Daniel Kaganovich

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Education

Stanford University (Stanford, CA) **2002-2008**
PhD - Molecular Cell Biology

Harvard University (Cambridge, MA) **1997-2001**
AB - Biochemistry, Honors Degree

Fellowships and Awards

ERC Starting Grant from the European Research Council, 2013-2018
American Federation for Aging Research Young Investigator Award in Alzheimer's Disease, 2012
Golda Meir Fellowship Award, 2010
Fulbright Fellowship, 2009
Haas-Koshland Fellowship, 2007
NIH Doctoral Fellowship, 2004
Stanford University Biology Teaching Award, 2003
Harvard College Research Fellowship, 2000
Research Science Institute, 1996

Refereed Journals and Grants

Cell, Molecular Cell, Cell reports, TiBS, Biophysical Journal, Science, Nature, Scientific Reports, Nature communications, Nature Chemical Biology, Molecular Systems Biology, EMBO Journal, EMBO Reports, PLoS Biology, PLoS Genetics, FEBS Letters, Current Biology, Human Molecular Genetics, Lab-on-a-chip, Molecular Biology of the Cell., Journal of Molecular Biology, Stem Cell Reports, Journal of Cell Science, Open Biology, G3, PNAS, Microbial Cell, Molecular Neurology, Journal of Neurochemistry.
Guest Editor: PLoS Genetics; Frontiers in Cellular Neuroscience, Science Matters
Grant Reviewer: ERC starting and consolidator grans, MRC, CNRS, GIF, Birax, UK Welcome Trust, Research Foundation Flanders, Israel Science Foundation, Australian Research Council

Publications

Eliezer Keinan, Ayelet Chen Abraham, Aaron Cohen, Alexander I. Alexandrov, Reshef Mintz, Merav Cohen, Dana Reichmann, **Daniel Kaganovich*,** Yaakov Nahmias
High-Reynolds Microfluidic Sorting of Large Yeast Populations
Scientific Reports, 2018, Sept. 13. ***corresponding author***

Shlomi Brielle and **Daniel Kaganovich**
Mitochondrial dysfunction in protein conformational disorders.
Invited Review, Journal of Genetics, 2018 Jul;97(3):703-713.

Daniel Kaganovich
There's a Granule for That: Material Properties of Protein Granules Provide a Platform for Building Diverse Cellular Functions
Invited Review, Trends in Biochemical Sciences, 2017, August 4.

Triana Amen and **Daniel Kaganovich**
Integrative modules for efficient genome engineering in yeast
Microbial Cell, 2017, June 4.

Pratibha Siwach and **Daniel Kaganovich**
Getting stress out of stressed-out stress granules
Invited Review, EMBO Journal, 2017 May 22.

Rotem Gura Sadovsky, Shlomi Brielle, **Daniel Kaganovich***, and Jeremy L. England
Measurement of rapid protein diffusion in the cytoplasm by photo-converted intensity profile expansion
Cell reports, 2017 March 15. ***corresponding author***

Rachel Brown and **Daniel Kaganovich**
Look Out Autophagy, Ubiquilin UPS its Game
Invited Review, Cell, 2016 August 11.

Sandra Malmgren Hill, Xinxin Hao, Johan Grönvall, Stephanie Spikings-Nordby, Per O. Widlund, Triana Amen, Anna Jörhov, Rebecca Josefson, **Daniel Kaganovich**, Beidong Liu, Thomas Nyström
Asymmetric Inheritance of Aggregated Proteins and Age Reset in Yeast Are Regulated by Vac17-Dependent Vacuolar Functions
Cell reports, 2016 June 30.

Gyanendra P. Dubey, Ganesh Babu Malli Mohan, Anna Dubrovsky, Triana Amen, Shai Tsipshtein, Alex Rouvinski, Alex Rosenberg, **Daniel Kaganovich**, Eilon Sherman, Ohad Medalia and Sigal Ben-Yehuda
Revealing the Complexity and Characteristics of Bacterial Nanotubes
Developmental Cell, 2016 February 22.

Michelle L. Oeser, Triana Amen, Cory M. Nadel, Benjamin J. Reed, Ramon D. Jones, Janani Gopalan, **Daniel Kaganovich**, and Richard G. Gardner
Dynamic sumoylation of a conserved transcription corepressor prevents persistent inclusion formation during hyperosmotic stress
PLoS Genetics, 2016 January 22.

