Jody Rosenblatt
Professor of Cell Biology
Randall Centre of Cell & Molecular Biophysics
Email: jody.rosenblatt@kcl.ac.uk

Research interests

Epithelial cell number homeostasis, epithelial cell extrusion, carcinoma invasion and metastasis, and asthma

Qualifications

Biophysics and Biochemistry, Doctor of Philosophy, Actin dynamics regulation, University of California, San Francisco
20 Sept 1992 → 20 Dec 1998
Award Date: 20 Dec 1999

Molecular Biology, Bachelor of Arts, Transcription regulation in Drosophila, University of California, Berkeley
12 Sept 1983 → 20 Dec 1988
Award Date: 20 Dec 1988

1 Sept 2012 → 15 Jan 2019 Associate Professor, Assoc. Prof.

1 Sept 2005 → 1 Sept 2012 Assistant Professor, Asst. Prof.

1 Feb 1999 → 30 Jun 2005 Post-doctoral Fellow, post-doc

Employment

Professor of Cell Biology

Randall Centre of Cell & Molecular Biophysics

King's College London

1 Sept 2019 → present

Research outputs

Bronchoconstriction damages airway epithelia by crowding-induced excess cell extrusion
Rosenblatt, J., Bagley, D., Russell, T., Ortiz-Zapater, E., Stinson, S., Fox, K., Redd, P., Joseph, M., Deering-Rice, C., Reilly, C., Parsons, M. & Brightling, C., 4 Apr 2024, In: Science. 384, 6691, p. 66-73 7 p., 6691.

Piezo1 activates noncanonical EGFR endocytosis and signaling
Pardo-Pastor, C. & Rosenblatt, J., 29 Sept 2023, In: Science Advances. 9, 39, eadi1328.

Piezo1 activates non-canonical EGFR endocytosis and signaling
Pardo Pastor, C. & Rosenblatt, J., 9 Aug 2023, (Accepted/In press) In: Science Advances.

Physical confinement promotes mesenchymal trans-differentiation of invading transformed cells in vivo
Zulueta-Coarasa, T., Fadul, J., Ahmed, M. & Rosenblatt, J., 18 Nov 2022, In: iScience. 25, 11, 105330.

Epithelial Coxsackievirus Adenovirus Receptor promotes house dust mite-induced lung inflammation
Ortiz-Zapater, E., Llopis Hernandez, V., Bagley, D., Roberts, L., Maguire, T., Voss, F., Mertins, P., Kirchner, M., Peset-Martin, I., Woszczek, G., Rosenblatt, J., Gotthardt, M., Santis, G. & Parsons, M., 27 Oct 2022, In: Nature Communications. 13, 1, 6407.

The role of tissue maturity and mechanical state in controlling cell extrusion
Zulueta-Coarasa, T. & Rosenblatt, J., Feb 2022, In: Current Opinion in Genetics and Development. 72, p. 1-7 7 p.

KRas-transformed epithelia cells invade and partially dedifferentiate by basal cell extrusion
Fadul, J., Zulueta-Coarasa, T., Slattum, G. M., Redd, N. M., Jin, M. F., Redd, M. J., Daetwyler, S., Hedeen, D., Huisken, J. & Rosenblatt, J., Dec 2021, In: Nature Communications. 12, 1, 7180.

Early mechanical selection of cell extrusion and extrusion signaling in cancer
Mitchell, S. J. & Rosenblatt, J., Oct 2021, In: Current Opinion in Cell Biology. 72, p. 36-40 5 p.

Replication stress promotes cell elimination by extrusion
Dwivedi, V. K., Pardo-Pastor, C., Droste, R., Kong, J. N., Tucker, N., Denning, D. P., Rosenblatt, J. & Horvitz, H. R., 27 May 2021, In: Nature. 593, 7860, p. 591-596 6 p.

Unconventional Ways to Live and Die: Cell Death and Survival in Development, Homeostasis, and Disease
Gudipaty, S. A., Conner, C. M., Rosenblatt, J. & Montell, D. J., 6 Oct 2018, In: Annual Review of Cell and Developmental Biology. 34, 1, p. 311-332 22 p.

The forces and fates of extruding cells
Fadul, J. & Rosenblatt, J., Oct 2018, In: Current Opinion in Cell Biology. 54, p. 66-71 6 p.

Endothelia extrude apoptotic cells to maintain a constant barrier
Mleynek, T., Li, D., Rosenblatt, J., Redd, M. J., Chan, A. & Gu, Y., 1 Feb 2018, In: BioRix.

