

**BIOGRAPHICAL SKETCH**  
*Alexander van Oudenaarden*

*PROFESSIONAL PREPARATION*

Delft University of Technology, The Netherlands	Materials Science and Engineering	M.S. 1993
Delft University of Technology, The Netherlands	Physics	M.S. 1993
Delft University of Technology, The Netherlands	Physics	Ph.D. 1998
Stanford University, Stanford, CA	Biophysics	1998 - 1999

*APPOINTMENTS*

09/2012 – present	Director Hubrecht Institute for Developmental Biology and Stem Cell Research, the Royal Netherlands Academy of Arts and Sciences (KNAW) and University Medical Center Utrecht, Utrecht, The Netherlands.
01/2013 – present	Professor, Faculty of Science, Utrecht University, Utrecht, The Netherlands.
01/2013 – present	Professor, University Medical Center Utrecht, Utrecht, The Netherlands.
09/2009 – 01/2014	Extramural faculty member of the Koch Institute for Integrative Cancer Research at MIT, Cambridge, MA, USA.
05/2009 – 01/2014	Professor of Biology Department of Biology, Massachusetts Institute of Technology, Cambridge, MA, USA.
07/2008 – 01/2014	Professor of Physics Department of Physics, Massachusetts Institute of Technology, Cambridge, MA, USA.
06/2008 – 01/2009	Visiting Professor Hubrecht Institute for Developmental Biology and Stem Cell Research, Utrecht, The Netherlands.
07/2004 – 06/2008	Associate Professor of Physics with tenure Department of Physics, Massachusetts Institute of Technology, Cambridge, MA, USA.
01/2000 – 06/2004	Assistant Professor of Physics Department of Physics, Massachusetts Institute of Technology, Cambridge, MA, USA.
03/1998 – 12/1999	Postdoctoral research Department of Chemistry, Stanford University, Stanford, CA, USA. Laboratory of Prof. S.G. Boxer Micropatterning of supported phospholipid bilayers
03/1998 – 12/1999	Postdoctoral research Department of Biochemistry, Stanford, CA, USA. Laboratory of Prof. J.A. Theriot Force generation of polymerizing actin filaments

## HONORS AND AWARDS

- 2017 Dutch Organization for Scientific Research (NWO) Spinoza Award
- 2017 EMBO member
- 2017 European Research Council (ERC) Advanced Grant
- 2015 Member of Koninklijke Hollandsche Maatschappij der Wetenschappen (KHMW)
- 2014 Member of the Royal Netherlands Academy of Arts and Sciences (KNAW)
- 2012 European Research Council (ERC) Advanced Grant
- 2012 Dutch Organization for Scientific Research (NWO) Vici Award
- 2008 NIH Director's Pioneer Award
- 2008 Guggenheim Fellow
- 2007 School of Science Prize for Excellence in Graduate Teaching
- 2001 Keck Career Development Professor in Biomedical Engineering
- 2001 Alfred Sloan Research Fellow
- 2001 NSF CAREER award
- 2000 Edgerly Science Partnership Award
- 1998 Andries Miedema Award for best Ph.D.-research in the field of condensed matter physics in the Netherlands, awarded every other year by Fundamental Research on Matter (FOM).
- 1998 Dutch Organization for Scientific Research (NWO) TALENT stipendium.
- 1998 Ph.D. Applied Physics, *cum laude*.
- 1994 Award for best undergraduate research in Materials Science, yearly award by Delft University of Technology.
- 1993 M.S. Materials Science and Engineering, *cum laude*.

