

PRESS RELEASE

2023 8 30

KISTEC

NIBIOHN

KISTEC

2

[1]

[2]

[3]

2

[4]

306

[5]

[6]

*Alistipes*

*Alistipes*

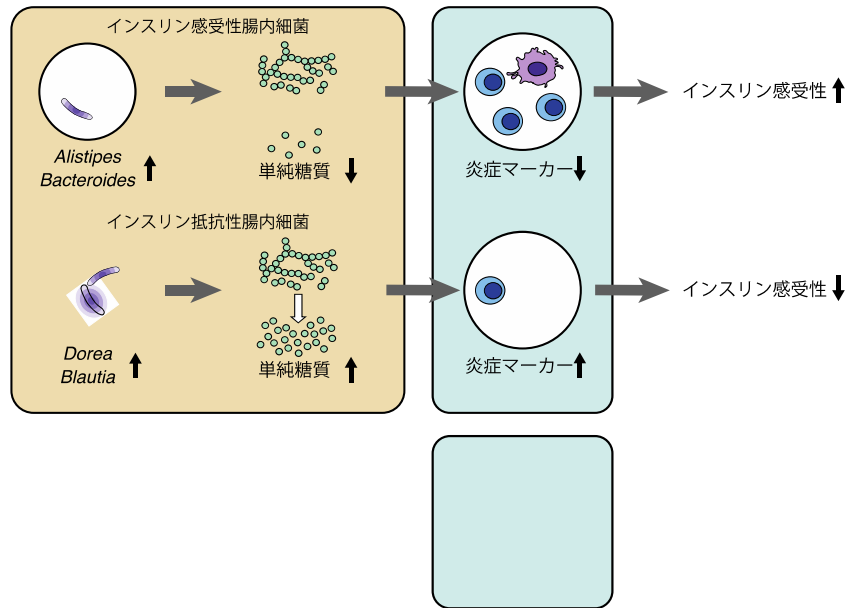
*Alistipes indistinctus*

*Nature*

8 30

8 31

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2

2

2

[7]

[8]

“

”

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2013

BMI<sup>[9]</sup> 25kg/m<sup>2</sup>  
 110mg/dL HbA1c<sup>[10]</sup> 6.0  
 100

306

HbA1c

[11]

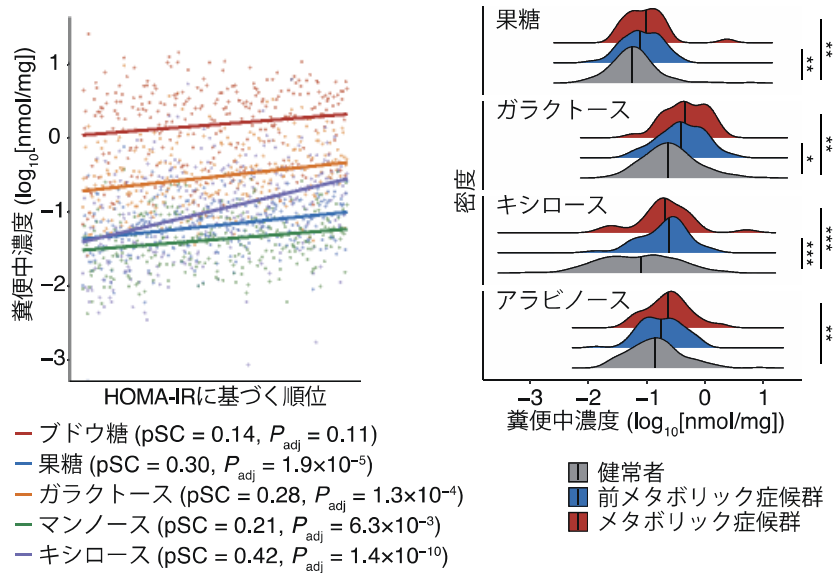
CAGE [12]

