### **Curriculum Vitae**

Anne Brunet, PhD

### Address

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Stanford, CA 94305

### **Education**

1992	BS, Biology, <i>summa cum laude</i> , Ecole Normale Supérieure (France)
1992–1997	PhD, Biology, University of Nice (France)
1998-2003	Post-doctoral training, Harvard Medical School

### **Professional Experience**

09/1992–12/1997	Graduate student, Jacques Pouysségur's laboratory, University of Nice
	(France)
01/1998–12/2003	Post-doctoral fellow, Michael Greenberg's laboratory, Harvard Medical
	School
02/2004-02/2011	Assistant Professor of Genetics, Stanford University
02/2011-12/2014	Associate Professor of Genetics, Stanford University
12/2014-present	Professor of Genetics, Stanford University
01/2011-present	Co-director of the Paul F. Glenn Laboratories for the Biology of Aging at
·	Stanford
2015-present	Michele and Timothy Barakett Professor of Genetics. Stanford University

### **Honors and Awards**

1992	Summa cum laude, Ecole Normale Supérieure
1993-1997	Pre-doctoral fellowship, Ecole Normale Supérieure
1993	EMBO Short-Term Fellowship
1997	EMBO Long-Term Post-Doctoral Fellowship
1998–2000	Human Frontier Science Program Post-Doctoral Fellowship
2000	Medical Foundation Post-Doctoral Fellowship
2000–2002	Goldenson-Berenberg Post-Doctoral Fellowship, Harvard Medical School
2003	Radcliffe Institute for Advanced Studies Fellowship
2003	Lacaze-Policart Lacassagne Prize (French Academy of Science)
2005	Pfizer/AFAR Innovation in Aging Research Award
2005	Klingenstein Award in the Neurosciences
2005	Ellison Medical Foundation New Scholar Award (awarded)
2005	Damon Runyon Scholar Award (awarded)
2006	Sloan Research Fellowship
2006	Brain Tumor Foundation Award
2007	Glenn Award for Research in Biological Mechanisms of Aging
2007	McCormick Award for Women in Science
2008	California Institute of Regenerative Medicine New Faculty Award
2009	NARSAD Young Investigator Award
2009	Ellison Medical Foundation Senior Scholar Award

2010	Mentoring Award from the Stanford University Post-doctoral
	Association
2012	Vincent Cristofalo Rising Star Award in Aging Research
2012	NIH Director Pioneer Award
2014	Bennett J. Cohen Award for Research in Aging
2015	Michele and Timothy Barakett Endowed Professorship
2018	NIH Director Transformative Research Award
2022	FNIH Lurie Prize Award

# **Keynote and Named Lectures**

2013	Koshland Lecture, UC Berkeley
2014	Bennett J. Cohen Lecture – University of Michigan
2015	World Economic Forum, Davos, Switzerland
2017	Keynote Lecture - Strategic Conference of Zebrafish Investigators, Pacific Grove
2017	Keynote Lecture - EMBO Conference - Advances in Stem Cells and Regenerative Medicine, Heidelberg, Germany
2017	Sager Lecture - Marine Biological Laboratory Friday Evening Lecture, Woods Hole
2018	Keynote Lecture - University of Wisconsin-Madison – Aging, Metabolism, Stress, Pathogenesis and Small RNAs in <i>C. elegans</i>
2018	Keynote Lecture - Society for the Study of Reproductions – Pathways to Discovery: Signals for Reproduction, Development and Longevity, New Orleans
2018	Keynote Lecture – Biology of Time – Exciting Biologies, Phoenix
2021	Keynote Lecture – Harvard Stem Cell Institute, Cambridge, MA
2021	Named Lecture – NIH Florence Mahoney Lecture on Aging, Bethesda, MD
2021	Keynote Lecture – EMBO EMBL Symposium – Metabolism Meets Epigenetics, Heidelberg, Germany

# **External Advisory Panels and Boards**

2007-present 2011-2013	American Federation for Aging Research (AFAR) Reviewing Committee Ellison Medical Foundation Reviewing Committee
2010-2012	NIH Program Project Ad Hoc Reviewer
2012-2015	NIH Study Section (CMAD) - Permanent Member
2015-2016	NIH Study Section (CMAD) - Chair
2011-2016	Member of Faculty of 1000
2020-2021	External Advisory Board, T32 UC Berkeley
2011-2022	Editorial Board, Longevity & Healthspan
2012-2022	Editorial Board, Aging Cell
2009-present	Editorial Board, <i>Aging</i>
2015-present	Editorial Board, Cell Reports
2017-present	Editorial Board, Genes & Development
2020-present	Editorial Board, Cell Stem Cell
2020-present	External Advisory Board, Nathan Shock Center, University of Washington
2020-present	External Advisory Board ( <u>Chair</u> ), Salk's AHA/Allen Center for Aging and Alzheimer's Disease