Basal extrusion drives cell invasion and mechanical stripping of E-cadherin
Rosenblatt, J., Fadul, J., Slattum, G. M., Redd, N. M., Zulueta-Coarasa, T. F., Redd, M., Daetwyler, S., Hedeen, D., Huisken, J. & Rosenblatt, J., 2018

Epithelial cell extrusion: Pathways and pathologies
Gudipaty, S. A. & Rosenblatt, J., Jul 2017, In: Seminars in Cell and Developmental Biology. 67, p. 132-140 9 p.

Mechanical stretch triggers rapid epithelial cell division through Piezo1
Gudipaty, S. A., Lindblom, J., Loftus, P. D., Redd, M. J., Edes, K., Davey, C. F., Krishnegowda, V. & Rosenblatt, J., 2 Mar 2017, In: Nature. 543, 7643, p. 118-121 4 p.

A toolbox to study epidermal cell types in zebrafish
Eisenhoffer, G. T., Slattum, G., Ruiz, O. E., Otsuna, H., Bryan, C. D., Lopez, J., Wagner, D. S., Bonkowsky, J. L., Chien, C-B., Dorsky, R. I. & Rosenblatt, J., 2017, In: Journal of Cell Science. 130, 1, p. 269-277 9 p.

Jody Rosenblatt
Rosenblatt, J., 1 Jun 2016, In: Current Biology. 26, 12, p. R485-R487

Defective apical extrusion signaling contributes to aggressive tumor hallmarks
Gu, Y., Shea, J., Slattum, G., Firpo, M. A., Alexander, M., J Mulvihill, S., Golubovskaya, V. M. & Rosenblatt, J., 26 Jan 2015, In: eLife. 2015, 4, e04069.

Autophagy in oncogenic K-Ras promotes basal extrusion of epithelial cells by degrading S1P
Slattum, G., Gu, Y., Sabbadini, R. & Rosenblatt, J., 6 Jan 2014, In: Current Biology. 24, 1, p. 19-28 10 p.

Cells: Shaping tissues and organs
Rosenblatt, J. & Gartner, Z., 2014, In: Molecular biology of the cell. 25, 6, p. 729-964

Tumour cell invasion: An emerging role for basal epithelial cell extrusion
Slattum, G. M. & Rosenblatt, J., 2014, In: NATURE REVIEWS CANCER. 14, 7, p. 495-501 7 p.

Bringing balance by force: live cell extrusion controls epithelial cell numbers
Eisenhoffer, G. T. & Rosenblatt, J., 2013, In: Trends in cell biology. 23, 4, p. 185-192 8 p.

Programmed cell death: A new way worms get rid of unwanted cells
Rosenblatt, J., 9 Oct 2012, In: Current Biology. 22, 19, p. R844-R846

Crowding induces live cell extrusion to maintain homeostatic cell numbers in epithelia
Eisenhoffer, G. T., Loftus, P. D., Yoshigi, M., Otsuna, H., Chien, C-B., Morcos, P. A. & Rosenblatt, J., 2012, In: Nature. 484, 7395, p. 546-549 4 p.

New emerging roles for epithelial cell extrusion
Gu, Y. & Rosenblatt, J., 2012, In: Current Opinion in Cell Biology. 24, 6, p. 865-870 6 p.

The tumor suppressor adenomatous polyposis coli controls the direction in which a cell extrudes from an epithelium
Marshall, T. W., Lloyd, I. E., Delalande, J. M., NÃ¤thke, I., Rosenblatt, J. & Yap, A., 1 Nov 2011, In: Molecular biology of the cell. 22, 21, p. 3962-3970 9 p.

Live Imaging of Cell Extrusion from the Epidermis of Developing Zebrafish
Eisenhoffer, G. T. & Rosenblatt, J., 1 Jun 2011, In: Journal of Visualized Experiments. 52

Epithelial cell extrusion requires the sphingosine-1-phosphate receptor 2 pathway
Gu, Y., Forostyan, T., Sabbadini, R. & Rosenblatt, J., 1 May 2011, In: The Journal of cell biology. 193, 4, p. 667-676 10 p.

Apoptotic regulation of epithelial cellular extrusion
Andrade, D. & Rosenblatt, J., 1 Mar 2011, In: APOPTOSIS. 16, 5, p. 491-501 11 p.

