

Molecular Immunology Profiles of Monkeys following Xenografting with the Islets and Heart of α -1, 3- galactosyltransferase Knockout Pigs

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● 게재학회지정보

이종이식학회지(Xenotransplantation), Impact factor 3.789, 영향력지수 76.93

● 연구핵심

국립축산과학원에서 개발한 바이오장기용 돼지의 이종장기로서 활용 가능성에 관한 연구

● 내용

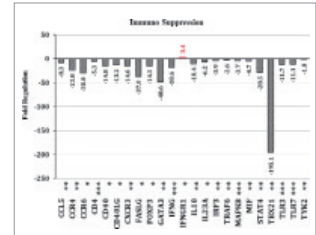
이종간 장기 이식시 발생하는 초기 면역 거부인자인 alpha Gal epitope이 제거된 돼지의 심장 혹은 췌도를 가진 원숭이에서 면역 거부 반응 인자들의 발현을 규명

● 시사점

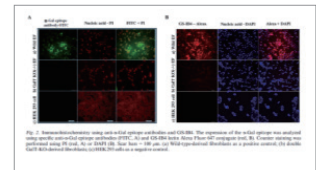
이종장기 이식이 성공을 위해서는 다중 면역 관련 유전자가 조절된 바이오장기용 돼지의 개발이 필수적이며 동시에 관련 기술의 동반 연구가 필요함이 확인됨