Triana Amen and **Daniel Kaganovich**
Yeast screening platform identifies FDA-approved drugs that reduce Abeta oligomerization
Invited Review, Microbial Cell, Vol. 3, No. 3, pp. 97 – 100 March 2016.

Shlomi Brielle, Rotem Gura, and **Daniel Kaganovich**
Imaging Stress
Invited Review, Cell Stress and Chaperones, 2015 July 4.

Sundararaghavan Pattabiraman and **Daniel Kaganovich**
Imperfect asymmetry: the mechanism governing asymmetric partitioning of damaged cellular components during mitosis
Invited Review, BioArchitecture, 2015 May 5.

Ofer Moldavski, Triana Amen, Smadar Zaidman, Miriam Eisenstein, Ilana Rogachev, Alexander Brandis, **Daniel Kaganovich***, and Maya Schuldiner
Lipid Droplets are Essential for Efficient Clearance of Cytosolic Inclusion Bodies
Developmental Cell, 2015 June 8. ***corresponding author***

Kelly Brock, Ayelet-chen Abraham, Triana Amen, **Daniel Kaganovich***, and Jeremy England
Structural basis for modulation of quality control fate in a marginally stable protein
Structure, 2015 July 7. ***corresponding author***

Triana Amen and **Daniel Kaganovich**
Dynamic droplets: the role of cytoplasmic inclusions in stress, function, and disease
Invited Review, Cell and Molecular Life Sciences, 2014 Oct 5.

Mikołaj Ogrodnik, Hanna Salmonowicz, Rachel Brown, Joanna Turkowska, Władysław Średniawa, Sundararaghavan Pattabiraman, Triana Amen, Ayelet-chen Abraham, Noam Eichler, Roman Lyakhovetsky, and **Daniel Kaganovich**
Dynamic JUNQ inclusions are asymmetrically inherited in mammalian cell lines through the asymmetric partitioning of vimentin
PNAS, 2014 May 18.

Sandra Tenreiro, Madalena M. Reimão-Pinto, Pedro Antas, José Rino, Donata Wawrzycka, Diana Macedo, Rita Rosado-Ramos, Triana Amen, Meytal Waiss, Filipa Magalhães, Andreia Gomes, Cláudia N. Santos, **Daniel Kaganovich** and Tiago Fleming Outeiro
Phosphorylation modulates clearance of alpha-synuclein inclusions in a yeast model of Parkinson's disease
PLoS Genetics, 2014 May 8.

Pamela S. Gallagher, Michelle L. Oeser, Ayelet-chen Abraham, **Daniel Kaganovich**, and Richard G. Gardner
Cellular maintenance of nuclear protein homeostasis
Invited Review, Cell and Molecular Life Sciences, 2013 Dec 5.

Jacob D. Wikstrom, Tal Israeli, Etty Bachar-Wikstrom, Avital Swisa, Yafa Ariav, Meytal Waiss, **Daniel Kaganovich**, Yuval Dor, Erol Cerasi, Gil Leibowitz
AMPK regulates ER morphology and function in stressed pancreatic β-cells via phosphorylation of DRP1.
*Mol Endocrinol*ogy. 2013 Aug 26.

Rachel Spokoini, Maya Shamir, Alma Keness, and **Daniel Kaganovich**
4D Imaging of Protein Aggregation in Live Cells
J Vis Exp. 2013 Apr 5;(74). doi: 10.3791/50083.

Maya Shamir and **Daniel Kaganovich**
High-Resolution 4D Imaging in Live Cells
Invited review, Encyclopedia of Analytical Chemistry, 2013 March 15. DOI: 10.1002/9780470027318.a9326

Rachel Spokoini, Ofer Moldavski, Yaakov Nahmias, Jeremy England, Maya Schuldiner, and **Daniel Kaganovich**
Confinement to organelle-associated inclusion structures mediates asymmetric inheritance of aggregated protein in budding yeast
Cell reports, 2012 Oct 25;2(4):738-47. Sept 27 online.

Sarah J. Weisberg, Roman Lyakhovetsky, Ayelet-chen Werdiger, Aaron D. Gitler, Yoav Soen, and **Daniel Kaganovich**
Compartmentalization of SOD1 G93A Aggregates Determines Their Toxicity
PNAS, 2012 Sept 25; 109 (39):15811-15816. Sept 11 online.