## OTHER EXPERIENCE

- 07/2015 – present Member of National Scientific Advisory board, The Netherlands Cancer Institute (NKI)
- 05/2014 – present Advisory editorial board member *Molecular Systems Biology*
- 01/2013 – present Member of the Scientific Advisory Board of the European Molecular Biology Laboratory (EMBL)
- 01/2012 – present Member of the Scientific Advisory Board of the Max Planck Institutes for Molecular Cell Biology and Genetics
- 09/2011 – present Member of the Scientific Advisory Board of the Whitehead Institute for Biomedical Research
- 10/2009 – 07/2012 Director of the MIT Center for Single-Cell Dynamics in Cancer (NIH/NCI funded U54 Physical Sciences-Oncology Center). The goal of this center is use both theoretical and experimental approaches inspired by Physics to attack important problems in cancer biology by developing novel technology and analytical/computational methods to track the dynamics of cancer at the single cell level.
- 06/2007 – 12/2011 Organizer of CSB (Computational and Systems Biology) seminar series.
- 01/2005 – 12/2007 Associate Editor *Biophysical Journal*
- 06/2004 – 07/2006 Course Faculty at the Marine Biology Laboratory (Woods Hole) Summer Course '*Physiology: Modern Cell Biology Using Microscopic, Biochemical and Computational Approaches*'
- 09/2002 – 12/2009 Lecturer and creator of MIT Graduate course 7.81/8.591/9.531 Systems Biology.

## PUBLICATION LIST

### 2017

S. C. van den Brink, F. Sage F, Á. Vértesy, B. Spanjaard, J. Peterson-Maduro, C. S. Baron, C. Robin, and A. van Oudenaarden.

Single-cell sequencing reveals dissociation-induced gene expression in tissue subpopulations.

*Nature Methods* **14**, 935-936 (2017).

G. P. A. Lacraz, J. P. Junker, M. M. Gladka, B. Molenaar, K. T. Scholman, M. Vigil-Garcia, D. Versteeg, H. de Ruiter, M. W. Vermunt, M. P. Creyghton, M. M. H. Huibers, N. de Jonge, A. van Oudenaarden, and E. van Rooij.

Tomo-seq identifies SOX9 as a key regulator of cardiac fibrosis during ischemic injury.

*Circulation* doi: 10.1161/CIRCULATIONAHA.117.027832 (2017).

J. den Hertog and A. van Oudenaarden.

Celebrating 100 years of Developmental Biology at the Hubrecht Institute.

*Developmental Biology* **428**, 259-260 (2017).

P. Dierickx, M. W. Vermunt, M. J. Muraro, M. P. Creyghton, P. A. Doevendans, A. van Oudenaarden, N. Geijsen, and L. W. van Laake.

Circadian networks in human embryonic stem cell-derived cardiomyocytes.

*EMBO Reports* **18**, 1199-1212 (2017)

C. L. Scheele, E. Hannezo, M. J. Muraro, A. Zomer, N. S. Langedijk, A. van Oudenaarden, B. D. Simons, and J. van Rheenen.

Identity and dynamics of mammary stem cells during branching morphogenesis.

*Nature* **542**, 313-317 (2017).

C. Adolphe, J. P. Junker, A. Lyubimova, A. van Oudenaarden, and B. Wainwright.

Patched receptors sense, interpret and establish an epidermal Hedgehog signalling gradient.

*Journal of Investigative Dermatology* **137**, 179-186 (2017).

O. Basak, J. Beumer, K. Wiebrands, H. Seno, A. van Oudenaarden, and H. Clevers.

Induced quiescence of Lgr5+ stem cells in intestinal organoids enables differentiation of hormone-producing enteroendocrine cells.

*Cell Stem Cell* **20**, 177-190 (2017).

### 2016

S. Amin, R. Neijts, S. Simmini, C. van Rooijen, S. C. Tan, L. Kester, A. van Oudenaarden, M. P. Creyghton, and J. Deschamps.

Cdx and T Brachyury co-activate growth signaling in the embryonic axial progenitor niche.

*Cell Reports* **17**, 3165-3177 (2016).

D. A. Jaitin, A. Weiner, I. Yofe, D. Lara-Astiaso, H. Keren-Shaul, E. David, T. M. Salame, A. Tanay, A. van Oudenaarden, and I. Amit.  
Dissecting immune circuits by linking CRISPR-pooled screens with single-cell RNA-seq.  
*Cell* **167**, 1883-1896 (2016).

