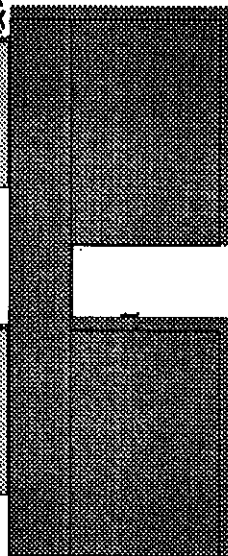


#	coordinate	Spot Intensity		Ratio	Difference	RATIO		Gene	Genbank #
		C	3			UP	DOWN		
106	G31	15	6	Down	-9				
107	G43	9	17	1.89	8	1.9		? ornithine decarboxylase (ODC) ? cytoplasmic beta-actin (ACTB)	J04791; X07944 V01217

N/C = not calculated due to manually-determined inconsistencies (signal bleeding, background, etc.) in one or both spots

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Date (JP)
#REF!

Atlas Rat 1.2k Array

#	Spot Intensity		Ratio	Difference	RATIO ? = weak signal (low trust)		Gene	Genbank #
	coordinate	C			7	UP		
1	A01c	15	34	2.27	19	2.3	leukocyte common antigen precursor (LCA); CD45 antigen; T200; PTPRC	M10072
2	A01i	128	58	0.45	-70	2.2	integral membrane protein E16 (TA1); L-type amino acid transporter 1	U00995
3	A02d	35	7	Down	-28		P-selectin precursor; granule membrane protein 140 (GMP-140); PADGEM; CD62P; leukocyte-endothelial cell adhesion molecule 3 (LECAM3)	L23088
4	A02f	75	18	0.24	-57	4.2	ecto-ATPase precursor; cell-CAM 105 (C-CAM 105); ATP-dependent taurocholate-carrier protein; GP110	M92848
5	A03i	22	52	2.36	30	2.4	MAL; T-lymphocyte maturation-associated protein; myelin protein MVP17	U31367
6	A04g	65	17	0.26	-48	3.8	CD28, T-cell surface antigen	X55288
7	A05a	12	3	Down	-9	?	glutamyl aminopeptidase A	S73583
8	A05c	11	3	Down	-8	?	Myc-Max-interacting tumor suppressor (MXI1)	AF003008
9	A05i	7	20	Up	13	Up	I-kB (I-kappa B) alpha chain; RL/IF-1 gene product	X63594
10	A05n	9	17	1.89	8	1.9	New England Deaconess transcription factor	U09229
11	A06i	69	39	0.57	-30	1.8	Id-3; DNA-binding protein inhibitor; HLH protein	D10864
12	A07b	20	11	0.55	-9	1.8	G1/S-specific cyclin D2 (CCND2); vin-1 proto-oncogene	D16308
13	A07f	51	28	0.55	-23	1.8	cyclin-dependent kinase 2 alpha (CDK2-alpha) + cyclin-dependent kinase 2-beta (CDK2-beta)	D28753 + D28754
14	A07h	65	20	0.31	-45	3.3	GAK; cyclinG-associated kinase	D38560
15	A08a	4	13	Up	9	Up	proliferating cell nuclear antigen (PCNA); cyclin	Y00047
16	A08d	146	306	2.10	160	2.1	microglobulin; beta-2-microglobulin + prostaglandin receptor F2a	X16956 + U26663
17	A08k	4	11	Up	7	Up	ATPase, transitional endoplasmic reticulum	U11760
18	A09b	148	58	0.39	-90	2.6	plasma kallikrein (rPK)	M58590

Spot Intensity ? = weak signal (low trust)

