

2022

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in silico

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NanoBRET

CXCR4 HIV

CXCR4

NanoBRET

[1] CXCR4

CXCR4

[5]

Transcription activator-like effector nuclease (TALEN) DNA

TALE

FokI

FKBP FRB

1

[2]

in vivo

ON/OFF

Homology-directed repair HDR

HDR S/G2

G1

S/G2

Cdt1

CRISPR-

Cas9

anti-CRISPR

HDR

[4]

の の

S/G2

G1

Geminin Cas9

anti-CRISPR+Cdt1

G1

G1 Cas9

HDR

anti-CRISPR

AcrIIA4

AcrIIA5

[7]

HN--1eH1wFGHHp.~~SHHH~~

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H--iHp.~~SKY~~HH

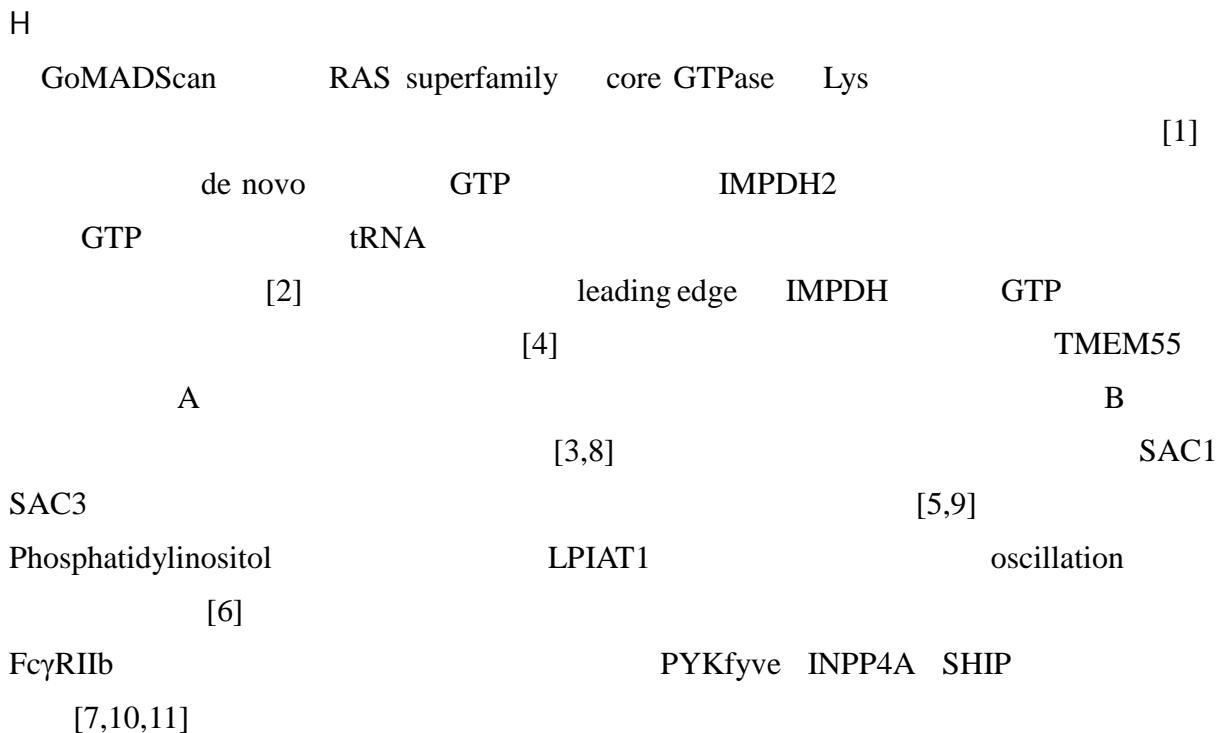
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BIOINDUSTRY

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$\tilde{\Phi}(\hat{B})$

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	(TBT)	-1 (NRF-1)	
NRF-1	NRF-1		
[3,4,7,8,11,12,15,16,23,27]			MPP ⁺
	MPP ⁺		
	[5,6,10,25]		
		[1,2,9,13,14,17-22,24,26]	
2022	TBT		
	[28,29,31,33,34]	TBT	
		[30]	
c-Jun	JunB		[32]
		[35-38]	

HN--1eH1wF6HH

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	DNA	8-hydroxygaunine	8-oxo-7,8-dihydrogaunine
G ^O		OGG1	
5'-GpA-3'	G		OGG1
		OOG1	[9,18,20]
		5'-tailed duplex	TD
editor			200
editor	TD	80	
E		[19]	
	DNA		
		<i>in vivo</i>	[13]