M. J. Muraro, G. Dharmadhikari, D. Grün, N. Groen, T. Dielen, E. Jansen, L. van Gurp, M. A. Engelse, F. Carlotti, E. J. de Koning, and A. van Oudenaarden.  
A single-cell transcriptome atlas of the human pancreas.  
*Cell Systems* **3**, 385-394 (2016).

N. Sasaki, N. Sachs, K. Wiebrands, S. I. Ellenbroek, A. Fumagalli, A. Lyubimova, H. Begthel, M. van den Born, J. H. van Es, W. R. Karthaus, V. S. Li, C. López-Iglesias, P. J. Peters, J. van Rheenen, A. van Oudenaarden, and H. Clevers.  
Reg4<sup>+</sup> deep crypt secretory cells function as epithelial niche for Lgr5<sup>+</sup> stem cells in colon.  
*PNAS* **113**, E5399-E5407 (2016).

F. Kruse, J. P. Junker, A. van Oudenaarden, and J. Bakkers.  
Tomo-seq: A method to obtain genome-wide expression data with spatial resolution.  
*Methods Cell Biology* **135**, 299-307 (2016).

D. Mooijman, S. S. Dey, J. C. Boisset, N. Crosetto, and A. van Oudenaarden.  
Single-cell 5hmC sequencing reveals chromosome-wide variability and enables lineage reconstruction.  
*Nature Biotechnology* **34**, 852-856 (2016).

D. Grün, M. J. Muraro, J. C. Boisset, K. Wiebrands, A. Lyubimova, G. Dharmadhikari, M. van den Born, J. van Es, E. Jansen, H. Clevers, E. J. P. de Koning, and A. van Oudenaarden.  
De novo prediction of stem cell identity using single-cell transcriptome data.  
*Cell Stem Cell* **19**, 266-277 (2016).

V. Ramanan, K. Trehan, M. L. Ong, J. M. Luna, H. H. Hoffmann, C. Espiritu, T. P. Sheahan, H. Chandrasekar, R. E. Schwartz, K. S. Christine, C. M. Rice, A. van Oudenaarden, and S. N. Bhatia.  
Viral genome imaging of hepatitis C virus to probe heterogeneous viral infection and responses to antiviral therapies.  
*Virology* **494**, 236-247 (2016).

E. Beerling, D. Seinstra, E. de Wit, L. Kester, D. van der Velden, C. Maynard, R. Schäfer, P. van Diest, E. Voest, A. van Oudenaarden, N. Vrisekoop, and J. van Rheenen.  
Plasticity between epithelial and mesenchymal states unlinks EMT from metastasis-enhancing stem cell capacity.  
*Cell Reports* **14**, 2281 – 2288 (2016).

P. W. Tetteh, O. Basak, H. F. Farin, K. Wiebrands, K. Kretzschmar, H. Begthel, M. van den Born, J. Korving, F. de Sauvage, J. H. van Es, A. van Oudenaarden, and H. Clevers.  
Replacement of lost Lgr5-positive stem cells through plasticity of their enterocyte-lineage daughters.

*Cell Stem Cell* **18**, 203 – 213 (2016).

C. C. Wu, F. Kruse, M. D. Vasudevarao, J. P. Junker, D. C. Zebrowski, K. Fischer, E. S. Noël, D. Grün, E. Berezikov, F. B. Engel, A. van Oudenaarden, G. Weidinger, and J. Bakkers.

Spatially resolved genome-wide transcriptional profiling identifies BMP signaling as essential regulator of zebrafish cardiomyocyte regeneration.

*Developmental Cell* **36**, 36 – 49 (2016).

## 2015

S. Semrau and A. van Oudenaarden,

Studying lineage decision-making in vitro: emerging concepts and novel tools,

*Annual Review Cell and Developmental Biology* **13**, 317 – 345 (2015).

