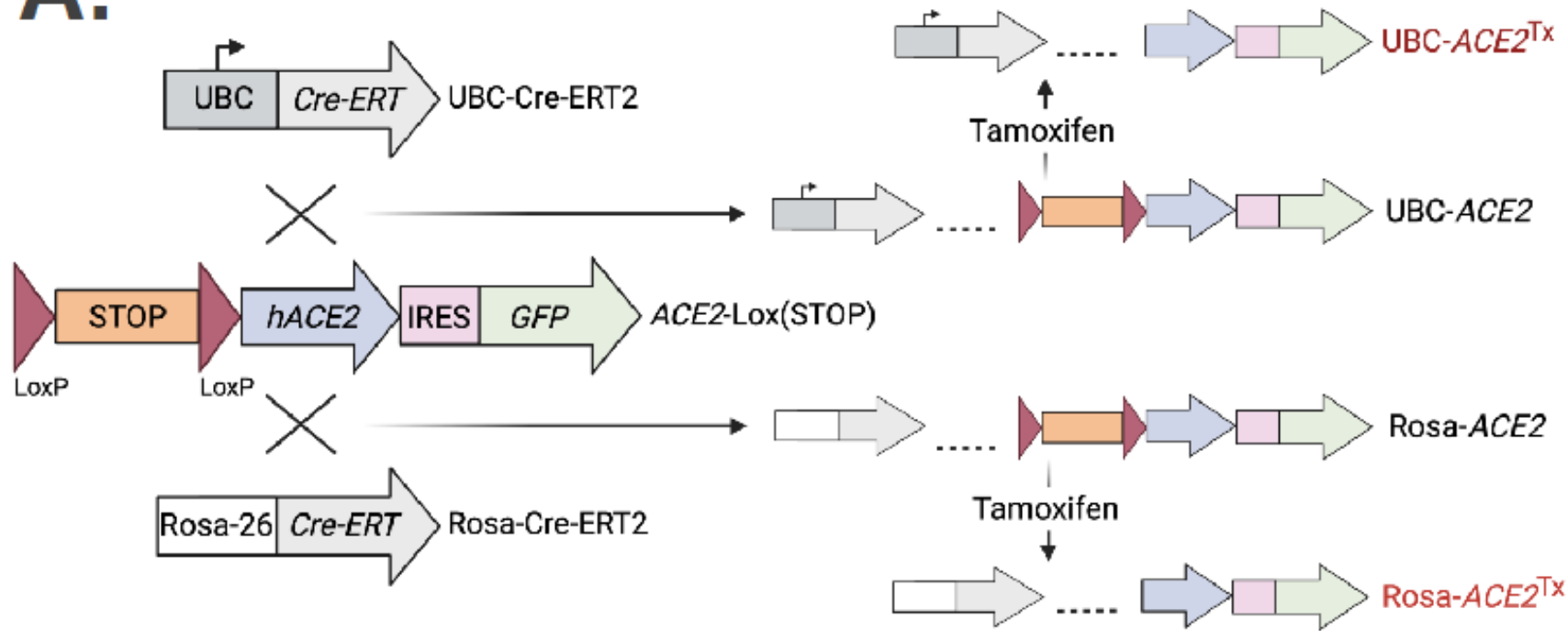




РТ-ПЦР, геномэквивалент/мл							
Генотип	№ животного	мозг	сердце	легкие	печень	тонк киш	толст киш
86	4881	107 287	55	6 578			
86	4882	56 516	2	9 282		12	
1184	3199	131		2 417			
1184	3125			2 933			
Дикий тип	3067						
Дикий тип	3105						
Дикий тип	3116						
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ВЕКТОР

A.