#	coordinate	C	7	Ratio	Difference	UP	DOWN	Gene	Genbank #
19	A09g	36	20	0.56	-16		1.8	proteasome delta subunit precursor; macropain delta; multicatalytic endopeptidase complex delta; proteasome subunit Y; proteasome subunit 5; PSMB6	D10754
20	A09i	16	28	1.75	12	1.8		proteasome component C13 precursor; macropain subunit C13; multicatalytic endopeptidase complex subunit C13; PSMB8	D10729
21	A10e	34	17	0.50	-17		2.0	Von Hippel-Lindau tumor suppressor protein (VHL)	U14746
22	A10f	100	52	0.52	-48		1.9	Wilms' tumor protein (WT1); tumor suppressor	X69716
23	A10m	39	17	0.44	-22		2.3	cysteine-rich protein 2 (CRP2); ESP1	D17512
24	A10n	4	11	Up	7	Up		Rb; pp105; retinoblastoma susceptibility-associated protein; tumor suppressor gene; cell cycle regulator	D25233
25	A11b	10	17	1.70	7	1.7		p21; cip1; waf1	L41275
26	A12d	373	126	0.34	-247		3.0	casein kinase II beta subunit (CKII); CSNK2B; CK2N); phosvitin	L15619
27	A12e	16	7	Down	-9			Pim-1 proto-oncogene	X63675
28	A12f	58	9	Down	-49			c-raf proto-oncogene; raf-1	M15427
29	A13b	168	295	1.76	127	1.8		Sky proto-oncogene; Tyro3; Rse; Dtk	D37880
30	A13g	42	20	0.48	-22		2.1	adenomatous polyposis coli protein (APC)	D38629
31	A13i	342	77	0.23	-265		4.4	neurofibromin; neurofibromatosis protein type I (NF1); GTPase stimulatory protein	D45201
32	A14d	64	34	0.53	-30		1.9	microsomal glutathione S-transferase (GST12; MGST1)	J03752
33	A14g	15	30	2.00	15	2.0		glutathione S-transferase P subunit; GST subunit 7 pi (GST7-7)	X02904
34	B01a	13	3	Down	-10			P450 IB1; C3H cytochrome P450; CYP1B1	U09540
35	B01c	22	3	Down	-19			cytochrome P450 VII (CYP7); cholesterol 7-alpha-monooxygenase; cholesterol 7-alpha-hydroxylase	J05460; J05509
36	B01i	30	17	0.57	-13		1.8	organic cation transporter 2 (OCT2)	D83044
37	B02e	21	9	Down	-12			glucose transporter 3	U17978
38	B03a	144	24	0.17	-120		6.0	sodium channel SHRSPHD, beta subunit, epithelial	U35174
39	B03c	554	295	0.53	-259		1.9	cyclic nucleotide-activated channel, olfactory	X55519
40	B04g	30	17	0.57	-13		1.8	sodium channel I	M22253
41	B05f	38	15	0.39	-23		2.5	voltage-dependent L-type calcium channel alpha 1D subunit (CACNA1D); L-type calcium channel alpha 1 polypeptide isoform 2 (CCHL1A2); rat brain class D (RBD); CACH3; CACN4	M57682
42	B06c	127	58	0.46	-69		2.2	potassium channel RB-IRK2, inward rectifier	X78461
43	B08f	116	47	0.41	-69		2.5	sodium/hydrogen exchange protein 1	M85299

Spot Intensity

RATIO ? = weak signal (low trust)