D. Grün and A. van Oudenaarden,

Design and analysis of single-cell sequencing experiments,

*Cell* **163**, 799 – 810 (2015).

N. Slavov, S. Semrau, E. Airoidi, B. Budnik, and A. van Oudenaarden,

Differential stoichiometry among core ribosomal proteins,

*Cell Reports* **13**, 865 – 873 (2015).

D. Grün, A. Lyubimova, L. Kester, K. Wiebrands, O. Basak, N. Sasaki, H. Clevers, and A. van Oudenaarden,

Single-cell mRNA sequencing reveals rare intestinal cell types,

*Nature* **525**, 251 – 255 (2015).

Y. Q. Soh, J. P. Junker, M. E. Gill, J. L. Mueller, A. van Oudenaarden, and D. C. Page,

A gene regulatory program for meiotic prophase in the fetal ovary,

*PLoS Genetics* **11**:e1005531 doi: 10.1371/journal.pgen.1005531 (2015).

J. Kind, L. Pagie, S. S. de Vries, L. Nahidiazar, S. S. Dey, M. Bienko, Y. Zhan, B. Lajoie, C. A. de Graaf, M. Amendola, G. Fudenberg, M. Imakaev, L. A. Mirny, K. Jalink, J.

Dekker, A. van Oudenaarden, and B. van Steensel,

Genome-wide maps of nuclear lamina interactions in single human cells,

*Cell* **163**, 134 – 147 (2015).

M. Welling, H. H. Chen, J. Muñoz, M. U. Musheev, L. Kester, J. P. Junker, N.

Mischerikow, M. Arbab, E. Kuijk, L. Silberstein, P. V. Kharchenko, M. Geens, C. Niehrs,

H. van de Velde, A. van Oudenaarden, A. J. Heck, and N. Geijsen,

DAZL regulates Tet1 translation in murine embryonic stem cells,

*EMBO Reports* **16**, 791 – 802 (2015).

J. P. Junker and A. van Oudenaarden,

Single-cell transcriptomics enters the age of mass production,

*Molecular Cell* **58**, 563 – 564 (2015).

J. S. van Zon, S. Kienle, G. Huelsz-Prince, M. Barkoulas, and A. van Oudenaarden.

Cells change their sensitivity to an EGF morphogen gradient to control EGF-induced gene expression,

*Nature Communications* **6**:7053. doi: 10.1038/ncomms8053 (2015).

M. van de Wetering, H. E. Francies, J. M. Francis, G. Bounova, F. Iorio, A. Pronk, W. van Houdt, J. van Gorp, A. Taylor-Weiner, L. Kester, A. McLaren-Douglas, J. Blokker, S. Jaksani, S. Bartfeld, R. Volckman, P. van Sluis, V. S. Li, S. Seepo, C. Sekhar Pedomallu, K. Cibulskis, S. L. Carter, A. McKenna, M. S. Lawrence, L. Lichtenstein, C. Stewart, J. Koster, R. Versteeg, A. van Oudenaarden, J. Saez-Rodriguez, R. G. Vries, G. Getz, L. Wessels, M. R. Stratton, U. McDermott, M. Meyerson, M. J. Garnett, and H. Clevers,  
Prospective derivation of a living organoid biobank of colorectal cancer patients,  
*Cell* **161**, 933 – 945 (2015).

J. M. Schmiedel, S. L. Klemm, Y. Zheng, A. Sahay, N. Blüthgen, D. S. Marks, and A. van Oudenaarden,  
MicroRNA control of protein expression noise,  
*Science* **348**, 128 – 132 (2015).

Y. C. Hu, P. K. Nicholls, Y. Q. Soh, J. R. Daniele, J. P. Junker, A. van Oudenaarden,  
and D. C. Page,  
Licensing of primordial germ cells for gametogenesis depends on genital ridge signaling,  
*PLoS Genetics* **11**:e1005019. doi: 10.1371/journal.pgen.1005019 (2015).