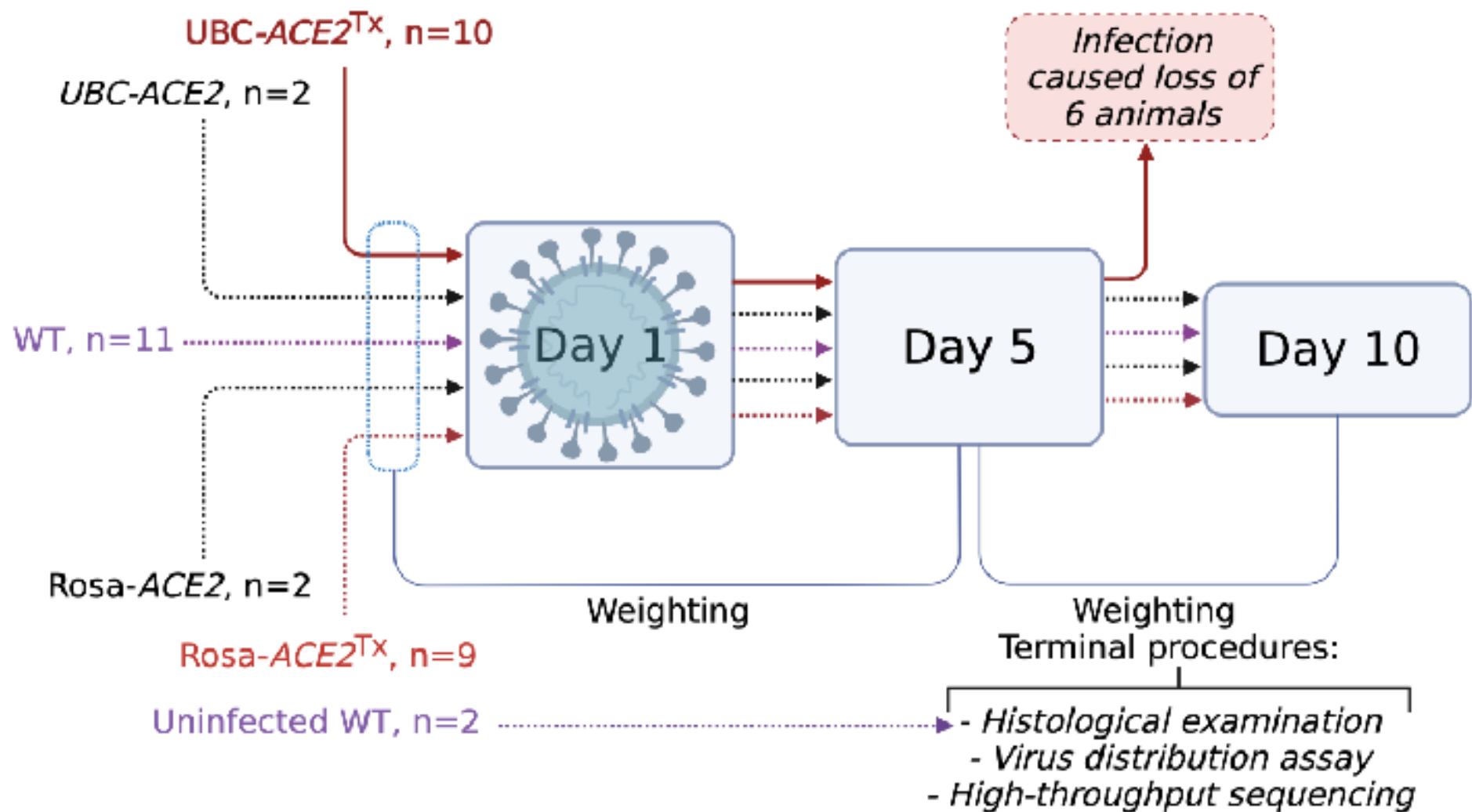
ORIGINAL RESEARCH article

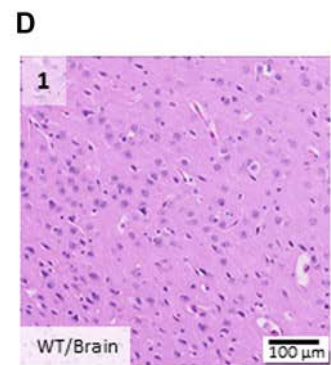
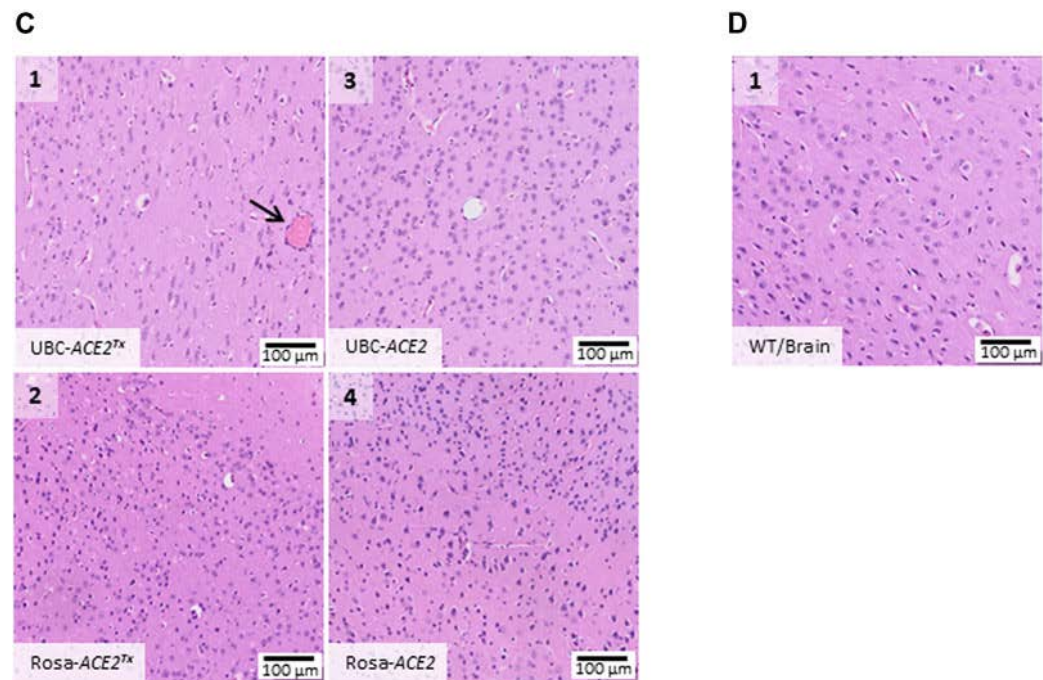
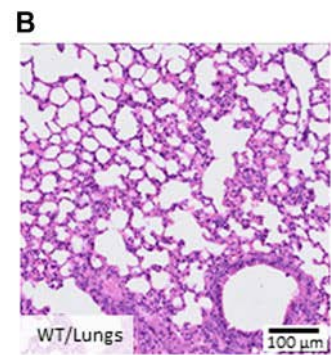
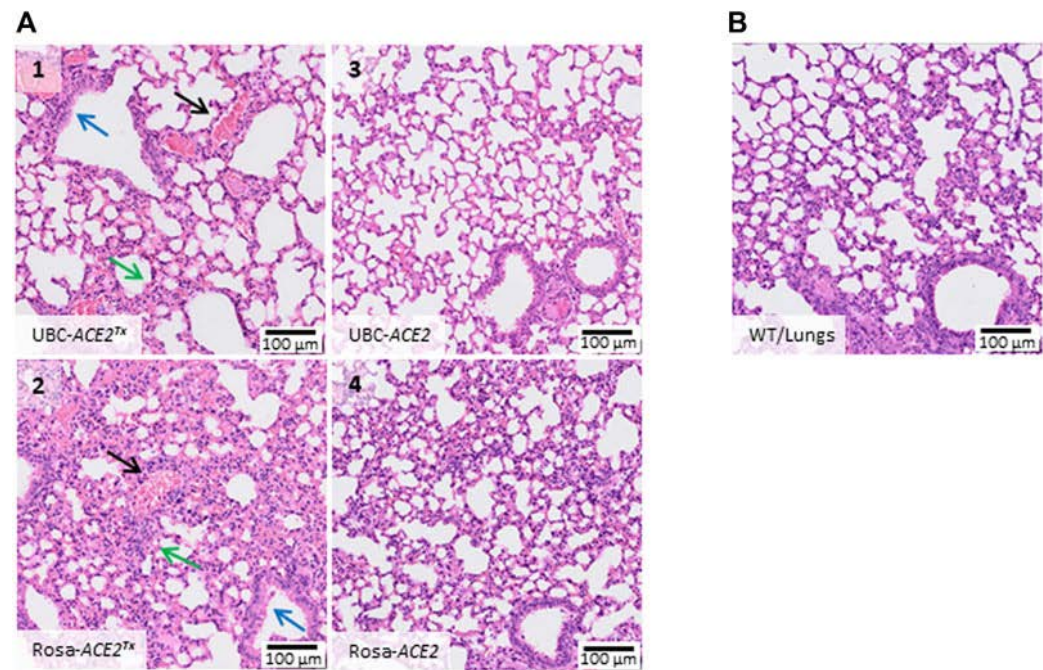