# **Stanford University Service**

2009-2015	Genetics Retreat Committee
2011, 2017, 2019	Genetics Faculty Search Committee
2014-2021	Bio-X Leadership Council
2014-2021	Review Committee BioX
2018-2021	Review committee Big Ideas – Stanford Neuroscience Institute
2015-2021	T32 co-Director (with Tom Rando) – Aging
2017-2021	T32 PI (with David Kingsley) – Genetics and Developmental Biology
2011-2022	Dean's post-doctoral fellowship review committee
2005-present	Genetics Graduate Student Admission Committee
2022-present	Steering committee – Knight Initiative
2011-present	Co-Director of Glenn Center (with Tom Rando and Tony Wyss-Coray)

# National and International Meeting Organization

2013-present	Bay Area Aging Meeting at Stanford
2013	NIH Geroscience Summit – Epigenetics and aging session
2014	Cold Spring Harbor Laboratory Meeting – PTEN Pathway and Targets
2015	Les Treilles Foundation – Aging and metabolism
2015	International Society for Stem Cell Research committee
2016	Keystone Symposium – Epigenetics and Metabolic Regulation of Aging
2016	Cell Symposium – Metabolism and Aging
2016	Cold Spring Harbor Laboratory Meeting – PI3K/mTOR/PTEN Network
2018	Keystone Symposium – Cancer Epigenetics: New Mechanisms, New
	Therapies
2018	FASEB – Transcription, Chromatin, and Epigenetics
2018	Cell Symposia – Aging and Metabolism
2018	Cold Spring Harbor Laboratory Meeting – Nutrient Signaling
2022	FASEB – Transcription, Chromatin and Epigenetics in Aging Meeting

## **Invited Lectures**

2004 2004 2004 2004	Upstate Cell Signaling Symposium. Dundee, Scotland Cell Press Symposium, Aging and Human Disease Meeting. Italy Stowers Institute for Medical Research. Kansas City, MO
<u>2005</u>	
2005	Kavli Institute for Theoretical Physics Symposium, Networks in Growth, Death, and Aging. Santa Barbara, CA
2005	University of Texas South Western. Dallas, TX
2006	
2006	Cold Spring Harbor Meeting, PTEN pathways. Cold Spring Harbor, NY
2006	ASBMB meeting. San Francisco, CA
2006	CNIO Cancer Conference, PTEN and the AKT route. Madrid, Spain
2006	Gordon Conference, Phosphorylation and G-protein mediated signaling networks. Biddeford, Me
2006	20 <sup>th</sup> IUBMB International Congress of Biochemistry and Molecular Biology and 11 <sup>th</sup> FAOBMB Congress. Kyoto, Japan

2006 2006 2006 2006	Steiner Foundation Meeting. Brunnen, Switzerland Cold Spring Harbor Laboratory. Cold Spring Harbor, NY University of California Irvine. Irvine, CA University of California, San Diego. San Diego, CA
2007	
2007	Keystone Symposium, Cell Signaling and Proteomics. Steamboat Spring, CA
2007	American Association for Cancer Research Annual Meeting. Los Angeles, CA
2007	Xth International Symposium on Insulin Receptors and Insulin Action.
2007	Stockholm, Sweden The New York Academy of Science, The PI3K-PTEN-AKT-TOR Signaling Pathway in Cancer, Metabolism, and Aging. New-York, NY
2007	FASEB Summer Research Conference, Obesity, Energy Balance and Disease. Indian Wells, CA
2007 2007	The 4 <sup>th</sup> Key Symposium, The Biology of Ageing. Stockholm, Sweden Buck Institute Symposium, Nutrient Signaling and Aging. Novato, CA
2008	
2008	Keystone Symposium, Metabolic Pathways of Longevity. Copper Mountain, CO
2008	American Diabetes Association. San Francisco, CA
2008	International Symposium on Olfaction and Taste. San Francisco, CA
2008	California Institute of Regenerative Medicine Annual Meeting. San Francisco, CA
2008	Cold Spring Harbor Meeting on the Genetics of Aging. Cold Spring Harbor, NY
2008	Harvard/California meeting on Stem Cell Biology. Los Angeles, CA
2008	San Antonio Nathan Shock Aging Center Conference on Aging. Bandera, TX
2008	University of Utah. Salt Lake City, UT
2008	Buck Institute for Age Research. Novato, CA
2008	Massachusetts General Hospital, Harvard Medical School. Boston, 2009 Gordon Research Conference, Biology of Aging. Ventura, CA
2009	
2009	Gordon Research Conference, Signal Transduction within the Nucleus. Ventura, CA
2009	Keystone Symposium, PI3-kinase signaling in disease. Olympic Valley, CA
2009	Banbury Meeting, Molecular Biology of Sirtuins. The Banbury Center, NY
2009	Brown University '09 Colloquium. Brown University, RI
2009	American Aging Association, 38 <sup>th</sup> Annual Meeting. Scottsdale, AZ
2009	CNIO Cancer Conference, The Energy of Cancer. Madrid, Spain
2009	Buck Institute Symposium, Systems Biology of Aging. Novato, CA
2008	Rockefeller Institute. New-York City, NY
2009 2009	Gladstone Institute. San Francisco, CA Harvard Medical School, Department of Pathology. Boston, MA
2009	Duke University. Durham, NC
2009	University of Cologne, Germany