J. Schuijers, J. P. Junker, M. Mokry, P. Hatzis, B. K. Koo, V. Sasselli, L. G. van der Flier, E. Cuppen, A. van Oudenaarden, and H. Clevers,  
Ascl2 acts as an R-spondin/Wnt-responsive switch to control stemness in intestinal crypts,  
*Cell Stem Cell* **16**, 158 – 170 (2015).

S. S. Dey, L. Kester, B. Spanjaard, M. Bienko, and A. van Oudenaarden,  
Integrated genome and transcriptome sequencing of the same cell,  
*Nature Biotechnology* **33**, 285 – 289 (2015).

N. Crosetto, M. Bienko, and A. van Oudenaarden,  
Spatially resolved transcriptomics and beyond,  
*Nature Reviews Genetics* **16**, 57 – 66 (2015).

## **2014**

S. Simmini, M. Bialecka, M. Huch, L. Kester, M. van de Wetering, T. Sato, F. Beck, A. van Oudenaarden, H. Clevers, and J. Deschamps,  
Transformation of intestinal stem cells into gastric stem cells on loss of transcription factor Cdx2,  
*Nature Communications* doi: 10.1038/ncomms6728 (2014).

J. P. Junker, K. A. Peterson, Y. Nishi, J. Mao, A. P. McMahon, and A. van Oudenaarden,  
A predictive model of bifunctional transcription factor signaling during embryonic tissue patterning,  
*Developmental Cell* **31**, 448 – 460 (2014).

J. P. Junker, E. S. Noël, V. Guryev, K. A. Peterson, G. Shah, J. Huisken, A. P. McMahon, E. Berezikov, J. Bakkers, and A. van Oudenaarden,

- Genome-wide RNA tomography in the zebrafish embryo,  
*Cell* **159**, 662 – 675 (2014).
- R. A. Mentink, T. C. Middelkoop, L. Rella, N. Ji, C. Y. Tang, M. C. Betist, A. van Oudenaarden, H. C. Korswagen,  
Cell intrinsic modulation of Wnt signaling controls neuroblast migration in *C. elegans*,  
*Developmental Cell* **31**, 188 – 201 (2014).
- A. Barreca, C. Martinengo, L. Annaratone, L. R., A. Chiappella, M. Ladetto, A. Demurtas, L. Chiusa, A. Stacchini, N. Crosetto, A. van Oudenaarden, and R. Chiarle,  
Inter- and Intra-tumoral heterogeneity of BCL2 correlates with IgH expression and prognosis in follicular lymphoma,  
*Blood Cancer Journal* **10**; 4:e249. doi: 10.1038/bcj.2014.67 (2014).
- N. Slavov, B. A. Budnik, D. Schwab, E. Airoidi, and A. van Oudenaarden,  
Constant growth rate can be supported by decreasing energy flux and increasing aerobic glycolysis,  
*Cell Reports* **7**, 705 – 714 (2014).
- D. Grün, L. Kester, and A. van Oudenaarden,  
Validation of noise models for single-cell transcriptomics,  
*Nature Methods* **11**, 637 – 640 (2014).
- S. Klemm, S. Semrau, K. Wiebrands, D. Mooijman, D. Faddah, R. Jaenisch, and A. van Oudenaarden,  
Transcriptional profiling of cells sorted by RNA abundance,  
*Nature Methods* **11**, 549 – 551 (2014).
- J. P. Junker and A. van Oudenaarden,  
Every cell is special: genome-wide studies add a new dimension to single-cell biology,  
*Cell* **157**, 8 – 11 (2014).
- V. Almendro, Y. K. Cheng, A. Randles, S. Itzkovitz, A. Marusyk, E. Ametller, X. Gonzalez-Farre, M. Muñoz, H. G. Russnes, A. Helland, I. H. Rye, A. L. Borresen-Dale, R. Maruyama, A. van Oudenaarden, M. Dowsett, R. L. Jones, J. Reis-Filho, P. Gascon, M. Gönen, F. Michor, and K. Polyak,  
Inference of tumor evolution during chemotherapy by computational modeling and in situ analysis of genetic and phenotypic cellular diversity,  
*Cell Reports* **6**, 514 – 527 (2014).
- V. Almendro, H. Kim, Y. K. Cheng, M. Gonen, S. Itzkovitz, P. Argani, A. van Oudenaarden, S. Sukumar, F. Michor, and K. Polyak,  
Genetic and phenotypic diversity in breast tumor metastases,  
*Cancer Research* **74**, 1338 – 1348 (2014).
- J. R. Alvarez-Dominguez, W. Hu, B. Yuan, J. Shi, S. S. Park, A. A. Gromatzky, A. van Oudenaarden, and H. F. Lodish,  
Global discovery of erythroid long noncoding RNAs reveals novel regulators of red cell maturation,  
*Blood* **123**, 570 – 581 (2014).