#	coordinate	C	7	Ratio	Difference	UP	DOWN	Gene	Genbank #
44	B09c	42	17	0.40	-25		2.5	sodium/dicarboxylate cotransporter	U51153
45	B09d	15	3	Down	-12			sodium/calcium exchanger NCX3	U53420
46	B09e	209	83	0.40	-126		2.5	neurotransmitter transporter, sodium dependent	L22022
47	B09f	193	68	0.35	-125		2.8	taurine transporter	M96601
48	B09h	28	62	2.21	34	2.2		SYNAPTIC VESICLE PROTEIN 2B	L10362
49	B10b	124	54	0.44	-70		2.3	sodium/potassium-transporting ATPase beta 1 subunit (ATP1B1)	J02701
50	B10f	15	3	Down	-12			potassium-transporting ATPase beta subunit (ATP4B); proton pump; gastric H+/K+ ATPase beta subunit	M55655; J05565
51	B10k	72	41	0.57	-31		1.8	ATPase, copper-transporting, Menkes protein	U08344
52	B11e	51	24	0.47	-27		2.1	urea transporter	U77971
53	B12l	20	11	0.55	-9		1.8	synapsin 2A	M27925
54	B14c	14	28	2.00	14	2.0		epidermal fatty acid-binding protein (E-FABP); cutaneous fatty acid-binding protein (C-FABP); DA11; FABP5	U13253
55	B14k	92	24	0.26	-68		3.8	synaptotagmin II	M64488
56	B14n	11	3	Down	-8			? syntaxin 4 (STX4)	L20821
57	C01a	6	13	Up	7	Up		? syntaxin 5 (STX5)	L20822
58	C01k	131	255	1.95	124	1.9		NEURODEGENERATION ASSOCIATED PROTEIN 1; downregulated by axotomy	D32249
59	C02c	40	3	Down	-37			type 1 hexokinase (HK1); brain hexokinase	J04526; J03228
60	C03m	202	64	0.32	-138		3.2	glucose-6-phosphate dehydrogenase	X07467
61	C05c	25	7	Down	-18			mitochondrial carnitine O-palmitoyltransferase I liver isoform (CPT I-L)	L07736
62	C05h	30	54	1.80	24	1.8		perilipin A/B (PERIA/PERIB); lipid droplet-associated proteins A/B	L26043
63	C06c	51	20	0.39	-31		2.5	fatty acid amide hydrolase	U72497
64	C07d	24	11	0.46	-13		2.2	cytochrome P450 3A1 (CYP3A1); P450-PCN1	M10161
65	C07f	49	22	0.45	-27		2.2	cytochrome P450 4A3 (CYP4A3); lauric acid omega-hydroxylase; P450-LA-omega 3	M33936
66	C07j	34	13	0.38	-21		2.6	cytochrome P-450 4F4	U39206
67	C08h	12	5	Down	-7			? mitochondrial adenylate kinase 2 (AK2); ATP/AMP transphosphorylase	D13061
68	C10i	8	17	2.13	9	2.1		? aldehyde dehydrogenase 2, mitochondrial, liver	X14977
69	C10k	15	7	Down	-8			? dopamine beta-hydroxylase	L12407

Spot Intensity ? = weak signal (low trust) RATIO ? = weak signal (low trust) Gene Genbank #

#	coordinate	C	7	Ratio	Difference	UP	DOWN	Gene	Genbank #
70	C10n	4	13	Up	9	Up		? nitric oxide synthase 3	U02534
71	C11a	4	11	Up	7	Up		? 17-kDa ubiquitin-conjugating enzyme E2 (UBE2B); ubiquitin-protein ligase; ubiquitin carrier protein; HR6B	M62388
72	C11d	58	122	2.10	64	2.1		60S ribosomal protein L44; L36A	M19635
73	C11e	152	272	1.79	120	1.8		40S ribosomal protein S12	M18547
74	C11f	19	39	2.05	20	2.1		ribosomal protein S4	X14210
75	C11g	97	170	1.75	73	1.8		ribosomal protein L11	X62146; S37517
76	C11j	46	102	2.22	56	2.2		ribosomal protein L12	X53504
77	C11k	101	175	1.73	74	1.7		S19; 40S ribosomal protein S19	X51707
78	C11l	111	206	1.86	95	1.9		60S ribosomal protein L21	M27905
79	C12a	30	51	1.70	21	1.7		40S ribosomal protein S17 (RPS17)	K02933
80	C12c	3	15	Up	12	Up		eukaryotic translation initiation factor 5 (EIF-5)	L11651
81	C12h	9	18	2.00	9	2.0		? bcl-2-associated death promoter (BAD)	AF003523
82	C13a	3	11	Up	8	Up		? P2X purinoceptor 1; ATP receptor P2X1; purinergic receptor; RP-2 protein	X80477
83	C14b	335	686	2.05	351	2.0		mannose-6-phosphate/insulin-like growth factor II receptor (M6P/IGFR2)	U59809
84	C14c	6	15	Up	9	Up		? platelet-derived growth factor alpha receptor (PDGFRa)	M63837
85	C14i	4	11	Up	7	Up		? transforming growth factor-beta II receptor precursor (TGF-beta II receptor; TGFB2)	L09653
86	C14k	24	7	Down	-17			Rek4 Eph-related receptor tyrosine kinase; ephrin type-A receptor 3; EphA3; similar to Etk1	U69278
87	D01b	77	132	1.71	55	1.7		platelet-derived growth factor receptor, alpha	Z14119
88	D01h	116	62	0.53	-54		1.9	G-protein coupled receptor, putative, GPR41	U92802
89	D02e	37	18	0.49	-19		2.1	estrogen receptor beta (ER-beta); ESR2; NR3A2	U57439
90	D03d	8	15	1.88	7	1.9		? D(4) dopamine receptor; D(2C) dopamine receptor	M84009
91	D03e	15	26	1.73	11	1.7		kappa-type opioid receptor (KOR-1)	D16829
92	D03i	5	15	Up	10	Up		delta-type opioid receptor (DOR-1); opioid receptor A	U00475
93	D03k	16	3	Down	-13			gastrin-releasing peptide receptor (GRP-R); GRP-preferring bombesin receptor	X56661
94	D05a	50	26	0.52	-24		1.9	prostaglandin E2 receptor EP2 subtype (PGE receptor EP2 subtype; PTGER2); prostanoil EP2 receptor	U94708