2,849

HOMA-IR<sup>[13]</sup>

BMI

1 HOMA-IR BMI TwinsUK [14]



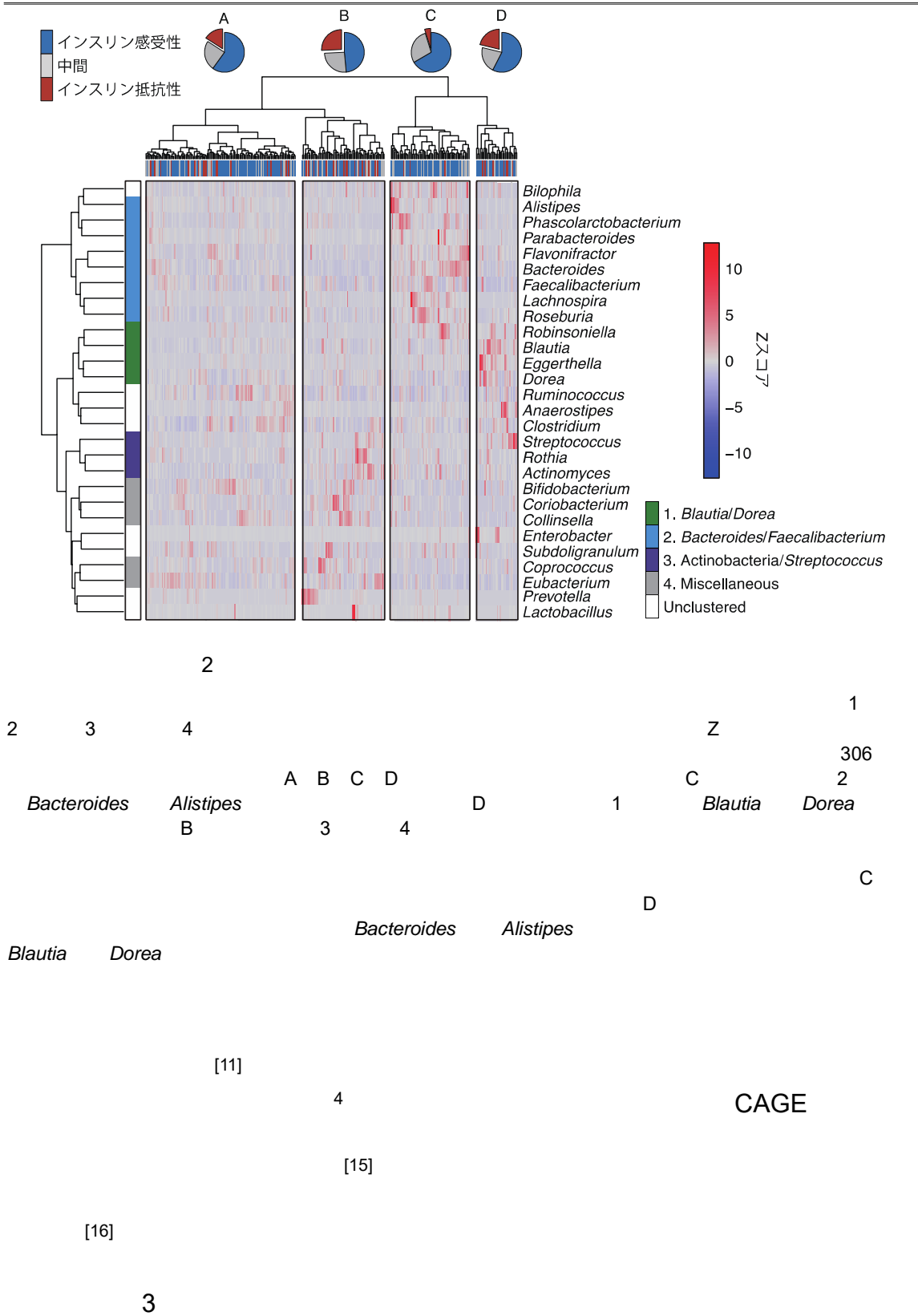
1

HOMA-IR

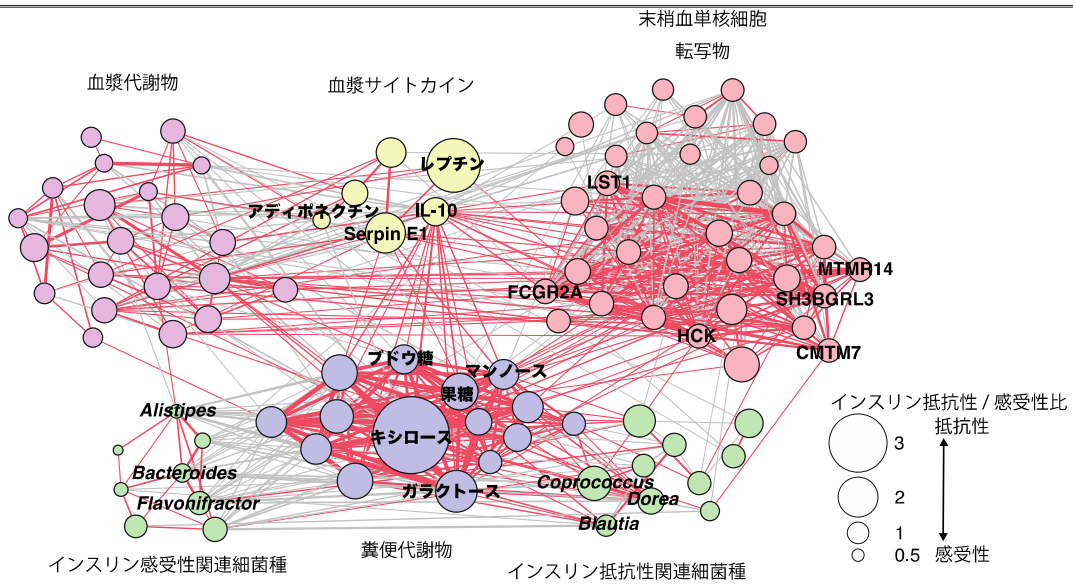
\*P<0.05 \*\*P<0.01 \*\*\*P<0.001

		2 3					2
							2
A D	306			<i>Blautia</i>	<i>Dorea</i>		2
		2		1			
		<i>Bacteroides</i>		<i>Alistipes</i>			
2		2					2
	<i>Bacteroides</i>		<i>Alistipes</i>				