S. Semrau, N. Crosetto, M. Bienko, M. Boni, P. Bernasconi, R. Chiarle, and A. van Oudenaarden,  
FuseFISH: Robust detection of transcribed gene fusions in single cells,  
*Cell Reports* **6**, 18 – 23 (2014).

## 2013

N. Ji, T. C. Middelkoop, R. A. Mentink, M. C. Betist, S. Tonegawa, D. Mooijman, H. C. Korswagen, and A. van Oudenaarden,  
Feedback control of gene expression variability in the *Caenorhabditis elegans* Wnt pathway,  
*Cell* **155**, 869 – 880 (2013).

L. Teytelman, D. M. Thurtle, J. Rine J, and A. van Oudenaarden,  
Highly expressed loci are vulnerable to misleading ChIP localization of multiple unrelated proteins,  
*PNAS* **110**, 18602 – 18607 (2013).

D. H. Kim, D. Gruen, and A. van Oudenaarden,  
Dampening of expression oscillations by synchronous regulation of a microRNA and its target,  
*Nature Genetics* **45**, 1337 – 1344 (2013).

A. Lyubimova, S. Itzkovitz, J. P. Junker, Z. P. Fan, X. Wu, and A. van Oudenaarden,  
Single-molecule mRNA detection and counting in mammalian tissue,  
*Nature Protocols* **8**, 1743 – 1758 (2013).

C. H. Hansen and A. van Oudenaarden,  
Allele-specific detection of single mRNA molecules *in situ*,  
*Nature Methods* **10**, 869 – 871 (2013).

M. Fang, H. Xie, S. K. Dougan, H. Ploegh, and A. van Oudenaarden,  
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*PLoS Biology* **11**: e1001618. doi:10.1371/journal.pbio.1001618 (2013).

Physical Sciences - Oncology Centers Network,  
A physical sciences network characterization of non-tumorigenic and metastatic cells,  
*Scientific Reports* **3**:1449 doi: 10.1038/srep01449 (2013).

G. Neuert, B. Munsky, R. Z. Tan, L. Teytelman, M. Khammash, A. van Oudenaarden,  
Systematic identification of signal-activated stochastic gene regulation,  
*Science* **339**, 584 – 587 (2013).

M. Barkoulas, J. S. van Zon, J. Milloz, A. van Oudenaarden, and M. A. Félix,  
Robustness and epistasis in the *C. elegans* vulval signaling network revealed by pathway dosage modulation,  
*Developmental Cell* **24**, 64 – 75 (2013).

R. Z. Tan, N. Ji, R. A. Mentink, H. C. Korswagen, and A. van Oudenaarden,



Deconvolving the roles of Wnt ligands and receptors in sensing and amplification,  
*Molecular Systems Biology* **9**:631 doi:10.1038/msb.2012.64 (2013).

M. Bienko, N. Crosetto, L. Teytelman, S. Klemm, S. Itzkovitz, and A. van Oudenaarden,  
A versatile genome-scale PCR-based pipeline for high-definition DNA FISH,  
*Nature Methods* **10**, 122 – 124 (2013).