Spot Intensity ? = weak signal (low trust) RATIO UP DOWN Gene Genbank #

#	coordinate	C	7	Ratio	Difference	UP	DOWN	Gene	Genbank #
95	D05f	14	5	Down	-9			prostaglandin E2 receptor EP3 subtype (PGE receptor EP3 subtype; PTGER3); prostanoid EP3 receptor	D14869
96	D05l	77	34	0.44	-43		2.3	5-hydroxytryptamine 1F receptor (5HT1F; HTR1F); serotonin receptor	L05596
97	D06c	311	126	0.41	-185		2.5	alpha 2C adrenergic receptor (ADRA2C); alpha 2C adrenoceptor	M58316
98	D06f	28	13	0.46	-15		2.2	somatostatin receptor 2	M93273
99	D06k	55	28	0.51	-27		2.0	cannabinoid receptor 1, neuronal	U40395
100	D07f	9	20	2.22	11	2.2		5-hydroxytryptamine (serotonin) receptor 5B; 5HT5b	L10073
101	D10m	123	71	0.58	-52		1.7	acetylcholine receptor alpha	X74832
102	D11b	19	9	Down	-10			acetylcholine receptor beta	X74833
103	D11k	11	3	Down	-8			transmembrane receptor UNC5H2	U87306
104	D11l	556	255	0.46	-301		2.2	glycine receptor, alpha 2A subunit, inhibitory	X61159
105	D11m	18	9	Down	-9			NEURONAL PENTRAXIN RECEPTOR	AF005099
106	D12b	27	71	2.63	44	2.6		Non-processed neurexin II-beta major, NEUREXIN II-BETA-A PRECURSOR + Non-processed neurexin II-alpha, NEUREXIN II-ALPHA-B PRECURSOR	M96377+ M96376
107	D12j	12	3	Down	-9			glutamate metabotropic receptor 2 (mGluR2)	M92075
108	D14d	18	34	1.89	16	1.9		tumor necrosis factor alpha precursor (TNF-alpha; TNFA); cachectin	X66539
109	D14i	16	30	1.88	14	1.9		granulocyte colony stimulating factor	U37101
110	D14m	72	17	0.24	-55		4.2	platelet-derived growth factor A-chain (PDGF-A)	L06894
111	E02f	30	11	0.37	-19		2.7	cytokine-induced neutrophil chemoattractant 2, beta	D21095
112	E03h	20	11	0.55	-9		1.8	muscle 6-phosphofructokinase (PFKM); phosphofructokinase 1; phosphohexokinase; phosphofructo-1-kinase A	U25651
113	E03k	7	18	Up	11	Up		C-type natriuretic peptide precursor (CNP; NPPC)	D90219
114	E04f	38	73	1.92	35	1.9		corticotropin-releasing hormone	M54987
115	E06d	2	11	Up	9	Up		early growth response protein 1 (EGR1); nerve growth factor-induced protein A (NGFI-A)	M18416; J04154
116	E06l	59	28	0.47	-31		2.1	arrestin C	U03628
117	E07n	25	13	0.52	-12		1.9	c-Jun N-terminal kinase 3 (JNK3); stress-activated protein kinase beta (SAPK-beta)	L27128
118	E09l	70	24	0.34	-46		2.9	casein kinase 1, gamma subunit, isoform 1	U22296
119	E10f	8	15	1.88	7	1.9		CamK II; calcium/calmodulin-dependent protein kinase brain type II beta	M16112
120	E12c	125	51	0.41	-74		2.5	protein phosphatase 2A, regulatory subunit B	M83298