<u>2010</u>	
2010	Cellular Stress and Aging Symposium. University of North Carolina, NC
2010	Keystone Symposium, New Insights into Healthspan and Diseases of Aging. Tahoe City, CA
2010	Cold Spring Harbor Meeting, PTEN Pathways and Targets. Cold Spring Harbor, NY
2010	Signaling and Cellular Regulation Symposium, University of Boulder, CO
2010	Paul Glenn Symposium, Biology of Aging, Santa Barbara, CA
2010	Keynote Speaker, Signaling Quebec 2010, Canada
2010	Ellison Medical Foundation Annual Meeting, Woods Hole, MA
2010	Gordon Conference on Aging, Les Diablerets, Switzerland
2010	AMPK: Central Regulatory System in Metabolism & Growth, FASEB Conference, Kyoto, Japan
2010	Cancer Metabolism, Barcelona Biomed Conference, Spain
2010	Symposium Nijmejen, The Netherlands
2010	Glenn Symposium, Salk Institute
2010	University of Strasbourg, France
2010	University of Utrecht, The Netherlands
2010	National Cancer Institute. Amsterdam, The Netherlands
2010	UC Irvine, CA
2010	Burnham Institute, CA
2010	Curie Institute, Paris, France
2010	University of Pennsylvania, Philadelphia, PA
<u>2011</u>	
2011	Genome, Cancer & Ageing Symposium, 3 <sup>rd</sup> Monaco Age Oncology
2011	The forefront of therapeutic approaches to Neurodegeneration: Age modifiers, proteostasis, and stem cells, The Bahamas
2011	Gordon Conference, Oxidative Stress & Disease, Ventura, CA
2011	Gordon Conference, Signal Transduction within the nucleus, Ventura, CA
2011	Keynote Speaker at the Retreat for MD Anderson, TX
2011	French American Biotechnology Symposium, Approaches of Aging, San Francisco, CA
2011	3rd Else Kröner-Fresenius Symposium on Molecular Mechanisms of Stem Cell Aging, Germany
2011	The 24 <sup>th</sup> Sigrid Juselius Symposium on post-translational modification networks as survival determinant, Espoo, Finland
2011	The Paul F. Glenn Symposium on Aging, Boston, MA
2011	FASEB Summer Research Conference, Epigenetics, Chromatin &
20	Transcription, Snowmass, CO
2011	Gordon Conference, Epigenetics, Easton, MA
2011	Stem Cells in Development and Disease, Berlin, Germany
2011	Rostock Symposium on System Biology and Bioinformatics in Ageing Research, Rostock, Germany
2011	
2011	Symposium on Genetics of Aging and Life History, Pohang, Korea
2011	Symposium on Genetics of Aging and Life History, Pohang, Korea EMBO Molecular Medicine Conference on Molecular Insights for innovative therapies, Heidelberg, Germany
	EMBO Molecular Medicine Conference on Molecular Insights for
2011	EMBO Molecular Medicine Conference on Molecular Insights for innovative therapies, Heidelberg, Germany
2011	EMBO Molecular Medicine Conference on Molecular Insights for innovative therapies, Heidelberg, Germany Gladstone, UCSF, San Francisco, CA

2011 2011 2011 2011 2011 2011	University of Washington, Seattle, WA Harvard Medical School, Childrens Hospital, Boston, MA University of California, Berkeley, CA University of California, San Francisco, CA University of Southern California, Los Angeles, CA University of San Antonio, San Antonio, TX
2012 2012 2012 2012 2012 2012 2012 2012	Keystone Symposium, Stem Cells, Squaw Valley, CA Keystone Symposium, Organ Regeneration, Breckenridge, CO Spector Prize lecture Symposium, Columbia University, NY Cell Press LabLinks meeting on Neural Stem Cells, San Francisco, CA ASBMB meeting, San Diego, CA AGE meeting, Fort Worth, TX Meeting Fondation Les Treilles, France Wilsede Meeting, Wildsede, Germany Cold Spring Harbor Meeting on the Genetic and Molecular mechanisms of aging, Cold Spring Harbor, NY 9th Nestlé International Nutrition Symposium, Lausanne, Switzerland Keystone Symposia Aging and Disease of Aging, Tokyo, Japan Stem Cells and Metabolism Abcam, La Jolla, CA Weill Cornell Medical School, New-York, NY Sloan Kettering, New-York, NY Gurdon Institute, Cambridge, UK Babraham Institute, Cambridge, UK Joslin Diabetes Center, Boston, MA
2013 2013 2013 2013	Council Meeting, NIA, Washington, DC Epigenetic Symposium, University of Pennsylvania, Philadelphia, PA Miami 2013 Winter Symposium, Miami, FL
2013 2013 2013	Keystone Symposia Stem Cell Regulation in Homeostasis and Disease, Banff, Canada Keystone Symposia Epigenetic Marks and Cancer, Santa Fe, NM NCI Symposium Epigenetics in Development, Bethesda, MD
2013 2013 2013	First Cologne Aging Conference, Cologne, Germany V Else Kröner-Fresenius Symposium Adult Stem Cell in Aging, Wartburg, Germany 25 <sup>th</sup> Pezcoller Symposium, Metabolism and Tumorigenesis, Trento, Italy
2013 2013 2013 2013	Gordon Conference Developmental Biology, Lucca, Italy Ellison Medical Foundation Symposium, Woods Hole, MA Gordon Conference on Aging, Lucca, Italy 14 <sup>th</sup> Annual Skirball Symposium, Metabolism – from molecules to
2013 2013	behavior, New-York, NY JB Little Symposium – Harvard School of Public Health, Boston, MA Advances in Geroscience: Impact on healthspan and chronic diseases, NIH, Bethesda, MD
2013 2013 2013	Abcam meeting – Chromatin Structure and function, Grand Cayman Island Cold Spring Harbor Laboratories, Cold Spring Harbor, NY Columbia University, NY