H

		(i)	
	<i>supF</i>		G ^O
			[21] (ii) 5'-GpA-
3'	G APOBEC3	5'-TpC-3'	C
	APOBEC3		
		APOBEC3	
	sequencer NGS		
DNA		[23]	dGTP
8-hydroxy-dGTP	8-oxo-7,8-dihydro-dGTP		
	MTH1		
		TD	

HN--1eH1wFGHH

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$\hat{\mathbb{H}}$ $\hat{\Psi}$

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pharmacokinetics (PK)/pharmacodynamics (PD)

MRSA

PK/PD

[5, 9]	[6]	[1, 2, 3, 14]	[4, 8, 12]
16]		[7, 10, 13]	[11, 15,

2022

[17, 19, 23] [18] [20, 21, 22]

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H

2018 ØFHH.ØG

H2019 ØGH

H

collagen type I α 2 chain [1]

FDEIA

P75 homologue fructose 1,6-bisaldolase [2,3]

ribosomal proteins [4]

peroxidase-1 beta-glucosidase

[5]

ELISA

 ω 5-

[6]

[7]

[8]

[9]

 ω 5-

1BS-18

1BS-18

 ω 5-

[10]

thiopental propofol [11]

[12]

[13]

-8

[14]

IgE

IgE

amplified luminescence proximity homogeneous assay

[15]

21

1BS-18

 ω 5-

[16]

[17]

HN--1eH1wF6HH

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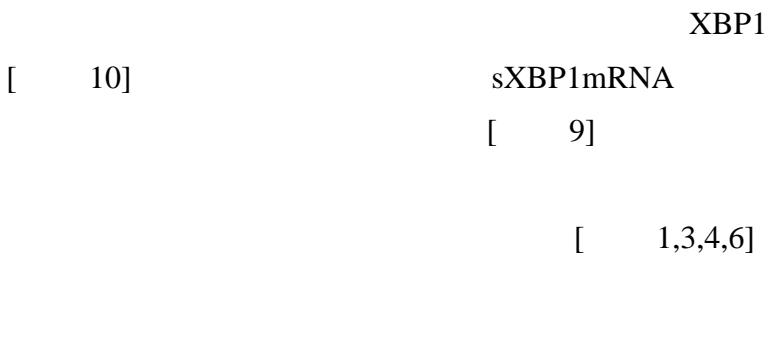
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1. , , , _____, _____

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2020

P62

[20]

Aβ

[27]

4-HNE

[12, 26]

HN--1eH1wFGHH

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2009-251958 2009 11 2 , PCT/JP2010/002691 2010 4 14 ,
5780549 2015 7 24)

Hfø FZH



H

Serratia marcescens

RND

[1]	<i>Vibrio cholerae</i>	MATE	VcmN	[2]
				[3,4]

[5-8]	S-	a1-
[9]		

<i>Vibrio cholerae</i> O1	NAG
	[10-13]

Streptomyces

[14]	D-	N ω -hydroxy-
l-arginine hydrolase	[15]	
LP28 , LY45 , PY45 , SN35N		
[16-18] 174A		
, SN35N	γ -	[19, 20]
NBRC14001	,	
lucensomycin	[21]	

AMED

Campylobacter jejuni

<i>C. jejuni</i> ST4526	pTet
	[22]