Spot Intensity ? = weak signal (low trust)

#	coordinate	Spot Intensity		Ratio	Difference	RATIO		Gene	Genbank #
		C	7			UP	DOWN		
121	E12d	63	35	0.56	-28		1.8	protein tyrosine phosphatase, striatum enriched	S49400;
122	E12f	20	7	Down	-13			protein tyrosine phosphatase PTPase	M65159
123	E13d	92	54	0.59	-38		1.7	transducin beta-2 subunit; GTP-binding protein G(i)/G(s)/G(t) beta subunit 2 (GNB2)	M33962
124	E13k	55	22	0.40	-33		2.5	guanine nucleotide-binding protein G(i)/G(s)/G(o) gamma-7 subunit (GNG7; GNGT7)	U34959
125	E14c	5	13	Up	8	Up		? GTP-binding protein (G-alpha-8), GUANINE NUCLEOTIDE-BINDING PROTEIN G(S), ALPHA SUBUNIT (ADENYLATE CYCLASE-STIMULATING)	L23219
126	E14e	19	34	1.79	15	1.8		Rab-3a ras-related protein	M17525
127	E14j	20	11	0.55	-9		1.8	rab15, ras related GTPase	X06889
128	E14m	78	24	0.31	-54		3.3	G protein, gamma 5 subunit	M83679
129	F01a	3	11	Up	8	Up		? rab4B, ras related GTPase	M95780
130	F01e	63	15	0.24	-48		4.2	RaiGDSB; GTP/GDP dissociation stimulator for a ras-related GTPase	X78605
131	F01g	42	5	Down	-37			RIN1; interacts directly with Ras and competes with Raf1	L07925
132	F01h	12	5	Down	-7			? phospholipase C gamma 1 9PLC gamma-1); PLC-II; PLC-148	U80076
133	F01i	16	7	Down	-9			? phospholipase C gamma 2 (PLC gamma-2); PLC-IV	J03806
134	F02a	13	22	1.69	9	1.7		calcium-dependent phospholipase A2 precursor (PLA2); phosphatidylcholine 2-acylhydrolase (PLA2-10; PLA2G5)	J05155
135	F02e	16	7	Down	-9			? inositol 1,4,5-trisphosphate 3-kinase receptor 1	U03763
136	F02h	121	51	0.42	-70		2.4	phospholipase C beta 3 (PLC-beta 3)	X74227
137	F02k	21	9	Down	-12			cAMP phosphodiesterase 4A; DPDE2; dunce Drosophila homolog E2	M99567
138	F03c	14	7	Down	-7			? olfactory guanylyl cyclase D precursor (GUCY2D)	L27057
139	F03g	40	22	0.55	-18		1.8	Adenylyl cyclase (olfactive type) type III	L37203
140	F03k	20	9	Down	-11			calretinin	M55075
141	F03l	23	3	Down	-20			Calcineurin B subunit, CALCINEURIN B SUBUNIT ISOFORM 1 (PROTEIN PHOSPHATASE 2B REGULATORY SUBUNIT)	X66974
142	F04m	9	20	2.22	11	2.2		mothers against DPP protein rat homolog 1 (MAD1)	L03554
143	F05e	10	20	2.00	10	2.0		presenilin 1 (PSNL1; PSEN1; PS1); S182 protein	U66478
144	F05g	18	7	Down	-11			SHPS-1 receptor-like protein with SH2 binding site	D82363
145	F06a	10	20	2.00	10	2.0		ADP-ribosylation factor 5 (ARF5)	D85183
146	F06d	23	9	Down	-14			protein kinase C-binding protein nel homolog 1	L12384
									U48245

