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Education:

- Research Assistant Professor, Genetics and Neurodevelopment, The Rockefeller University, 2004-2007
- Postdoctoral Fellow/Res. Associate, Developmental Biology and Neurogenetics, The Rockefeller University, 1995-2004

- Ph.D., Integrated program in Cellular, Molecular, and Biophysical Studies, Center for Neurobiology and Behavior,
Columbia University College of Physicians and Surgeons, 1989-1995
- B.A. Biochemistry, University of Pennsylvania, 1982-1986
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Research Interest:

To understand how Humans perceive odors.

- [MouSensor: A versatile genetic platform creating super sniffer mice to study human odor coding, Cell Reports, 2016](#)
- [MouSensor Platform PDF](#)
- [MouSensor Press Release](#)
- [Ultrasensitive detection of amines by a trace amine-associated receptor; J Neurosci. 2013](#)
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To understand how OR singular gene choice occurs in olfactory neurons.

- Homeodomain binding motifs modulate the probability of odorant receptor gene choice in transgenic mice. ***Mol Cell Neurosci. 2011***

- A common gene exclusion mechanism used by two chemosensory systems. ***Eur J Neurosci. 2009***

- The Promoter of the Mouse M71 Odorant Receptor. ***Mol. Cell. Neurosci 2005***

- [***Axon Guidance of Mouse Olfactory Sensory Neurons by Odorant Receptors and The \$\beta\$ 2 Adrenergic Receptor.***](#) ***Cell 2004***

- Genetic Disruptions of O/E2 and O/E3 Genes Reveal Involvement in Olfactory Neuron Projection. ***Development 2004***

- [***Odorant Receptor Gene Choice is Reset by Nuclear Transfer from Mouse Olfactory Sensory Neurons.***](#) ***Nature 2004***

- [***Odorant Receptor Expression Defines Functional Units in the Mouse Olfactory System.***](#) ***Journal of Neuroscience 2002b***

- Characterization of a Cluster Comprising ~100 Odorant Receptor Genes in Mouse. ***Mammalian Genome 2000***

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To understand how OR dependent axonal identity occurs

- [***Ultrasensitive detection of amines by a trace amine-associated receptor.***](#) ***Journal of Neuroscience 2013***

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[Uncoupling stimulus specificity and glomerular position in the mouse olfactory system.](#) ***Mol Cell Neurosci. 2012***

- [***Mapping of ClassI and ClassII odorant receptors to glomerular domains by two distinct types of olfactory sensory neurons in the mouse.***](#) ***Neuron 2009***

- *In vitro* Mutational Analysis of the β 2 Adrenergic Receptor, an *in vivo* Surrogate Odorant Receptor **, PLoS One. 2015**

- *In vitro* Mutational and Bioinformatics Analysis of the M71 Odorant Receptor and its Superfamily **, PLoS One. 2015**

- β 2 Adrenergic Fluorescent protein fusions traffic to plasma membrane and retain functionality **, PLoS One. 2013**

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To understand the role of trigeminal neurons in whisker function.

- Abolition of lemniscal barrellette patterning in *Prx1* knockout mice: effects upon ingestive behavior. **Somatosens Mot Res. 2015**

- Selective Deletion of Leptin Receptor in Neurons Leads to Obesity. **Journal of Clinical Investigation 2001**

To understand the pluripotent state of embryonic stem cells.

- Fast quantitative real-time PCR based screening for common chromosomal aneuploidies

in mouse embryonic stem cells.

Stem Cell Reports 2013

Co-Founder: MouSensor, LLC.

www.mousensor.com

[Linkedin Profile](#)

[Google Scholar Records](#)

Publications:

37) R. Higuchi-Sanabria, E.J. Garcia, D. Tomoiaga, E.L. Munteanu, **P. Feinstein**, P, and L.A. Pon. (2016)

Characterization of Fluorescent Proteins for Three- and Four-Color Live-Cell Imaging in *S. cerevisiae*.