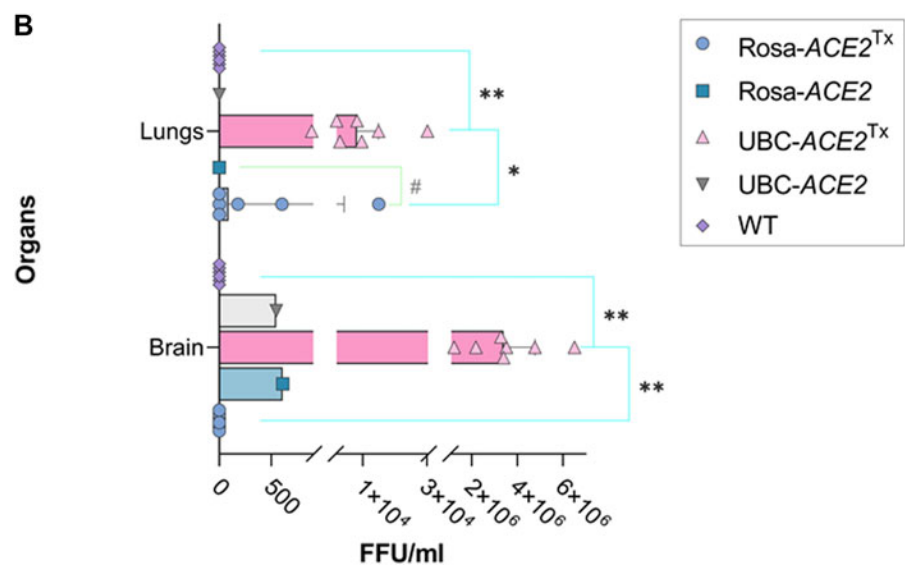
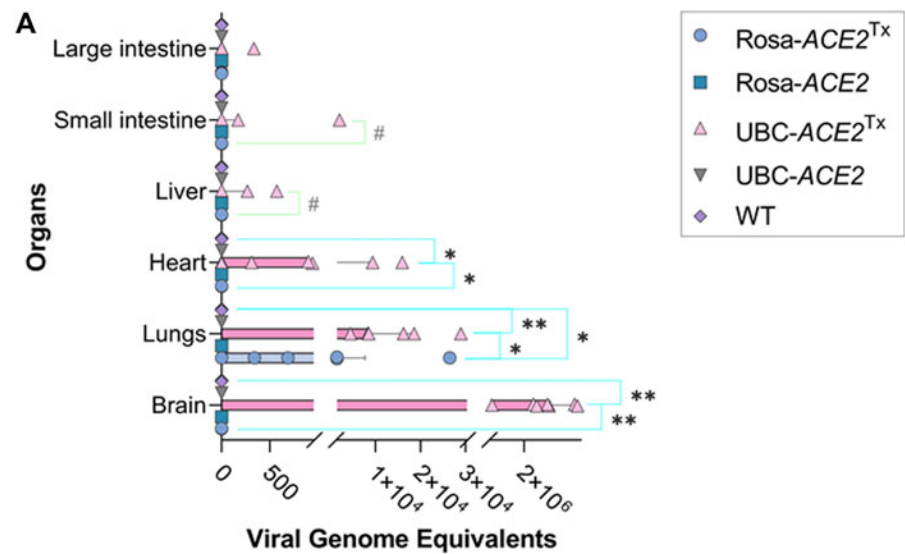
Front. Mol. Biosci., 18 January 2022 | <https://doi.org/10.3389/fmolb.2021.821506>

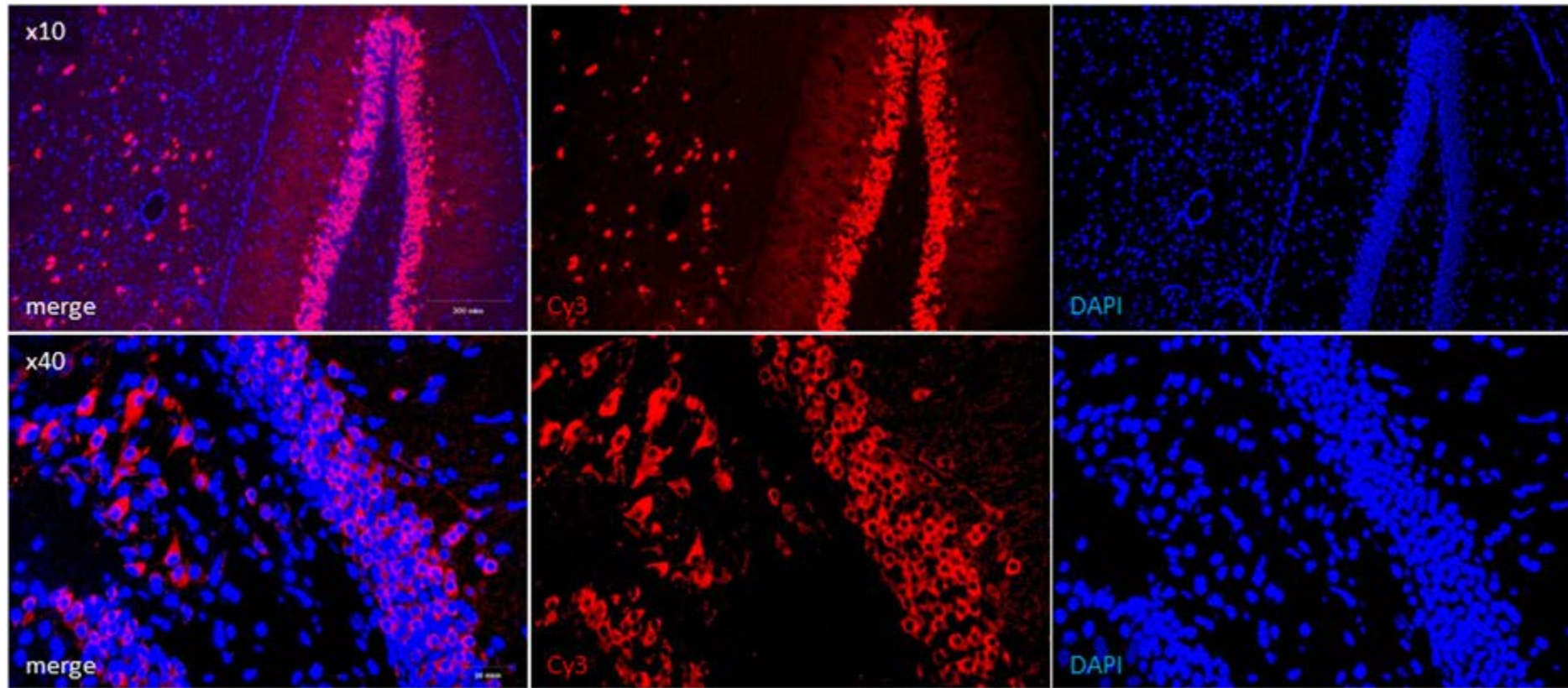
The Tissue Distribution of SARS-CoV-2 in