P115 RhoGEF and microtubules decide the direction apoptotic cells extrude from an epithelium
Slattum, G. M., McGee, K. M. & Rosenblatt, J., 2009, In: Journal of Cell Biology. 186, 5, p. 693-702 10 p.

Mitosis: Moesin and the Importance of Being Round
Rosenblatt, J., 1 Apr 2008, In: Current Biology. 18, 7, p. R292-R293

Myosin II-Dependent Cortical Movement Is Required for Centrosome Separation and Positioning during Mitotic Spindle Assembly
Rosenblatt, J., Cramer, L. P., Baum, B. & McGee, K. M., 1 Apr 2004, In: Cell. 117, 3, p. 361-372 12 p.

An epithelial cell destined for apoptosis signals its neighbors to extrude it by an actin- and myosin-dependent mechanism
Rosenblatt, J., Raff, M. C. & Cramer, L. P., 1 Nov 2001, In: Current Biology. 11, 23, p. 1847-1857 11 p.

Actin, cofilin and cognition
Rosenblatt, J. & Mitchison, T. J., 1998, In: Nature. 393, 6687, p. 739-740 2 p.

Interaction of human Arp2/3 complex and the Listeria monocytognes ActA protein in actin filament nucleation
Welch, M. D., Rosenblatt, J., Skoble, J., Portnoy, D. A. & Mitchison, T. J., 1998, In: Science. 281, 5373, p. 105-108 4 p.

Actin dynamics in vivo
Welch, M. D., Mallavarapu, A., Rosenblatt, J. & Mitchison, T. J., 1997, In: Current Opinion in Cell Biology. 9, 1, p. 54-61 8 p.

Xenopus actin depolymerizing factor/cofilin (XAC) is responsible for the turnover of actin filaments in Listeria monocytogenes tails
Rosenblatt, J., Agnew, B. J., Abe, H., Bamburg, J. R. & Mitchison, T. J., 1997, In: Journal of Cell Biology. 136, 6, p. 1323-1332 10 p.

A purified Drosophila septin complex forms filaments and exhibits GTPase activity
Field, C. M., Al-Awar, O., Rosenblatt, J., Wong, M. L., Alberts, B. & Mitchison, T. J., 1996, In: Journal of Cell Biology. 133, 3, p. 605-616 12 p.

The bulk of unpolymerized actin in Xenopus egg extracts is ATP-bound
Rosenblatt, J., Peluso, P. & Mitchison, T. J., 1995, In: Molecular biology of the cell. 6, 2, p. 227-236 10 p.

Involvement of profilin in the actin-based motility of L. monocytogenes in cells and in cell-free extracts
Theriot, J. A., Rosenblatt, J., Portnoy, D. A., Goldschmidt-Clermont, P. J. & Mitchison, T. J., 1994, In: Cell. 76, 3, p. 505-517 13 p.

PITALRE, a nuclear CDC2-related protein kinase that phosphorylates the retinoblastoma protein in vitro
Graña, X., De Luca, A., Sang, N., Fu, Y., Claudio, P. P., Rosenblatt, J., Morgan, D. O. & Giordano, A., 1994, In: Proceedings of the National Academy of Sciences of the United States of America. 91, 9, p. 3834-3838 5 p.

Crystal structure of cyclin-dependent kinase 2
Bondt, H. L. D., Rosenblatt, J., Jancarik, J., Jones, H. D., Morgant, D. O. & Kim, S-H., 1 Jun 1993, In: Nature. 363, 6430, p. 595-602 8 p.

Purification and Crystallization of Human Cyclin-dependent Kinase 2
Rosenblatt, J., Bondt, H. D., Jancarik, J., Morgan, D. O. & Kim, S-H., 1 Apr 1993, In: Journal of Molecular Biology. 230, 4, p. 1317-1319 3 p.

A transcriptional switch between the Pig-1 and Sgs-4 genes of Drosophila melanogaster
Mougneau, E., Von Seggern, D., Fowler, T., Rosenblatt, J., Jongens, T., Rogers, B., Gietzen, D. & Beckendorf, S. K., 1993, In: Molecular and Cellular Biology. 13, 1, p. 184-195 12 p.

Cell cycle regulation of CDK2 activity by phosphorylation of Thr160 and Tyr15
Gu, Y., Rosenblatt, J. & Morgan, D. O., 1992, In: EMBO Journal. 11, 11, p. 3995-4005 11 p.