***PLoS One* 2016** Jan 4;11(1):e0146120. doi: 10.1371/journal.pone.0146120.

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36) S. Jamet, J. Bubnell, P. Pfister, D. Tomoiaga, M.E. Rogers, and **P. Feinstein**.(2015)

In vitro Mutational Analysis of the β 2 Adrenergic Receptor, an *in vivo* Surrogate Odorant Receptor

***PLoS One*. 2015** Oct 29;10(10):e0141696. doi: 10.1371/journal.pone.0141696

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35) J. Bubnell, S. Jamet, D.Tomoiaga, C.D'Hulst, K. Krampis, J. Zhang, T. Bozza and **P. Feinstein**.

(2015)

In vitro Mutational and Bioinformatics Analysis of the M71 Odorant Receptor and its Superfamily.

***PLoS One.* 2015 Oct 29;10(10):e0141712. doi: 10.1371/journal.pone.0141712**

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Abolition of lemniscal barrellette patterning in *Prxxl1* knockout mice: effects upon ingestive behavior.

***Somatosens Mot Res.* 2015 Dec;32(4):236-48. doi: 10.3109/08990220.2015.1086327**

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33) J. Bubnell, Patrick Pfister, Maria L. Sapor, Matt Rogers, and **P. Feinstein**. (2013)

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***PLoS One.** 2013 Sep 23;8(9):e74941. doi: 10.1371/journal.pone.0074941.*

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32) C. D'Hulst, I. Paranova, D. Tomoiaga, M. L. Sapor, and **P. Feinstein**. (2013)

Fast quantitative real-time PCR based screening for common chromosomal aneuploidies in mouse embryonic stem cells.

***Stem Cell Reports,** Volume 1, Issue 4, 350-359, 26 September 2013*

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[Ultrasensitive detection of amines by a trace amine-associated receptor.](#)

J Neurosci. Feb 13;33(7):3228-39. doi: 10.1523/JNEUROSCI.4299-12.2013.

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30) J. Zhang, G. Huang, A. Dewan, **P. Feinstein**, T. Bozza. (2012)

[Uncoupling stimulus specificity and glomerular position in the mouse olfactory system.](#)

Mol Cell Neurosci. 2012 Aug; 51,79-88. Epub 2012 Aug 21

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29) A.Vassalli, **P. Feinstein**, and P. Mombaerts (2010)

Homeodomain binding motifs modulate the probability of odorant receptor gene choice in transgenic mice.

Mol Cell Neurosci. 2011 Feb;46(2):381-96. Epub 2010 Nov 26.

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28) L. Capello, D. Roppolo, V.P. Jungo, **P. Feinstein** and I. Rodriguez. (2009)

A common gene exclusion mechanism used by two chemosensory systems.

Eur J Neurosci. 2009 Feb;29(4):671-8. Epub 2009 Feb 6

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27) T. Bozza, A. Vassalli, S. Fuss, JJ. Zhang, B. Weiland, R. Pacifico, **P. Feinstein** and P. Mombaerts. (2009)

[Mapping of ClassI and ClassII odorant receptors to glomerular domains by two distinct types of olfactory sensory neurons in the mouse.](#)

Neuron 61: 1-13

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26) A. Walz, **P. Feinstein**, M. Khan and P. Mombaerts. (2007)

Axonal wiring of guanylate cyclase-D-expressing olfactory neurons is dependent on neuropilin 2 and semaphorin 3F.

Development 134: 4063-4072

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25) P. Mombaerts and **P. Feinstein**. (2005)

Axonal Wiring through Odorant Receptors.

S. Grillner and A.M. Graybiel ed. Microcircuits. The interface between Neurons and Global

Brain Function. Dahlem Workshop Report 93. Cambridge, MA: The MIT Press.

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24) A. Rothman, **P. Feinstein**, J. Hirota, and P. Mombaerts. (2005)

The Promoter of the Mouse M71 Odorant Receptor.