<i>Herbiconiux</i>	<i>Paenibacillus</i>	[23, 24]
	—	,

Tn10

[25]		
	NBRC14063	NBRC14836
,		

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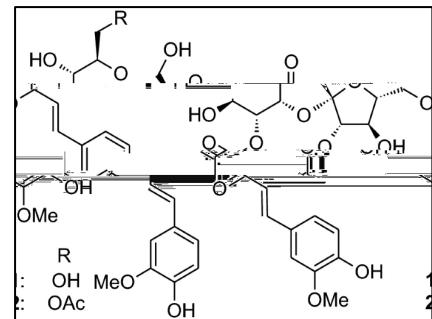
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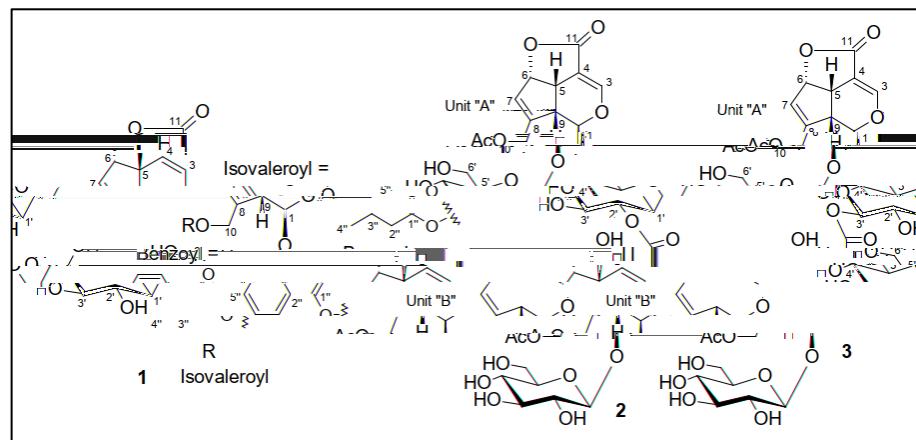
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2 Racemolide

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HN--1eH1wFGHH

1. Four new glucosides from the aerial parts of *Equisetum sylvaticum*

By: Wang, Zhichao; Tian, Yusen; Sugimoto, Sachiko; Yamano, Yoshi; Kawakami, Susumu; Otsuka, Hideaki; Matsunami; Katsuyoshi

Journal of Natural Medicines (2022), 76(4), 832-841 DOI: 10.1007/s11418-022-01643-0

2. Crotofolane-type diterpenoids: crotocascarins R-V, rearranged trinorcrotofolane: crotocascarin δ and a phorbol derivative from the leaves of *Croton cascarilloides*

Kawakami, Susumu; Inagaki, Masanori; Nishimura, Motohiro; Otsuka, Hideaki; Matsunami; Katsuyoshi; Nehira, Tatsuo; Shinzato, Takakazu

Chemical & Pharmaceutical Bulletin (2022), 70(4), 286-292 DOI: 10.1248/cpb.c21-01034

3. Omphalines A-E: ent-rosane-type diterpenoids from the madagascar endemic plant, *Omphalea oppositifolia*

Kawakami, Susumu; Kanagawa, Chieko; Rakotondraibe, Liva Harinantaina; Inagaki, Masanori; Nishimura, Motohiro; Otsuka, Hideaki; Seyama, Toshio; Matsunami; Katsuyoshi; Rakotoarisoa, Falitiana Marrino; Rakotonandrasana, Stephan Richard; et al

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4. Cytotoxic and antileishmanial triterpenes of *Tabebuia aurea* (Silva Manso) leaves

Mahmoud, Amany Hamouda; Mahmoud, Basma Khalaf; Samy, Mamdouh Nabil; Fouad, Mostafa Ahmad; Kamel, Mohamed Salah; Matsunami; Katsuyoshi

Natural Product Research (2022), 36(23), 6181-6185 DOI: 10.1080/14786419.2022.2062350

5. Cytotoxicity and chemical profiling of the Red Sea soft corals *Litophyton arboreum*

Mahmoud, Amany Hamouda; Zidan, Sabry A. H.; Samy, Mamdouh Nabil; Alian, Abdallah; Abdelmohsen, Usama Ramadan; Fouad, Mostafa Ahmed; Kamel, Mohamed Salah; Matsunami; Katsuyoshi

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6. Diterpenes and sterols from the Red Sea soft coral *Sarcophyton trocheliophorum* and their cytotoxicity and anti-leishmanial activities

Zidan, Sabry A. H.; Abdelhamid, Reda A.; Alian, Abdallah; Fouad, Mostafa A.; Matsunami; Katsuyoshi; Orabi, Mohamed A. A.

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7. Isolation of three new diterpenes from *Dodonaea viscosa*

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Chemical & Pharmaceutical Bulletin (2021), 69(1), 40-47 <https://doi.org/10.1248/cpb.c20-00327>

8. Six new phenylpropanoid derivatives from chemically converted extract of *Alpinia galanga* (L.) and their antiparasitic activities

Sulistiyowaty, Melanny Ika ; Uyen, Nguyen Hoang; Suganuma, Keisuke; Chitama, Ben-Yeddy Abel; Yahata, Kazuhide; Kaneko, Osamu ; Sugimoto, Sachiko; Yamano, Yoshi; Kawakami, Susumu ; Otsuka, Hideaki; Matsunami; Katsuyoshi