Spot Intensity

RATIO ? = weak signal (low trust)

#	coordinate	C	7	Ratio	Difference	UP	DOWN	Gene	Genbank #
147	F06f	81	26	0.32	-55		3.1	GAP-associated protein (p190).	M94721
148	F06g	65	37	0.57	-28		1.8	phospholipase A-2-activating protein (PLAP)	U17901
149	F07i	40	75	1.88	35	1.9		trypsinogen 4	X15679
150	F07n	181	79	0.44	-102		2.3	mast cell protease 1 precursor (RMCP-1)	U67915
151	F08n	51	100	1.96	49	2.0		stromelysin 3; matrix metalloproteinase 11 (MMP11)	U46034
152	F09g	11	35	3.18	24	3.2		cathepsin L	Y00697
153	F10a	10	18	1.80	8	1.8		proteasome iota subunit; macropain iota subunit; multicatalytic endopeptidase complex iota subunit; 27-kDa prosomal protein (PROS27); PSMA6	D10755
154	F10n	6	13	Up	7	Up		? tissue inhibitor of metalloproteinase-1 (TIMP-1)	L31883
155	F11a	4	13	Up	9	Up		? tissue inhibitor of metalloproteinase 2 (TIMP2)	L31884
156	F12a	6	13	Up	7	Up		? leukocyte common antigen-related tyrosine phosphatase (LAR)	L11586
157	F12d	23	39	1.70	16	1.7		Tyrosine phosphatase-like protein; negative regulator of PTases in neuronal tissues, RAT PHEOCHROMOCYTOMA-DERIVED PROTEIN TYROSINE PHOSPHATASE-LIKE PROTEIN (EC 3.1.3.48)	D38222
158	F12j	56	17	0.30	-39		3.3	proteinase activated receptor 2 precursor (PAR-2)	U61373
159	F13b	19	5	Down	-14			G protein coupled receptor, putative, GPR12	U12184
160	F13c	49	20	0.41	-29		2.5	G protein coupled receptor 19	U65417
161	F13h	200	109	0.55	-91		1.8	Ear-3; V-erbA related protein; COUP-TFI transcription factor	U10995
162	F13m	3	13	Up	10	Up		calponin, acidic	U06755
163	F13n	19	34	1.79	15	1.8		cofilin	X62908
164	F14d	17	5	Down	-12			telomerase protein component 1 (TLP1)	U89282
165	F14k	34	15	0.44	-19		2.3	Sca1; spinocerebellar ataxia type 1	X91619
166	F14m	9	34	3.78	25	3.8		interferon induced protein	X61381
167	G27	33	64	1.94	31	1.9		glyceraldehyde 3-phosphate dehydrogenase (GAPDH)	M17701
168	G43	9	18	2.00	9	2.0		? cytoplasmic beta-actin (ACTB)	V01217

N/C = not calculated due to manually-determined inconsistencies (signal bleeding, background, etc.) in one or both spots

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厚生労働科学研究費補助金（長寿科学総合研究事業）

（分担）研究報告書

老化に伴う嗅覚障害に対する治療法の開発に関する研究

嗅覚障害の治療

分担研究者 阪上 雅史 兵庫医科大学耳鼻咽喉科学教室 教授

A. 研究目的

嗅覚障害患者における嗅覚障害の原因について、各年代別に検討し高齢者における嗅覚障害の原因の特徴を検討することである。

B. 研究方法

平成7年6月から平成14年12月までに、兵庫医科大学耳鼻咽喉科嗅覚外来を受診した嗅覚障害患者を対象とした。検討項目は、鼻内所見、特に嗅裂針状鏡を用いた嗅裂の観察を行うこと。鼻単純レントゲン、あるいは必要に応じてCT、MRIによる副鼻腔、頭蓋内病変の検索も行った。