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3

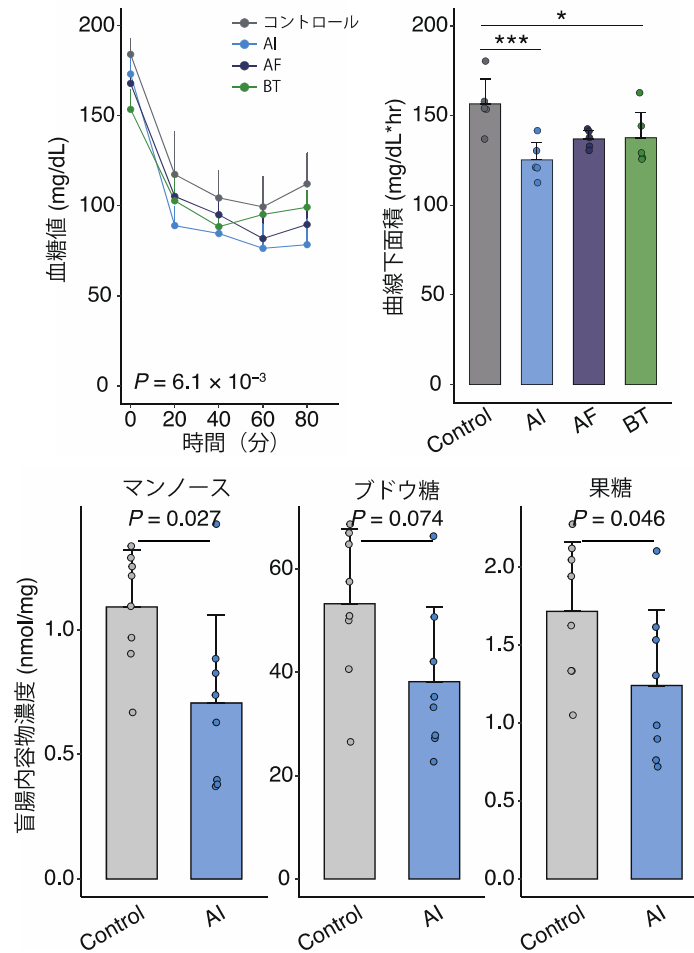
[2]

*Alistipes*  
*Alistipes indistinctus*

4

4

*Alistipes indistinctus*



#### 4 *Alistipes indistinctus*

*Alistipes indistinctus* AI *Alistipes finegoldii* AF *Bacteroides thetaiotaomicron* BT

AI

AI

- 1 Zierer, J. *et al.* The fecal metabolome as a functional readout of the gut microbiome. *Nat Genet* 50, 790–795 (2018).
- 2 Turnbaugh, P. J. *et al.* A core gut microbiome in obese and lean twins. *Nature* 457, 480–484 (2009).
- 3 Karlsson, F. H. *et al.* Gut metagenome in European women with normal, impaired and diabetic glucose control. *Nature* 498, 99–103 (2013).
- 4 Després, J. P. & Lemieux, I. Abdominal obesity and metabolic syndrome. *Nature* 444, 881–887 (2006).

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*indistinctus*

[17]

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### Gut microbial carbohydrate metabolism contributes to insulin resistance

Tadashi Takeuchi, Tetsuya Kubota, Yumiko Nakanishi, Hiroshi Tsugawa, Wataru Suda, Andrew Tae-Jun Kwon, Junshi Yazaki, Kazutaka Ikeda, Shino Nemoto, Yoshiki Mochizuki, Toshimori Kitami, Katsuyuki Yugi, Yoshiko Mizuno, Nobutake Yamamichi, Tsutomu Yamazaki, Iseki Takamoto, Naoto Kubota, Takashi Kadowaki, Erik Arner, Piero Carninci, Osamu Ohara, Makoto Arita, Masahira Hattori, Shigeo Koyasu, Hiroshi Ohno

*Nature*

DOI

10.1038/s41586-023-06466-x

[1] 2

	1	2	
	2		
1,150		90	2

[2]

2

[3]

[4]

2



[5]

[6]

[7]

DNA

[8]

[9] BMI

$$\text{BMI} = \frac{\text{kg}}{\text{m}^2}$$

BMI Body Mass Index

[10] HbA1c

1 2

[11]

[12] CAGE

RNA

CAGE Cap

Analysis Gene Expression

[13] HOMA-IR

[14] TwinsUK  
1992

[15]  
DNA                      DNA                      RNA  
DNA

[16]

[17]



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Erik Arner

Andrew Tae-Jun Kwon

Piero Carninci

JSPS

A

22H00452

15H05897

18H05431

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21K18216 C 19K08991  
AMED  
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22zf0127007  
19gm0710009h0006 JST ERATO  
JPMJER2101  
2020-A-9  
20AC5004 NAFLD / KISTEC  
AMED 7 2040  
100

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[at] @