Tziona Ben-Gedalya, Roman Lyakhovetsky, Yifat Yedidia, Michal Bejerano-Sagie, Natalya M. Kogan, Marcela Viviana Karpuj, **Daniel Kaganovich** and Ehud Cohen
Cyclosporin A-induced PrP Aggresomes are Dynamic Quality Control Cellular Compartments
Journal of Cell Science, 2011 Jun 1;124(11):1891-902.

Jeremy England and **Daniel Kaganovich**
Polyglutamine shows a urea like affinity for unfolded cytosolic protein.
FEBS Letters, 2011 Jan;585(2):381-384.

Maya Amit, Sarah J. Weisberg, Michael Nadler-Holly, Ester Feldmesser, **Daniel Kaganovich**, Keith R. Willison, and Amnon Horovitz
Equivalent mutations in the different subunits of the eukaryotic chaperonin CCT result in dramatically distinct phenotypes
Journal of Molecular Biology, 2010 Aug 20;401(3):532-43.

Daniel Kaganovich, Ron Kopito, and Judith Frydman
Misfolded proteins partition between two distinct eukaryotic quality control compartments
Nature, 2008 Aug 28. 454(7195):1088-1095.

Amie J McClellan, Stephen Tam, **Daniel Kaganovich**, Judith Frydman
Protein quality control: chaperones culling corrupt conformations
Review, Nature Cell Biology, 2005 Aug;7(8):736-41.

Alexei F. Kisselev, **Daniel Kaganovich**, and Alfred L. Goldberg
Binding of hydrophobic peptides to several regulatory sites promotes peptide hydrolysis by all active sites of 20S proteasomes: evidence for peptide-induced channel opening in the α-rings
Journal of Biological Chemistry, 2002 June 21; 277(25): 22260-70.

Cain H. Yam, Wai Yi Siu, **Daniel Kaganovich**, Joan V. Ruderman, and Randy Y. C. Poon.
Cleavage of human cyclin A at R70/R71 by the bacterial protease OmpT
Proceedings of the National Academy of Sciences, 2001 Jan. 16. Vol. 98: 497-501.

Invited talks

May 21, 2019	*Conference: biology, cancer, and neurodegeneration, Rio de Janeiro, Brasil*
October 6, 2017	*9th Annual Alliance for Healthy Aging Conference, Mayo Clinic, Rochester, Minnesota, USA*
January 27, 2018	*International Federation for Cell Biology, Hyderabad, India*
February 26, 2017	*Next Generation ALS Research, Weizmann Institute, Israel*
September 12, 2016	*Jacques Monod Conference on Protein Misfolding and Disease, Brittany, France*
September 7, 2016	*Pasteur Institute, Paris, France*