C. 研究結果

上記期間に、当科外来を受診した嗅覚障害患者は、552例で10歳未満1例、10-19歳7例、20-29歳31例、30-39歳45例、40-49歳81例、50-59歳159例、60-69歳136例、70-79歳80例、80歳以上14例であった。また、嗅覚障害原因内訳では（別紙 図1）、若年層で慢性鼻炎、頭部外傷後嗅覚障害が多く、中高年層で、感冒罹患後嗅覚障害が増加している。さらに60歳以上では、原因不明例も多かった。

（別紙資料参照）

D. 考察

高齢者嗅覚障害の原因では、原因不明例が多く、これらのなかでは加齢による障害が少なからず含まれていると思われる。また感冒後障害も少ない。逆に、若年層では、鼻副鼻腔炎、頭部外傷後例が多く、高齢者嗅覚障害は嗅神経性嗅覚障害を来すことが多いと考えられた。

研究成果

- Megumi Fujii, Keijiro Fukazawa, Sadamu Takayasu and Masafumi Sakagami
Olfactory dysfunction in patients with head trauma. *Auris Nasus Larynx* 29:35-40, 2002.
- Megumi Fujii, Keijiro Fukazawa, Chihiro Hatta, Hiroki Yasuno and Masafumi Sakagami
Olfactory acuity after total laryngectomy
Chemical Senses 27:117-121, 2002.

研究成果の刊行に関する一覧表

雑誌

発表者氏名	論文タイトル名	発表誌名	巻号	ページ	出版年
Nibu K	Introduction to Olfactory Neuroepithelium	Microsc Res Tech	58	133-134	2002
Inaki K	Molecular-feature domains with posterodorsal-anteroventral polarity in the symmetrical sensory maps of the mouse olfactory bulb: mapping of odourant-induced Zif268 expression.	Eur J of Neurosci	15	1563-1574	2002
Sugitani Y	Brn-1 and Brn-2 share crucial roles in the production and positioning of mouse neocortical neurons	Genes and Development	16	1760-1765	2002
Nagao H	Grouping and representation of odourant receptors in domains of the olfactory bulb sensory map	Microsc Res Tech	58	168-175	2002
Kempermann G	Early determination and long-term persistence of adult-generated new neurons in the hippocampus of mice	Development	130	391-399	2002
Taniguchi M	Distorted odor maps in the olfactory bulb of semaphorin 3A deficient mice	J Neurosci	23	1390-1397	2003
Treloar HB	Inverse expression of OCAM in a subset of olfactory axons and a subset of mitral/tufted cells in the developing rat olfactory bulb	J Comp Neurol	458	389-403	2003
Mori K	Grouping of odourant receptors: odour maps in the mammalian olfactory bulb	Biochem Soc Trans	31	134-136	2003
Ohta Y	High-dose glucocorticoids inhibit proliferation of rat olfactory epithelium	Annal Otol Rhinol Laryngol	111	909-911	2002
Ishimoto S	Induction of growth factor expression is reduced during healing of typanic membrane perforations in glucocorticoid-treated rats. Ann Otol Rhinol Laryngol	Annal Otol Rhinol Laryngol	111	947-953	2002

Ishimoto S	Direct application of keratinocyte growth factor, basic fibroblast growth factor and transforming growth factor- α during healing of tympanic membrane perforation in glucocorticoid-treated rats	Acta Otolaryngol	122	468-473	2002
Fujii M	Olfactory dysfunction in patients with head trauma	Auris Nasus Larynx	29	35-40	2002
Fujii M	Olfactory acuity after total laryngectomy Olfactory acuity	Chemical Senses	27	117-121	2002

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