Human cyclin-dependent kinase 2 is activated during the S and G2phases of the cell cycle and associates with cyclin A
Rosenblatt, J., Gu, Y. & Morgan, D. O., 1992, In: Proceedings of the National Academy of Sciences of the United States of America. 89, 7, p. 2824-2828 5 p.

Variable and hypervariable domains are found in the regions of HCV corresponding to the flavivirus envelope and NS1 proteins and the pestivirus envelope glycoproteins
Weiner, A. J., Brauer, M. J., Rosenblatt, J., Richman, K. H., Tung, J., Crawford, K., Bonino, F., Saracco, G., Choo, Q-L., Houghton, M. & Han, J. H., 1 Feb 1991, In: Virology. 180, 2, p. 842-848 7 p.

HCV testing in low-risk population
Weiner, A., Truett, M., Han, J., Polito, A., Choo, Q-L., Rosenblatt, J., Quan, S., Kuo, G., Houghton, M., Page, E., Agius, C. & Nelles, M., 1 Sept 1990, In: The Lancet. 336, 8716, p. 695 1 p.

Detection of hepatitis C viral sequences in non-A, non-B hepatitis
Weiner, A. J., Kuo, G., Lee, C., Rosenblatt, J., Choo, Q-L., Houghton, M., Bradley, D. W., Bonnino, F. & Saracco, G., 1990 , In: The Lancet. 335, 8680, p. 1-3 3 p.

Early events in hepatitis C virus infection of chimpanzees
Shimizu, Y. K., Weiner, A. J., Rosenblatt, J., Wong, D. C., Shapiro, M., Popkin, T., Houghton, M., Alter, H. J. & Purcell, R. H., 1990, In: Proceedings of the National Academy of Sciences of the United States of America. 87, 16, p. 6441-6444 4 p.

Prizes

H. A. and Edna Benning Endowed Chair
Rosenblatt, Jody (Recipient), 2015

Howard Hughes Medical Institute Faculty Scholar
Rosenblatt, Jody (Recipient), 1 May 2016

Royal Society of Biology Fellow
Rosenblatt, Jody (Recipient), 1 Sept 2019

Willard and Viola Gardner Prize for outstanding achievement in the natural sciences (UASAL)
Rosenblatt, Jody (Recipient), 20 May 2018

Awards

Multi-modal mapping of mechanistic drivers of lung fibrosis
Parsons, M., Rosenblatt, J. & Sinkus, R.
MRC Medical Research Council: £435,798.30
1/11/2022 → 31/10/2025

Projects

Basal extrusion: a new mechanism for metastasis initiation
Rosenblatt, J.
CRUK Cancer Research UK
1/01/2022 → 31/12/2026

EMBO: Regulatory mechanisms controlling a new mechanical Epithelial to Mesenchymal Transition in zebrafish
Rosenblatt, J. & Zulueta Coarasa, T.
EMBO European Molecular Biology Organisation
15/01/2019 → 14/01/2020

Inhibiting Bronchoconstriction-dependent Airway Epithelial Extrusion to Impede the Asthma Inflammatory Cycle
Rosenblatt, J.
American Asthma Foundation
1/01/2019 → 30/06/2022

PROMIGREX: Mechanical regulation of cell migration by Piezo1 and its implications in epithelial cell turnover
Rosenblatt, J.
EC European Commission
1/04/2021 → 31/03/2023

Mechanical regulation of epithelial cell turnover by Piezo1: proliferation, migration and death
Pardo Pastor, C. & Rosenblatt, J.
HFSP Human Frontier Science Program
1/04/2019 → 31/03/2022

Multi-modal mapping of mechanistic drivers of lung fibrosis
Parsons, M., Rosenblatt, J. & Sinkus, R.
MRC Medical Research Council
1/11/2022 → 31/10/2025

Regulation of epithelial and endothelial cell-cell junctions by mechanical forces
Eggert, U., Garcia-Manyes, S., Rosenblatt, J. & Spillane, K.
BBSRC Biotechnology and Biological Sciences Research Council
1/04/2021 → 31/03/2026

MechTransition: Regulatory mechanisms controlling a new mechanical Epithelial to Mesenchymal Transition in zebrafish
Rosenblatt, J.
EC European Commission
1/09/2020 → 31/08/2022

The Role of Epithelial Cell Extrusion in Asthma
Rosenblatt, J. & Martinez Nunez, R.
Wellcome Trust
26/07/2021 → 25/06/2026

The role of epithelial cell extrusion in disease
Rosenblatt, J.
Academy of Medical Sciences
1/05/2020 → 30/04/2023