Mol. Cell. Neurosci. 28: 535– 546 (doi:10.1016/j.mcn.2004.11.006)

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23) **P. Feinstein**, T. Bozza, I. Rodriguez, A. Vassalli, and P. Mombaerts (2004)

[Axon Guidance of Mouse Olfactory Sensory Neurons by Odorant Receptors and The \$\beta\$ 2 Adrenergic Receptor.](#)

Cell 117: 833-846

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22) **P. Feinstein** and P. Mombaerts (2004)

[A Contextual Model for Axonal Sorting into Glomeruli of the Mouse Olfactory System.](#)

Cell 117: 817-831

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21) D.J. Zou, **P. Feinstein**, A.L.Rivers, G.A. Mathews, A. Kim, C.A. Greer, P. Mombaerts, and S. Firestein (2004)

[Postnatal refinement of peripheral olfactory projections.](#)

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20) J. Li, T. Ishii, **P. Feinstein**, and P. Mombaerts (2004)

[Odorant Receptor Gene Choice is Reset by Nuclear Transfer from Mouse Olfactory Sensory](#)

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19) S.S. Wang, J.W. Lewcock, **P. Feinstein**, P. Mombaerts, and R.R. Reed (2004)

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18) L. Belluscio, C. Lodovichi , **P. Feinstein**, P. Mombaerts and L. Katz (2002)

[Odorant Receptors Organize Local Circuitry in the Mouse Olfactory Bulb.](#)

Nature 419: 296-300

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17) A.Vassalli, A. Rothman, **P. Feinstein**, M. Zapotocky and P. Mombaerts (2002)

Minigenes Impart Odorant Receptor-Specific Axon Guidance in the Olfactory Bulb.

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16) T. Bozza, **P. Feinstein**, C. Zheng and P. Mombaerts (2002)

[Odorant Receptor Expression Defines Functional Units in the Mouse Olfactory System.](#)

Journal of Neuroscience 22(8): 3033-43

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15) H.B. Treloar, **P. Feinstein**, P. Mombaerts and C.A. Greer (2002)

Specificity of Glomerular Targeting by Olfactory Sensory Axons.

Journal of Neuroscience **22(7)**: 2469-77

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14) S.M. Potter*, C. Zheng, D.S*. Koos*, **P. Feinstein***, S.E. Fraser* and P. Mombaerts*

(2001) Structure and Emergence of Specific Olfactory Glomeruli in the Mouse.

Journal of Neuroscience **21(24)**: 9713-23 ***All authors contributed equally**

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13) A.C. Perry, A. Rothman, J.I. de las Heras, **P. Feinstein**, P. Mombaerts, H.J. Cooke and T. Wakayama (2001)

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12) L. Feiner, A.L. Webber, C. B. Brown, M. M. Lu, L. Jia, **P. Feinstein**, P. Mombaerts, J.A. Epstein, J. Raper (2001)

Targeted Disruption of Semaphorin 3C Leads to Persistent Truncus Arteriosus and Aortic Arch Interruption.

Development **128(16)**: 3061-70

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11) P. Cohen, C. Zhao, X. Cai, J.M. Montez, S.C. Rohani, **P. Feinstein**, P. Mombaerts and J.M.

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8) C. Zheng, **P. Feinstein**, T. Bozza, I. Rodriguez and P. Mombaerts (2000)

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***Neuron* 26:81-91.**

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7) J. Strotmann, R. Hoppe, S. Conzelmann, **P. Feinstein**, P. Mombaerts and H. Breer. (1999)

Small subfamily of olfactory receptor genes: structural features, expression pattern and genomic organization.

***Gene* 236:281-291**

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6) I. Rodriguez, **P. Feinstein** and P. Mombaerts (1999)

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***Cell* 97**:199-208

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5) **P.G. Feinstein**, K. Kornfeld, D. S. Hogness and R. S. Mann (1995)

Identification of Homeotic Target Genes in *Drosophila melanogaster* Including *nervy*, a Proto-Oncogene Homologue.

***Genetics* 140**:573-586

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3) **P. G. Feinstein**, K. Shrader, H. A. Bakalyar, W. J. Tang, J. Krupinski, A. G. Gilman, and R. R. Reed (1991)

Molecular Cloning and Biochemical Characterization of a Ca⁺⁺/Calmodulin Insensitive Adenylate Cyclase from Rat Brain.

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2) J. Krupinski, F. Coussen, H. A. Bakalyar, W. J. Tang, **P. G. Feinstein**, K. Orth, C. Slaughter, R. R. Reed, and A. G. Gilman (1989)

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***Science* 244**:1558-1564

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Molecular Cloning of Odorant-Binding Protein: Member of a Ligand Carrier Family.

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