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Kawakami, Susumu; Miura, Erika; Nobe, Ayaka; Inagaki, Masanori; Nishimura, Motohiro; Matsunami; Katsuyoshi; Otsuka, Hideaki; Aramoto, Mitsunori

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16. A New Macrolactone, Racemolide Along With Seven Known Compounds With Biological Activities From Mangrove Plant, *Lumnitzera racemosa*

Gomaa Darwish, Ahmed Gomaa; Samy, Mamdouh Nabil; Sugimoto, Sachiko; Otsuka, Hideaki; Matsunami; Katsuyoshi

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Sugimoto, Sachiko; Yamano, Yoshi; Desoukey, Samar Y.; Katakawa, Kazuaki; Wanas, Amira S.; Otsuka, Hideaki; Matsunami; Katsuyoshi

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Nagashima, Kazumi; Yamano, Yoshi; Sugimoto, Sachiko; Ishiwata, Kenji; Kanuka, Hirotaka; Otsuka, Hideaki; Matsunami; Katsuyoshi

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22. Ardisiatetrons A and B: tetronic acid derivatives and triterpenes from the leaves of *Ardisia quinquegona* and their biological activity leishmania activity

Asaumi, Shintaro; Kawakami, Susumu; Sugimoto, Sachiko; Matsunami; Katsuyoshi; Otsuka, Hideaki; Shinzato, Takakazu

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Terazawa, Saori; Uemura, Yuka; Koyama, Yuka; Kawakami, Susumu; Sugimoto, Sachiko; Matsunami; Katsuyoshi; Otsuka, Hideaki; Shinzato, Takakazu; Kawahata, Masatoshi; Yamaguchi, Kentaro

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Teshima, Serika; Kawakami, Susumu; Sugimoto, Sachiko; Matsunami; Katsuyoshi; Otsuka, Hideaki; Shinzato, Takakazu

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Uemura, Yuka; Kawakami, Susumu; Sugimoto, Sachiko; Matsunami; Katsuyoshi; Otsuka, Hideaki; Shinzato, Takakazu
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Widyowati, Retno; Sugimoto, Sachiko; Yamano, Yoshi; Sukardiman; Otsuka, Hideaki; Matsunami; Katsuyoshi
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Natural Product Research (2016), 30(8), 967-972 DOI: 10.1080/14786419.2015.1088540

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ALP

ALP

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HN--1eH1wFGHH

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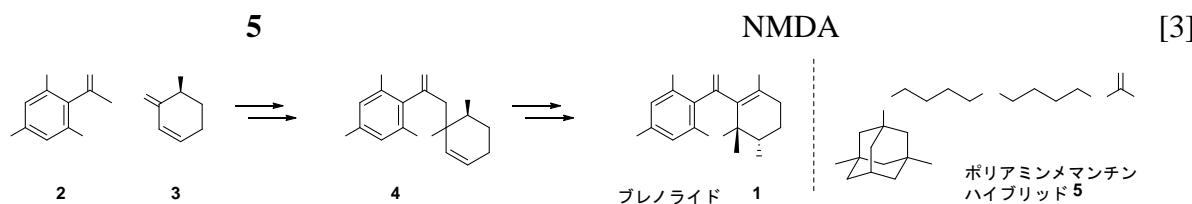
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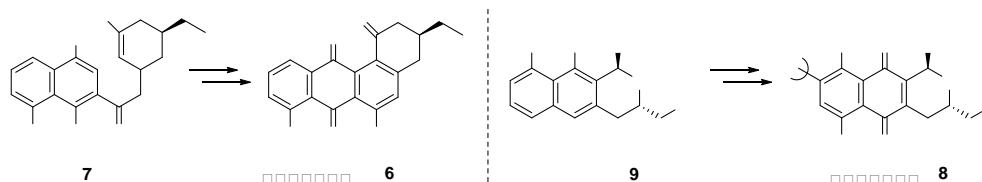
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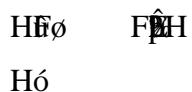
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connexin43 (Cx43)

12, 15

6, 10

Toll-like receptor 7 TLR7

resiquimod

TLR7

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18, 19, 22

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Cx43

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P-gp

P-gp

P-gp

P-gp

A549

P-gp

ERK

P-gp

PEPT

reduced folate carrier

EMT

[3,6,8,12,17-19,22,24-26,28,30]

EMT

34a p53

PAI-1

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RNA

miR-

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[33-35]

iE-DAP

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iE-DAP

NOD1

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