July 5, 2016 *Symposium on Microbial Organelles and Interactions, Tel Aviv University, Israel*
June 30, 2016 *School of Medicine, Tsinghua University, Beijing, China*
June 14, 2016 Invited Talk, *Gordon Research Conference on Intermediate Filaments, Vermont, USA*
June 5, 2016 *American Federation for Aging Research conference, Santa Barbara, USA*
April 14, 2016 Keynote Lecture: *New Trends in Biological Microscopy (25th Pasteur-Weizmann Meeting)*
February 11, 2016 *Department of Biochemistry and Biophysics, UPenn, Pennsylvania, USA*
February 8, 2016 *Department of Cell Biology, Harvard Medical School, USA*
January 25, 2016 *Department of Biology, University of Copenhagen, Denmark*
January 14, 2016 *Department of Neurobiology, Tel Aviv University, Israel*
December 22, 2015 *Faculty of Medicine, Technion, Haifa, Israel*
June 26, 2015 *European Research Conference on Intermediate Filaments, Stockholm, Sweden*
March 26, 2015 *Institute of Neuropathology, Zurich University Hospital, Switzerland*
March 26, 2015 *Postdoc Association* Invited Talk*, Institute of Biochemistry ETH Zurich, Switzerland*
March 16, 2015 *Department of Biology, Technion, Haifa, Israel*
March 10, 2015 *Conference on scientific cooperation between Lower Saxony and Israel, Hanover, Germany*
February 26, 2015 *Department of Pharmaceutical Chemistry, UCSF, San Francisco, California, USA*
February 25, 2015 *Department of Chemical and Systems Biology at Stanford, California, USA*
February 15, 2015 *EMBO Workshop on Neurodegeneration, Jerusalem, Israel*
December 31, 2014 *Department of Biological Chemistry, Weizmann Institute of Science, Rehovot, Israel*
November 20, 2014 *Max Planck Institute of Molecular Cell Biology and Genetics, Dresden, Germany*
November 3, 2014 *7th International Meeting on Heat Shock Proteins in Biology and Medicine, Washington DC*
October 29, 2014 *HUJI-UMG Workshop on Mechanisms of Neurodegeneration, Jerusalem, Israel*
June 15, 2014 Invited Talk, *Gordon Research Conference on Intermediate Filaments, Vermont, USA*
May 18, 2014 *Department of Biochemistry, Hebrew University Medical School, Jerusalem, Israel*
November 18, 2013 *Minerva conference on mRNA and Protein Trafficking, Rehovot, Israel*
October 13, 2013 *Department of Neurobiology, Hebrew University Medical School, Jerusalem, Israel*
September 30, 2013 *Israeli Biophysical Society Annual Meeting, Jerusalem, Israel*
August 22, 2013 *Department of Microbiology, Gothenburg University, Gothenburg, Sweden*
August 16, 2013 *Department of Gene Technology, Tallinn Technical University, Tallinn, Estonia*
August 12, 2013 *Neuroscience Center, University of Helsinki, Helsinki, Finland*
June 25, 2013 *Israel Live Imaging Forum, Beer Sheva, Israel*
April 4, 2013 *Cell and Molecular Neuroscience Unit, Lisbon Faculty of Medicine, Portugal*
December 24, 2012 *Department of Biochemistry and Molecular Biology, Tel Aviv University, Israel*
August 29, 2012 *Adler Symposium on Protein Folding Quality Control, Gothenburg, Sweden*
May 20, 2012 *Brain Malfunction and Degeneration Conference, Jerusalem, Israel*
April 4, 2012 *Department of Pathology, Sackler School of Medicine, Tel Aviv University, Israel*
March 29, 2012 *Department of Biochemistry, Indiana University, Bloomington, IN*
February 16, 2012 *Department of Biochemistry, Boston University Medical School, Boston, MA*
February 13, 2012 *Department of Biochemistry and Molecular Biology, University of Nevada, Reno*
December 12, 2011 *National Institute of Biotechnology in the Negev, Ben Gurion University, Israel*
November 30, 2011 *Faculty of Life Sciences, Bar-Ilan University, Ramat-Gan, Israel*
August 26, 2011 *Cell Stress Society Focus Group on Stress and Healthy Aging, Quebec, Canada*
August 21, 2011 *Cell Stress Society International Conference, Quebec, Canada*
June 25, 2011 *Alzheimer's Disease Conference, Tel Aviv, Israel*
February 11, 2011 *Federation of Israel Societies for Experimental Biology Conference, Eilat, Israel*
December 15, 2010 *Dept. of Cell and Developmental Biology, UPenn Medical School, Philadelphia, PA*
May 30, 2010 *Department of Cellular Biochemistry, Hadassah Medical School, Jerusalem, Israel*
April 30, 2010 *Department of Cell Biology, Harvard Medical School, Boston, MA*
June 22, 2009 *Molecular Genetics Department, Weizmann Institute of Science, Rehovot, Israel*
May 26, 2009 *Structural Biology Department, Weizmann Institute of Science, Rehovot, Israel*
May 1, 2009 *Department of Biochemistry, UCSF, San Francisco, California*
November 20, 2008 *Lewis Sigler Institute, Princeton University, Princeton, New Jersey*

Organization of International Conferences

Organizer: 2017 Batsheva de Rothschild Seminar: **Nuclear Lamina and Nuclear Organization**

Organizer: 2015 EMBO Meeting: **Macromolecular Assemblies: Crossroads of Stress and Function**

Session chair: 2013 Cell Stress Society International Conference **Stress Proteins in Biology and Medicine**

Organizer of 2012 Hebrew University – University of Gottingen Symposium on neurodegenerative diseases **From genes to intervention: the molecular basis of neurological disorders**

Research Support

Ongoing

ERC european research council Starting Grant (PI Daniel Kaganovich)
Project Title: Harnessing the Dark Side of Protein Folding: Manipulating Aggregation for Recombinant Protein Production.
Award Amount: $2,400,000
Duration of Award: October 2013 - September 2019