## 2012

K. A. Peterson, Y. Nishi, W. Ma, A. Vedenko, L. Shokri, X. Zhang, M. McFarlane, J. M. Baizabal, J. P. Junker, A. van Oudenaarden, T. Mikkelsen, B. E. Bernstein, T. L. Bailey, M. L. Bulyk, W. H. Wong, and A. P. McMahon,  
Neural-specific Sox2 input and differential Gli-binding affinity provide context and positional information in Shh-directed neural patterning,  
*Genes and Development* **26**, 2802 – 2816 (2012).

N. Ji, and A. van Oudenaarden,  
Single molecule fluorescent in situ hybridization (smFISH) of *C. elegans* worms and embryos,  
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N. Barker, A. van Oudenaarden, and H. Clevers,  
Identifying the stem cell of the intestinal crypt: strategies and pitfalls,  
*Cell Stem Cell* **11**, 452 – 460 (2012).

J. H. van Es, T. Sato, M. van de Wetering, A. Lyubimova, A. N. Yee Nee, A. Gregorieff, N. Sasaki, L. Zeinstra, M. van den Born, J. Korving, A. C. Martens, N. Barker, A. van Oudenaarden, and H. Clevers,  
Dll1(+) secretory progenitor cells revert to stem cells upon crypt damage,  
*Nature Cell Biology* **14**, 1009 – 1104 (2012).

Y. Buganim, D. A. Faddah, A. W. Cheng, E. Itskovich, S. Markoulaki, K. Ganz, S. L. Klemm, A. van Oudenaarden, and R. Jaenisch,  
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*Cell* **150**, 1209 – 1222 (2012).

F. J. van Werven, G. Neuert, N. Hendrick, A. Lardenois, S. Buratowski, A. van Oudenaarden, M. Primig, and A. Amon,  
Transcription of two long noncoding RNAs mediates mating-type control of gametogenesis in budding yeast,  
*Cell* **150**, 1170 – 1181 (2012).

J. Munoz, D. E. Stange, A. G. Schepers, M. van de Wetering, B. Koo, S. Itzkovitz, R. Volckmann, K. S. Kung, J. Koster, S. Radulescu, K. Myant, R. Versteeg, O. J. Sansom, J. H. van Es, N. Barker, A. van Oudenaarden, S. Mohammed, A. J. R. Heck and H. Clevers,  
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N. Slavov and A. van Oudenaarden,  
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*Molecular Cell* **45**, 551 – 552 (2012).

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H. C. Korswagen, and D. M. Miller 3<sup>rd</sup>,  
UNC-4 antagonizes Wnt signaling to regulate synaptic choice in the *C. elegans* motor  
circuit,  
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R. D. Thiagarajan, P. Machanick, P. A. Gray, A. van Oudenaarden, D. H. Rowitch, C. D.  
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Identification of molecular compartments and genetic circuitry in the developing  
mammalian kidney,  
*Development* **139**, 1863 – 1873 (2012).

B. Munsky, G. Neuert, and A. van Oudenaarden,  
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*Science* **336**, 183 – 187 (2012).

N. Slavov, E. Airoidi, A. van Oudenaarden, and D. Botstein,  
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divergent eukaryotes,  
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J. H. van Es, A. Haegebarth, P. Kujala, S. Itzkovitz, B. K. Koo, S. F. Boj, J. Korving, M.  
van den Born, A. van Oudenaarden, S. Robine, and H. Clevers,  
A critical role for the Wnt effector Tcf4 in adult intestinal homeostatic self-renewal,  
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A. Noske, U. Zürrer-Härdi, G. Bell, W. L. Tam, S. A. Mani, A. van Oudenaarden, and R.  
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J. P. Junker and A. van Oudenaarden,  
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coregulated genes,  
*Molecular Cell* **45**, 437 – 438 (2012).

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*Cell* **148**, 608 – 619 (2012).

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