2013 2013 2013 2013 2013	MIT, Boston, MA Brandeis, Boston, MA Pasteur Institute, Paris, France Koshland Lecture, UC Berkeley, CA Albert Einstein College of Medicine, NY
2014 2014 2014 2014 2014 2014 2014 2014	Keystone Meeting – Tumor metabolism, Whistler, Canada Cold Spring Harbor Meeting PTEN, Cold Spring Harbor, NY Keystone Meeting – Epigenetic Programming and Inheritance, MA Yale University, New Haven, CT Cornell University, Ithaca, NY Gordon Conference Meeting – Phosphorylation and G-protein mediated signaling network, Biddeford, ME Beatson International Cancer Conference, Scotland EMBL meeting metabolism, Heidelberg, Germany University of Michigan, Ann Arbor, MI University of California at San Diego, San Diego, CA University of Utah, Salt Lake City, UT
2015 2015 2015 2015 2015 2015 2015 2015	Aging Symposium, Burnham Institute, San Diego, CA World Economic Forum, Davos, Switzerland Fusion Conference – Intervention in Aging, Cancun, Mexico Gordon Conference – Stem Cells and Cancer, Ventura, CA Les Treilles Symposium – Physiology, Les Treilles, France EMBO Workshop on Developmental Circuits in Aging, Heraklion, Crete Cold Spring Harbor Meeting, 21st Century Genetics – Genes at Work, NY Les Treilles Symposium – The Role of Metabolism in Ageing and Ageing Related Disease, Les Treilles, France Gordon Conference - Developmental Biology, South Hadley, MA FASEB–Transcription, Chromatin, and Epigenetics, West Palm Beach, FL Gordon Conference - Biology of Aging, Newry, ME Cold Spring Harbor Meeting - Mitochondria and Cancer, NY Cold Spring Harbor Asia - Molecular Basis of Aging and Disease, China Janelia Conference – Behavioral Epigenetics, Ashburn, VA Stanford Neuroscience Institute Symposium, Stanford, CA ABCAM – Epigenetics, Obesity and Metabolism, Cambridge, UK Jacques Monod Conference – Comparative Biology of Aging, France UCSF, San Francisco, CA University of Colorado, Aurora, CO ABCAM – Chromatin: Structure and Function 2015, Grand Cayman Island
2016 2016 2016 2016 2016 2016 2016	Stem Cell Symposium - Seattle, WA Keystone Symposium - Noncoding RNAs in Health and Disease, NM Keystone Symposium - Chromatin regulation in cancer, Whistler, Canada Development Symposium - Chicago, IL Baylor College of Medicine, Houston, TX Rockefeller University, New-York, NY