EU Joint Program in Neurodegenerative Disease Resarch (JPND) (co-PI Daniel Kaganovich)
Project Title: Stress granules and proteostasis in motor neurons: towards a mechanistic understanding of ALS.
Joint Project: Simon Alberti (PI), Serena Carra, Angelo Poletti, Nico Dantuma, Jared Sterneckert
Award Amount: $2,011,698
Duration of Award: January 2016 - December 2019

Ministry of Science, Technology, and Space: Israeli-Italian Grant for Scientific and Technological Cooperation (PI Daniel Kaganovich)
Project Title: Dynamics and function of stress granules and other protein-RNA assemblies in Amyotrophic Lateral Sclerosis.
Joint Project: Serena Carra, University of Modena
Award Amount: $200,000
Duration of Award: October 2016 - March 2019

Israel Science Foundation: Joint Israel-India Grant (PI Daniel Kaganovich)
Project Title: Deciphering the structural role of glycogen in neuronal autophagy and neurodegeneration.
Award Amount: $320,000
Duration of Award: October 2016 - September 2019

Completed Funding

German Israeli Foundation (GIF) (PI Daniel Kaganovich)
Project Title: Building a molecular map of alpha-synuclein toxicity.
Joint Project: Tiago Outeiro and Silvio Rizzoli from the University of Gottingen
Award Amount: $182,400
Duration of Award: January 2014 - December 2016

Niedersachsen-Israel Research Cooperation Program (PI Daniel Kaganovich)
Project Title: The role of membrane binding on alpha-synuclein aggregation and cell-to-cell propagation in models of Parkinson's Disease.
Joint Project: Tiago Outeiro from the University of Gottingen
Award Amount: $300,000
Duration of Award: January 2014 - December 2017

Abisch-Frenkel Foundation for the Promotion of Life Sciences (PI Daniel Kaganovich)
Project Title: The neuronal cell biology of Tauopathy: examining the etiology of neuron-specific toxicity of Tau aggregation.
Award Amount: $45,000
Duration of Award: August 2015 - July 2017

American Federation for Aging Research Rosalinde and Arthur Gilbert Foundation and The Diane and Guilford Glazer Foundation in Partnership with the American Federation for Aging Research New Investigator Award in Alzheimer's Disease (PI Daniel Kaganovich)
Project Title: The Cell Biology of Protein Aggregation in a C. elegans Alzheimer Model.
Award Amount: $100,000
Duration of Award: July 2012 - June 2014

Israel Science Foundation (PI Daniel Kaganovich)
Project Title: Quality control of protein folding and aggregation.

Award Amount: $292,500
Duration of Award: October 2011 - September 2015

E-RARE-2 Consortium Grant for Transnational Projects on Rare Diseases (co-PI Daniel Kaganovich)
Project Title: Towards the Understanding of Pathological Protein Processing and Toxicity in Machado-Joseph Disease.
Joint Project: Philipp Koch (PI), Dineke Verbeek, Luis Pereira de Almeida, and Thorsten Schmidt
Award Amount: $1,200,000
Duration of Award: January 2013 – December 2015

Abisch-Frenkel Foundation for the Promotion of Life Sciences (PI Daniel Kaganovich)
Project Title: Amyloid management in yeast through spatial organization of aggregatesin the cytosol.
Award Amount: $45,000
Duration of Award: August 2011 - July 2013

German Israeli Foundation (GIF) (PI Daniel Kaganovich)
Project Title: Asymmetric inheritance of aggregate inclusions in yeast.
Award Amount: $57,000
Duration of Award: January 2012 - December 2012

National Institute for Psychobiology in Israel (PI Daniel Kaganovich)
Project Title: Determine the basis for the neuronal cell-type specificity of aggregation-induced toxicity: Examining the effect of neural stimulation and activity on protein folding stress and oxidative stress.
Award Amount: $25,000
Duration of Award: October 2011 - September 2012

Mentorship and Training

Postdocs

2010-2012 Roman Lyakhovetsky (current Position: Pharmacovigilance Associate at Teva Pharmaceuticals)
2013-present Pratibha Siwach (PBC India-Israel Postdoctoral Fellow)

PhD Students

2013-present Triana Amen (JBC Gold Doctoral Fellow and Bioengineering Fellow)
2014-present Sundaraghavan Pattabiraman
2014-present Shlomi Brielle (Bioengineering Fellow)
2013-2018 Rachel Brown
2011-2017 Ayelet-chen Abraham

Co-advised PhD students

James Owen Andrews, Ibrahim Cisse lab at MIT
Eliezer Keinan, Kobi Nahmias lab at HUJI
Ofer Moldavski, Maya Schuldiner lab at Weizmann