● 활용가능분야 및 예상파급효과

- 사람의 부족 고�형장기를 일시적으로 대체하는 대체장기로서 이용 가능
- 부족 장기로 인해 발생하는 반인륜적 반사회적 행동 감소 기대



면역억제제 처리시 선천성 · 후천성 면역 관련 된 유전자의 발현 양상을 규명



이종간 장기 이식시 사람에서 초급성 거부 반응을 유발하는 alpha Gal epitope이 형질 전환 돼지의 세포에서는 감소됨을 확인함

Gene	Log2(Fold Change)	Adjusted P-value	Log2(Fold Change)	Adjusted P-value
CD8A	1.5	0.001	1.5	0.001
CD8B	1.5	0.001	1.5	0.001
CD8C	1.5	0.001	1.5	0.001
CD8D	1.5	0.001	1.5	0.001
CD8E	1.5	0.001	1.5	0.001
CD8F	1.5	0.001	1.5	0.001
CD8G	1.5	0.001	1.5	0.001
CD8H	1.5	0.001	1.5	0.001
CD8I	1.5	0.001	1.5	0.001
CD8J	1.5	0.001	1.5	0.001
CD8K	1.5	0.001	1.5	0.001
CD8L	1.5	0.001	1.5	0.001
CD8M	1.5	0.001	1.5	0.001
CD8N	1.5	0.001	1.5	0.001
CD8O	1.5	0.001	1.5	0.001
CD8P	1.5	0.001	1.5	0.001
CD8Q	1.5	0.001	1.5	0.001
CD8R	1.5	0.001	1.5	0.001
CD8S	1.5	0.001	1.5	0.001
CD8T	1.5	0.001	1.5	0.001
CD8U	1.5	0.001	1.5	0.001
CD8V	1.5	0.001	1.5	0.001
CD8W	1.5	0.001	1.5	0.001
CD8X	1.5	0.001	1.5	0.001
CD8Y	1.5	0.001	1.5	0.001
CD8Z	1.5	0.001	1.5	0.001
CD8AA	1.5	0.001	1.5	0.001
CD8AB	1.5	0.001	1.5	0.001
CD8AC	1.5	0.001	1.5	0.001
CD8AD	1.5	0.001	1.5	0.001
CD8AE	1.5	0.001	1.5	0.001
CD8AF	1.5	0.001	1.5	0.001
CD8AG	1.5	0.001	1.5	0.001
CD8AH	1.5	0.001	1.5	0.001
CD8AI	1.5	0.001	1.5	0.001
CD8AJ	1.5	0.001	1.5	0.001
CD8AK	1.5	0.001	1.5	0.001
CD8AL	1.5	0.001	1.5	0.001
CD8AM	1.5	0.001	1.5	0.001
CD8AN	1.5	0.001	1.5	0.001
CD8AO	1.5	0.001	1.5	0.001
CD8AP	1.5	0.001	1.5	0.001
CD8AQ	1.5	0.001	1.5	0.001
CD8AR	1.5	0.001	1.5	0.001
CD8AS	1.5	0.001	1.5	0.001
CD8AT	1.5	0.001	1.5	0.001
CD8AU	1.5	0.001	1.5	0.001
CD8AV	1.5	0.001	1.5	0.001
CD8AW	1.5	0.001	1.5	0.001
CD8AX	1.5	0.001	1.5	0.001
CD8AY	1.5	0.001	1.5	0.001
CD8AZ	1.5	0.001	1.5	0.001
CD8BA	1.5	0.001	1.5	0.001
CD8BB	1.5	0.001	1.5	0.001
CD8BC	1.5	0.001	1.5	0.001
CD8BD	1.5	0.001	1.5	0.001
CD8BE	1.5	0.001	1.5	0.001
CD8BF	1.5	0.001	1.5	0.001
CD8BG	1.5	0.001	1.5	0.001
CD8BH	1.5	0.001	1.5	0.001
CD8BI	1.5	0.001	1.5	0.001
CD8BJ	1.5	0.001	1.5	0.001
CD8BK	1.5	0.001	1.5	0.001
CD8BL	1.5	0.001	1.5	0.001
CD8BM	1.5	0.001	1.5	0.001
CD8BN	1.5	0.001	1.5	0.001
CD8BO	1.5	0.001	1.5	0.001
CD8BP	1.5	0.001	1.5	0.001
CD8BQ	1.5	0.001	1.5	0.001
CD8BR	1.5	0.001	1.5	0.001
CD8BS	1.5	0.001	1.5	0.001
CD8BT	1.5	0.001	1.5	0.001
CD8BU	1.5	0.001	1.5	0.001
CD8BV	1.5	0.001	1.5	0.001
CD8BW	1.5	0.001	1.5	0.001
CD8BX	1.5	0.001	1.5	0.001
CD8BY	1.5	0.001	1.5	0.001
CD8BZ	1.5	0.001	1.5	0.001
CD8CA	1.5	0.001	1.5	0.001
CD8CB	1.5	0.001	1.5	0.001
CD8CC	1.5	0.001	1.5	0.001
CD8CD	1.5	0.001	1.5	0.001
CD8CE	1.5	0.001	1.5	0.001
CD8CF	1.5	0.001	1.5	0.001
CD8CG	1.5	0.001	1.5	0.001
CD8CH	1.5	0.001	1.5	0.001
CD8CI	1.5	0.001	1.5	0.001
CD8CJ	1.5	0.001	1.5	0.001
CD8CK	1.5	0.001	1.5	0.001
CD8CL	1.5	0.001	1.5	0.001
CD8CM	1.5	0.001	1.5	0.001
CD8CN	1.5	0.001	1.5	0.001
CD8CO	1.5	0.001	1.5	0.001
CD8CP	1.5	0.001	1.5	0.001
CD8CQ	1.5	0.001	1.5	0.001
CD8CR	1.5	0.001	1.5	0.001
CD8CS	1.5	0.001	1.5	0.001
CD8CT	1.5	0.001	1.5	0.001
CD8CU	1.5	0.001	1.5	0.001
CD8CV	1.5	0.001	1.5	0.001
CD8CW	1.5	0.001	1.5	0.001
CD8CX	1.5	0.001	1.5	0.001
CD8CY	1.5	0.001	1.5	0.001
CD8CZ	1.5	0.001	1.5	0.001
CD8DA	1.5	0.001	1.5	0.001
CD8DB	1.5	0.001	1.5	0.001
CD8DC	1.5	0.001	1.5	0.001
CD8DD	1.5	0.001	1.5	0.001
CD8DE	1.5	0.001	1.5	0.001
CD8DF	1.5	0.001	1.5	0.001
CD8DG	1.5	0.001	1.5	0.001
CD8DH	1.5	0.001	1.5	0.001
CD8DI	1.5	0.001	1.5	0.001
CD8DJ	1.5	0.001	1.5	0.001
CD8DK	1.5	0.001	1.5	0.001
CD8DL	1.5	0.001	1.5	0.001
CD8DM	1.5	0.001	1.5	0.001
CD8DN	1.5	0.001	1.5	0.001
CD8DO	1.5	0.001	1.5	0.001
CD8DP	1.5	0.001	1.5	0.001
CD8DQ	1.5	0.001	1.5	0.001
CD8DR	1.5	0.001	1.5	0.001
CD8DS	1.5	0.001	1.5	0.001
CD8DT	1.5	0.001	1.5	0.001
CD8DU	1.5	0.001	1.5	0.001
CD8DV	1.5	0.001	1.5	0.001
CD8DW	1.5	0.001	1.5	0.001
CD8DX	1.5	0.001	1.5	0.001
CD8DY	1.5	0.001	1.5	0.001
CD8DZ	1.5	0.001	1.5	0.001
CD8EA	1.5	0.001	1.5	0.001
CD8EB	1.5	0.001	1.5	0.001
CD8EC	1.5	0.001	1.5	0.001
CD8ED	1.5	0.001	1.5	0.001
CD8EE	1.5	0.001	1.5	0.001
CD8EF	1.5	0.001	1.5	0.001
CD8EG	1.5	0.001	1.5	0.001
CD8EH	1.5	0.001	1.5	0.001
CD8EI	1.5	0.001	1.5	0.001
CD8EJ	1.5	0.001	1.5	0.001
CD8EK	1.5	0.001	1.5	0.001
CD8EL	1.5	0.001	1.5	0.001
CD8EM	1.5	0.001	1.5	0.001
CD8EN	1.5	0.001	1.5	0.001
CD8EO	1.5	0.001	1.5	0.001
CD8EP	1.5	0.001	1.5	0.001
CD8EQ	1.5	0.001	1.5	0.001
CD8ER	1.5			