2016	Princeton University, Newark, NJ
2016	UT Southwestern, Dallas, TX
2016	Stowers Institute for Medical Research, Kansas City, MO
2016	Keystone Symposium – Epigenetic and Metabolic Regulation of Aging
2010	and Aging-related Diseases, Santa Fe, NM
2016	Department of Cell Biology, Harvard Medical School, Boston, MA
2016	ISSCR Stem Cell meeting, San Francisco, CA
2016	Cell Symposium – Transcriptional Regulation in Development and
2010	Disease, Chicago, IL
2016	University of Wisconsin-Madison – Aging, Metabolism, Stress,
2010	Pathogenesis and Small RNAs in C. elegans, Madison, WI
2016	SDB-ISD International Conference, Boston, MA
2016	EMBL Conference – Transcription and Chromatin, Heidelberg,
2010	Germany
2016	Cold Spring Harbor Laboratory – Mechanisms of Aging, NY
2016	Cold Spring Harbor Laboratory – Mechanisms of Aging, NY  Cold Spring Harbor Laboratory – Germ Cells, NY
2016	ITMAT International Symposium, Philadelphia, PA
2016	University of Dundee - Cell Signaling Lecture, Scotland, UK
2016	GSA Pre-Conference Session - A Phylogenetic View of Interventions
2010	in Aging, New Orleans, LA
2016	Miami Epigenetics and Cancer Symposium, Miami Beach, FL
2016	NIH Common Fund High-Risk, High-Reward Research Symposium,
2010	Bethesda, MD
	Detriesda, MD
<u>2017</u>	
<del>2017</del> 2017	Keynote Lecture - Strategic Conference of Zebrafish Investigators,
2011	Pacific Grove, CA
2017	Scripps Florida Symposium – The Biology of Aging, Jupiter, FL
2017	Gordon Research Conference – Stem Cells & Cancer, Lucca, Italy
2017	Fusion Conference – Interventions in Aging, Cancun, Mexico
2017	Sloan Kettering Institute, New York, NY
2017	Yale University School of Medicine, New Haven, Connecticut
2017	Harvard University, T.H. Chan School of Public Health, Boston, MA
2017	Harvard University, Department of Molecular & Cellular Biology,
2011	Cambridge, MA
2017	ASBMB Annual Meeting, Chicago, IL
2017	Keynote Lecture - EMBO Conference - Advances in Stem Cells and
	Regenerative Medicine, Heidelberg, Germany
2017	UCSF – DSCB Symposium, San Francisco, CA
2017	Pasteur Institute – Developmental & Stem Cell Biology, Paris, France
2017	Cold Spring Harbor Laboratory – Genome Engineering: The
	CRISPR/Cas Revolution, Cold Spring Harbor, NY
2017	Marine Biological Laboratory Friday Evening Lecture, Woods Hole,
	MA
2017	FASEB – Reversible Acetylation on Health and Disease, Big Sky, MT
2017	QB3 Berkeley – Rewriting Genomes, Berkeley, CA
2017	EMBO Meeting – Gene regulatory mechanisms in neural fate
÷ · ·	decisions, San Juan de Alicante, Spain
2017	Foresight Institute – Atomic Precision for Healthspan and Longevity,
	Palo Alto, CA
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2017	Scripps Research Institute – The TSRI Distinguished Cell and
2017	Molecular Biology Lecture Series, La Jolla, CA Molecular Biology of Ageing Meeting, Groningen, The Netherlands
2017	Chan Zuckerberg Biohub, San Francisco, CA
2017	Broad Institute – Cell Circuit and Epigenomics Seminar, Cambridge,
	MA
2017	Whitehead Institute Seminar Series, Cambridge, MA
2017	Stanford University – Inflammation, Aging and Chronic Disease
	Conference, Stanford, CA
<u>2018</u>	
2018	Wellcome Genome Campus – Healthy Ageing: From Molecules to
	Organisms, Hinxton, Cambridge, UK
2018	Keystone Conference - Cancer Epigenetics: New Mechanisms, New
	Therapies, Breckenridge, CO
2018	Fusion Conference – Neuroepigenetics and Neuroepitranscriptomics,
	Cancun, Mexico
2018	Genentech, South San Francisco, CA
2018	University of Southern California – Regenerative Medicine and Stem
	Cell Research, Los Angeles, CA
2018	Buck Student Aging Symposium, Novato, CA
2018	University of Washington – Basic Biology of Aging Seminar, Seattle,
	WA
2018	Columbia University – Genetics and Development Departmental
	Seminar, New York, NY
2018	CNIO "La Caixa" Foundation Frontiers Meeting - Molecular, Cellular
	and Organismal Hallmarks of Aging, Madrid, Spain
2018	Max Planck Institute for Biology of Ageing, Nothobranchius
	Symposium, Cologne, Germany
2018	<b>Keynote Lecture</b> - University of Wisconsin-Madison – Aging,
	Metabolism, Stress, Pathogenesis and Small RNAs in <i>C. elegans</i> ,
	Madison, WI
2018	RAND Summer Institute, Santa Monica, CA
2018	Keynote Lecture - Society for the Study of Reproductions -
	Pathways to Discovery: Signals for Reproduction, Development and
0040	Longevity, New Orleans, LA
2018	FASEB – Protein Phosphorylation Networks in Health and Disease,
0040	Snowmass, CO
2018	University of Basel – Stem Cell Dynamics Throughout Life: From
2010	Development to the Adult, Basel, Switzerland
2018	Max Planck Institute for Biology of Ageing – 10 <sup>th</sup> Anniversary
2018	Symposium, Cologne, Germany FASEB – Transcription, Chromatin, and Epigenetics, Florence, Italy
2018	, , , , , , , , , , , , , , , , , , , ,
	Cell Symposia – Aging and Metabolism, Sitges, Spain <b>Keynote Lecture</b> – Biology of Time – Exciting Biologies, Phoenix,
2018	AZ
2018	Cold Spring Harbor Laboratory – Nutrient Signaling, Cold Spring
2010	Harbor, NY
2018	Sanford Burnham Prebys Medical Discovery Institute – Epigenetics
2010	of development, aging and disease, La Jolla, CA
	or dovolopinions, aging and diocase, La bolla, OA