Undergraduate students

2010-2013	Maya Shamir	2010-2013	Noam Eichler
2012-2015	Vardit Levine	2014-2016	Moriya Elihu
2016-present	Eric Goldberg	2016-2017	Lily Ayoun

Study abroad students through the Rothberg School

Sarah Kornblau 2011, Margaret Cuniff 2012, Rebecca Khalandovsky 2011,
Hanna Salmonowicz 2013, Mikolaj Ogrodnik 2013, Rivkah Brown 2013, Jarrod Rulney, 2014, Idan Berman 2014-2015, Aaron Birnbaum sumer 2015, Ezra Roberts 2017, Alexander Alexandrov (EMBO Fellowship) 2017.

Courses taught at HU and UMG

Generation of CRISPR/Cas9 knockout and tagged cell lines (grad students)
Introduction to Cell biology: From Cell to Organism (Undergrad)
Advanced Cell Biology (Undergrad)
Avnei Pina Course – Biology of Aging (undergrad)
Life and death of proteins (Undergrad and Masters seminar course)
Imaging lab course workshop for advanced undergrad students (undergrad)
Lectures in course on Neurodegenerative Disease at ICNC (grad students)
Lectures in course on the Road to Successful Publications: Scientific Writing (Doctoral students)
The molecular basis of neurodegenerative disease, guest course at University of Coimbra (grad students)

Recent major accomplishments relevant to future plans

A major focus of my work for the past 10 years (~6 of them as a Principle Investigator) has been the basic biology of cellular aging.

I am currently pursuing 3 areas of research:

1. **Asymmetric aging** in dividing cells, including how single-celled organisms as well as differentiating stem cells maintain aging asymmetry and asymmetrically partition aggregates and other damaged components during replicative aging and neurogenesis.

We discovered a mechanism of aggregate retention in budding yeast mother cells which works by confining damaged proteins to cytosolic side of organelle membranes (Spokoini et al., 2012).

We elaborated part of the mechanism of delivering aggregates to the outer membrane of the vacuole in yeast, in collaboration with the Nystrom lab (Hill et al., 2016).

We found that the Vimentin intermediate filament is partitioned asymmetrically in dividing immortalized cell lines and in embryonic stem cells (Ogrodnik et al., 2014). We are currently studying the role of Vimentin in mediating aging asymmetry in differentiating mammalian cells. Specifically, we found that vimentin is needed for neuronal differentiation.

We are conducting ongoing research into a novel mechanism regulating the asymmetry of the yeast nuclear envelope.

2. **Spatial organization of protein folding quality control and aggregation** in yeast and neurons.

We found that ALS-associated aggregates "contaminate" healthy aggregate-like structures and cause toxicity (Weisberg et al., 2012). We are currently investigating the mechanisms targeting aggregates to different types of inclusion structures in yeast and in mammalian cells.

We have an ongoing project which has resulted in the identification of a novel mechanism regulating aggregate localization in yeast.

We discovered a novel functional association between aggregate inclusions and lipid droplets, which are important for maintaining the solubility of misfolded proteins (in collaboration with the Schuldiner group; Moldavski et al., 2015).

3. **Cellular functions deriving from aggregate-like membraneless organelles**, such as Stress Granules, and other RNP granules. In this context we are also studying multiple models of aging-associated neurodegeneration including ALS, Parkinson's, and Alzheimer's.

We demonstrated that Stress Granules and related RNP granules mediate metabolic adaptation (this is still unpublished). We are investigating the role of metabolic stress in ALS and related CNS disorders.

A major ongoing set of projects in the lab focuses on the difference between physiological and functional phase-separated structures on one hand, and more aggregated and dysfunctional inclusions on the other.

In collaboration with the Gardner lab, we used Structured Illumination Microscopy to visualize nuclear granules of a transcriptional repressor, whose function is thought to be regulated through phase separation and disaggregation (Oeser et al., 2016).

Additionally my lab has:

Developed new tools for genome engineering in yeast (Amen and Kaganovich., 2017).
Developed new protocols for TIRF imaging in yeast and bacteria (Dubey et al.,2017).
Works with Structured Illumination Microscopy and Light Sheet Illumination Microscopy.
Developed a novel approach for measuring protein diffusion in live cells, and characterized anomalous diffusion phenomena (Gura et al., 2017).
Developed a new protocol for BioID in yeast.