Transgenic Mice With Inducible Ubiquitous Expression of hACE2

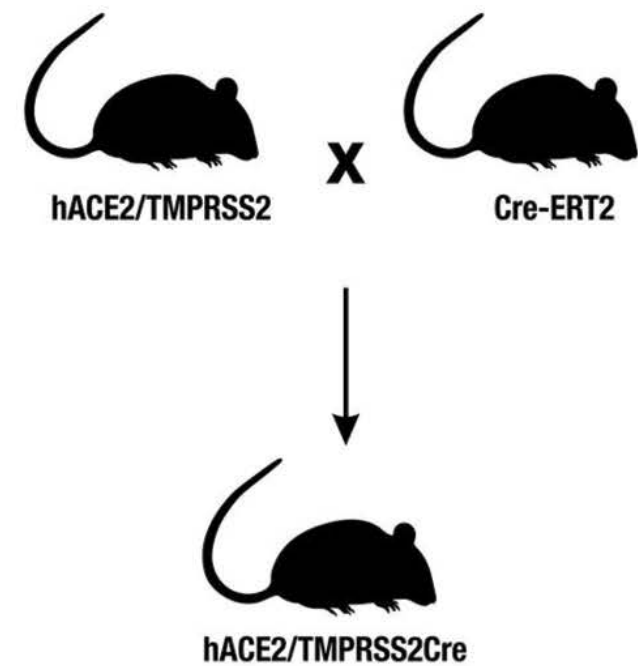
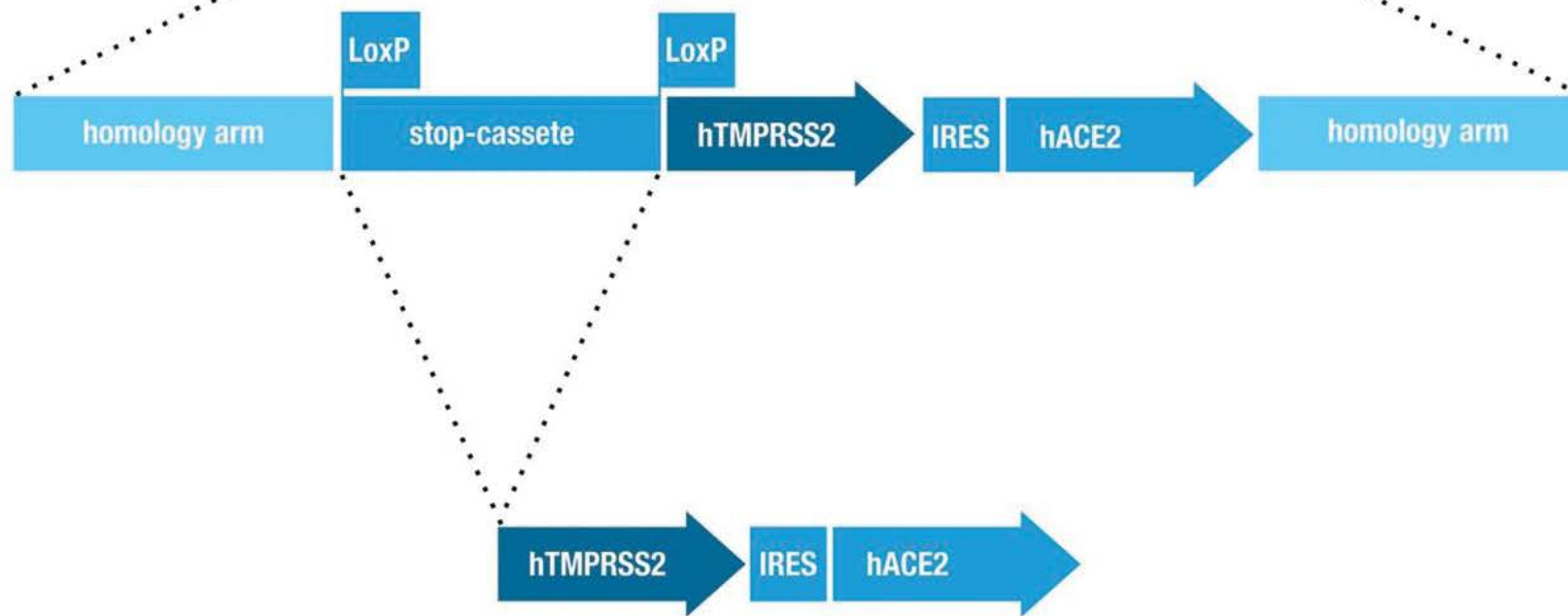
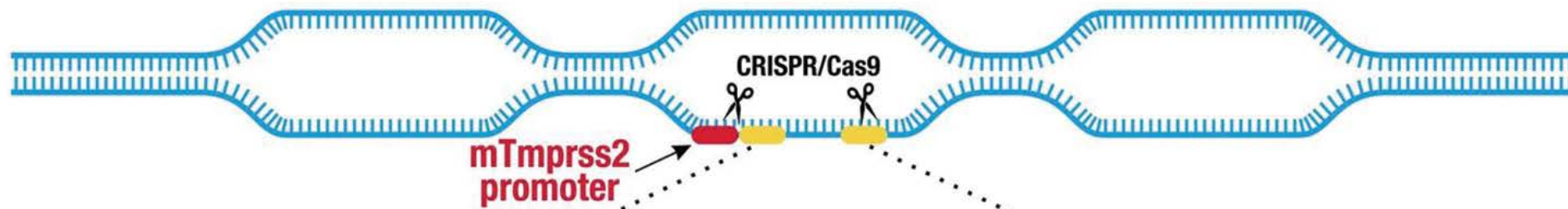
Alexander A. Dolzkiy^{1*}, Andrey S. Gudymo^{1†}, Oleg S. Taranov¹, Irina V. Grishchenko¹, Ekaterina M. Shitik¹, Dmitry Yu Prokopov¹, Vladislav O. Soldatov^{2,3}, Elvira V. Sobolevskaya¹, Sergey A. Bodnev¹, Natalia V. Danilchenko¹, Anastasia A. Moiseeva¹, Polina Y. Torzhkova¹, Yulia A. Bulanovich¹, Galina S. Onhonova¹, Elena K. Ivleva¹, Marina V. Kubekina², Andrey E. Belykh⁴, Tatiana V. Tregubchak¹, Alexander B. Ryzhikov¹, Elena V. Gavrilova¹, Rinat A. Maksyutov¹, Alexey V. Deykin^{2,3} and Dmitry V. Yudkin¹

B.









Спасибо за внимание!