2018	Sylvester Comprehensive Cancer Center – Miami Epigenetics and Cancer Symposium, Miami Beach, FL
2018 2018	Gerontological Society of America Meeting, Boston, MA Northwestern University – SQE Epigenetics, Chromatin, and Human Disease, Chicago, IL
2018 2018	Buck Institute – 30 <sup>th</sup> Anniversary Symposium, Novato, CA American Society for Cell Biology – Beyond Homeostasis: Stem Cells Under Stress, San Diego, CA
2018	NASA Ames Research Center – XO Seminar, Mountain View, CA
<u>2019</u>	
2019	University of California, San Francisco – Basic Science Seminar, San Francisco, CA
2019	UCSF Gladstone Institutes – GICD/CVRI Seminar, San Francisco, CA
2019 2019	Fusion Neurogenesis Conference, Nassau, Bahamas University of Washington, Seattle, WA
2019	Keystone Symposia – Epigenetics and Human Disease, Banff, Alberta, Canada
2019 2019	McGill University – Molecular Seminar, Montréal, Canada Harvard Medical School – Department of Genetics Seminar, Boston, MA
2019	Brown University – Biology of Aging Seminar, Providence, Rhode Island
2019	University of Oregon – Institute of Molecular Biology Seminar, Eugene, OR
2019	Les Treilles Symposium – Nutrient Sensing and the Metabolic Control of Cell Growth, Les Treilles, France
2019	Eurogenesis Meeting 2019 - Bordeaux, France
2019	Marabou Symposium – Nutrition and Stem Cell Integrity in Ageing, Stockholm, Sweden
2019	Erasmus University Medical Center – Ageing, Health and Rejuvenation, Rotterdam, The Netherlands
2019	Gordon Research Conference – Molecular, Cellular and Physiological Determinants of Lifespan and Healthspan, Sunday River, Newry, Maine
2019	Morgridge Metabolism Symposium – Frontiers in Metabolism - Mechanism of Metabolic Disease, Madison, WI
2019	Foundation des Treilles – Stem Cells, Aging and Stress Response Mechanisms, Tourtour, France
2019	University of Michigan – Department of Molecular and Integrative Physiology, Ann Arbor, MI
2019	Yale School of Medicine – Genetics Department Seminar Series, New Haven, CT
2019	University of California, San Francisco – Hillblom Aging Symposium, San Francisco, CA
2019	Gerontological Society of America Scientific Meeting – Strength in Age: Harnessing the Power of Networks, Austin, TX
2019	Barcelona BioMed Conference – Immunotherapy beyond cancer. A cure for age-related diseases, Barcelona, Spain

2019	Harvard University – Department of Molecular and Cellular Biology, Cambridge, MA
<u>2020</u>	
2020	Albert Einstein College of Medicine – Stem Cell Symposium – Gene
2020	Editing and RNA Biology in Stem Cells, Bronx, NY
2020	Keystone Symposia – Gene Regulation: From Mechanisms to
2020	Disease, joint meeting with Cancer Epigenetics: New Mechanisms
	and Therapeutic Opportunities, Keystone, CO
2020	Keystone Symposia – Intra- and Intercellular Mechanisms of Aging,
2020	Vancouver, Canada
2020	(Virtual) Northwestern University - Proteostasis Consortium Seminar
2020	Series – Working to solve aging and neurodegenerative disease,
	Evanston, IL
2020	(Virtual) Aging Science Talks – The African killifish – a vertebrate
2020	model to study aging and 'suspended animation'
2020	(Virtual) Baylor College of Medicine – MCB Seminar Series, Houston,
2020	TX
2020	(Virtual) MIT Aging Brain Symposium – Cellular & Molecular
2020	Mechanisms of Neurodegeneration, Cambridge, MA
2020	(Virtual) Cold Spring Harbor Laboratory – Mechanisms of Aging, Cold
2020	Spring Harbor, NY
2020	(In-Person) Los Altos Hills Conference – Tackling Biology's Final
	Frontier, Los Altos Hills, CA
2020	(Virtual) Oregon Health and Science University – Epigenetics
	Symposium, Portland, OR
2020	(Virtual) Cedars-Sinai – Center for Neural Science and Medicine
	Seminar, Los Angeles, CA
2020	(Virtual) MRC Laboratory of Molecular Biology – LMB Seminar,
	Cambridge, England, UK
2020	(Virtual) GSA Annual Scientific Meeting – Turning 75: Why Age
	Matters, Philadelphia, Pennsylvania
2020	(Virtual) Genentech – Neuroscience Department, South San
	Francisco, CA
<u>2021</u>	4.5.4 N. HOOF BY 11 1 C 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
2021	(Virtual) UCSF Biomedical Sciences Seminar, San Francisco, CA
2021	(Virtual) Inserm Conference, Paris, France
2021	(Virtual) NYU School of Medicine, Kimmel Center of Stem Cell
2224	Biology, New York, NY
2021	(Virtual) Northeastern Biology Colloquium, Boston, MA
2021	(Virtual) UCSD – Biomedical Sciences Program, San Diego, CA
2021	(Virtual) Calico Life Sciences, South San Francisco, CA
2021	(Virtual) Memorial Sloan Kettering Cancer Center – MSK Kravis
0004	Women in Science Symposium, New York, NY
2021	(Virtual) University of Wisconsin-Madison – Molecular and Cellular
0004	Pharmacology Seminar, Madison, WI
2021	(Virtual) University of Massachusetts, Worcester, MA
2021	Named Lecture - (Virtual) NIH Florence Mahoney Lecture on Aging,
	Bethesda, MD

2021	(Virtual) Stanford Distinguished Careers Institute Colloquium, Stanford, CA
2021	<u>Keynote Lecture</u> - (Virtual) Harvard Stem Cell Institute, Cambridge, MA
2021	(Virtual) Cold Spring Harbor Laboratory – Cellular Dynamics and Models, Cold Spring Harbor, NY
2021	(Virtual) Cold Spring Harbor Laboratory – Biological Time Keeping, Cold Spring Harbor, NY
2021	(Virtual) Keystone Symposia - Molecular and Cellular Biology, Denver, CO
2021 2021	(Virtual) Pezcoller Symposium – Aging and Cancer, Trento, Italy
2021	(Virtual) International Society for Stem Cell Research, Hamburg, Germany
2021	(In-Person) Aging Research and Drug Discovery Conference (ARDD), Copenhagen, Denmark
2021	<ul> <li>(Virtual) Center for Molecular Medicine Cologne Symposium (CMMC)</li> <li>25 Years of Progress in Molecular Medicine: From Basic Research to Clinical Application, Cologne, Germany</li> </ul>
2021	(Virtual) Genentech – Journeys in Science Seminar, South San Francisco, CA
2021	(Virtual) Cold Spring Harbor Laboratory – Mechanisms of Metabolic Signaling, Cold Spring Harbor, NY
2021	(Virtual) University of Pennsylvania – Institute for Regenerative Medicine Symposium, Philadelphia, PA
2021	(Virtual) University of Cambridge – Department of Physiology, Development and Neuroscience Seminar, Cambridge, United Kingdom
2021	<u>Keynote Lecture</u> - (Virtual) EMBO EMBL Symposium – Metabolism Meets Epigenetics, Heidelberg, Germany
2021	(Virtual) University of Pennsylvania – Developmental, Stem Cell, and Regenerative Biology, Philadelphia, PA
2021	(Virtual) Fritz Lipmann Institute Seminar, Jena, Germany
<b>2022</b> 2022	(Virtual) University of Washington, Seattle, WA
2022	(In-Person) Harvard Medical School – Cell Biology Seminar Series, Boston, MA
2022	(Virtual) University of Toronto – Medicine by Design Global Speaker Series, Toronto, Canada
2022	(In-Person) Monte Verità Conference – Neurogenesis from Development to Adulthood in Health and Disease, Monte Verità, Ascona, Switzerland
2022	(In-Person) Euro-Geroscience Conference, Toulouse, France
2022	(Virtual) Keystone Symposia – Cancer: Aging in the Driver's Seat, Snowbird, UT
2022	(In-Person) Cell Symposia – Metabolites in Signaling and Disease, Lisbon, Portugal
2022	(In-Person) Fusion Conference – Epigenetics: From Mechanisms to Disease, Cancun, Mexico
2022	(In-Person) EMBO Workshop – Developmental Circuits in Aging, Heraklion, Greece

2022	(In-Person) Keystone Symposia – Tissue Fibrosis and Repair:
	Mechanisms, Human Disease and Therapies, Keystone, CO
2022	(In-Person) University of Wisconsin-Madison – Metabolism, Aging,
	Pathogenesis, and Stress in <i>C. elegans</i> , Madison, WI
2022	(In-Person) FASEB Meeting – Transcription, Chromatin and
	Epigenetics in Aging, Sicily, Italy

### **Publications**

### **Peer-Reviewed Journal Articles**

- 1. Lenormand P, Sardet C, Pagès G, L'Allemain G, <u>Brunet A</u> and Pouysségur J (1994) Growth factors induce nuclear translocation of MAP kinases (p42mapk and p44mapk) but not their activator MAP kinase kinase (p45mapkk) in fibroblasts. *J Cell Biol*, 122: 1079-1088.
- 2. Pagès G\*, <u>Brunet A</u>\*, L'Allemain G and Pouysségur J (1994) Constitutive mutant and putative regulatory serine phosphorylation site of mammalian MAP kinase kinase (MEK1). *EMBO J*, 13: 3003-3010. \*: both authors have contributed equally to the work.
- 3. <u>Brunet A</u>, Pagès G and Pouysségur J (1994) Constitutively active mutants of MAP kinase kinase (MEK1) induce growth factor-relaxation and oncogenicity when expressed in fibroblasts. *Oncogene*, 9: 3379-3387.
- 4. <u>Brunet A</u>\*, Pagès G\* and Pouysségur J (1994) Growth factor-stimulated MAP kinase induces rapid retrophosphorylation and inhibition of MAP kinase kinase (MEK1). *FEBS Lett*, 346: 299-303. \*: both authors have contributed equally to the work.
- 5. Papin C, Eychène A, <u>Brunet A</u>, Pagès G, Pouysségur J, Calothy G and Barnier JV (1995) B-Raf protein isoforms interact with and phosphorylate MEK-1 on serine residues 218 and 222. *Oncogene*, 10: 1647-1651.
- Pagès G, Stanley ER, Le Gall M, <u>Brunet A</u> and Pouysségur J (1995) The mouse p44 mitogen-activated protein kinase (extracellular signal-regulated kinase 1) gene. *J Biol Chem*, 270: 26986-26992.
- 7. **Brunet A** and Pouysségur J (1996) Identification of MAP kinase domains by re-directing stress signals into growth factor responses. **Science**, 272: 1652-1655.
- 8. Lavoie JN, L'Allemain G, <u>Brunet A</u>, Müller R and Pouysségur J (1996) Cyclin D1 expression is regulated positively by the p42/p44MAPK and negatively by the p38/HOG MAPK pathway. *J Biol Chem*, 271: 20608-20616.
- 9. Brondello JM, <u>Brunet A.</u> Pouysségur J and McKenzie FR (1997) The dual specificity Mitogen-activated protein kinase phosphatase-1 and-2 are induced by the p42/p44MAPK cascade. *J Biol Chem*, 272: 1368-1376.
- 10. Briant L, Robert-Hebmann V, Sivan V, <u>Brunet A</u>, Pouysségur J and Devaux C (1998) Involvement of extracellular signal-regulated kinase module in HIV-mediated CD4 signals controlling activation of nuclear factor-kappa B and AP-1 transcription factors. *J Immunol*, 160: 1875-1885.
- 11. Englaro W, Bertolotto C, Busca R, <u>Brunet A</u>, Pagès G, Ortonne J-P and Ballotti R (1998) Inhibition of the mitogen-activated protein kinase pathway triggers B16 melanoma cell differentiation. *J Biol Chem*, 273: 9966-9970.
- 12. Lenormand P, Brondello J-M, <u>Brunet A</u> and Pouysségur J (1998) Growth factor-induced p42/p44 MAPK nuclear translocation and retention requires both MAPK activation and neosynthesis of nuclear anchored proteins. *J Cell Biol*, 142: 625-633.
- 13. <u>Brunet A</u>, Roux D, Lenormand P, Dowd S, Keyse S and Pouysségur J (1999) Nuclear translocation of p42/p44 mitogen-activated protein kinase is required for growth factor-induced gene expression and cell cycle entry. *EMBO J*, 18: 664-674.

- 14. **Brunet A**, Bonni A, Zigmond MJ, Lin MZ, Juo P, Hu LS, Anderson MJ, Arden KC, Blenis J, Greenberg ME (1999) Akt promotes cell survival by phosphorylating and inhibiting a Forkhead transcription factor. *Cell*, 96: 857-868.
- 15. Bonni A, <u>Brunet A</u>, West AE, Datta SR, Takasu MA, Greenberg ME (1999) Cell survival promoted by the Ras-MAPK signaling pathway by transcription-dependent and transcription-independent mechanisms. *Science*, 286: 1358-1362.
- 16. Nichols A, Camps M, Gillieron C, Chabert C, <u>Brunet A</u>, Wilsbacher J, Cobb M, Pouysségur J, Shaw JP, Arkinstall S (2000) Substrate recognition domains within extracellular signal-regulated kinase mediate binding and catalytic activation of mitogen-activated protein kinase phosphatase-3. *J Biol Chem*, 275: 24613-24621.
- 17. **Brunet A**, Park J, Tran H, Hu LS, Hemmings BA, Greenberg ME (2001) The protein kinase SGK mediates survival signals by phosphorylating the Forkhead transcription factor FKHRL1/FOXO3a. *Mol Cell Biol*, 21: 952-965.
- 18. Shin I, Bakin, AV, Rodeck, U, **Brunet A**, Arteaga CL (2001) Transforming growth factor beta enhances epithelial cell survival via Akt-dependent regulation of FKHRL1. *Mol Biol Cell*, 12: 3328-3339.
- 19. **Brunet A**\*, Kanai F\*, Stehn J, Xu J, Sarbassova D, Frangioni D, Dala JV, DeCaprio JA, Greenberg ME and Yaffe MB (2002) 14-3-3 Transits to the Nucleus and Actively Participates in Dynamic Nucleo-Cytoplasmic Transport. *J Cell Biol*, 156: 817-828 \*: both authors have contributed equally to the work.
- 20. Tran H\*, **Brunet A**\*, Grenier JM, Datta SR, Fornace Jr AJ, DiStefano PS, Chiang LW and Greenberg ME (2002). DNA repair pathway stimulated by the Forkhead transcription factor FOXO3a (FKHRL1) through the GADD45 protein. **Science**, 296: 530-534. \*both authors have contributed equally to the work.
- 21. Chou FL, Hill JM, Hsieh JC, Pouysségur J, <u>Brunet A</u>, Glading A, Uberall F, Ramos JW, Werner MH and Ginsberg MH (2003) PEA-15 binding to ERK1/2 MAP kinases is required for its modulation of integrin activation. *J Biol Chem*, 278: 52587-52597.
- 22. <u>Brunet A</u>, Sweeney LB, Sturgill FJ, Chua KF, Greer PL, Lin Y, Tran H, Ross SE, Mostoslavsky R, Cohen H, Hu LS, Cheng H-L, Jedrychowsky M, Gygi SP, Sinclair DA, Alt FW, Greenberg ME (2004) Stress-Dependent Regulation of FOXO transcription factors by the SIRT1 Deacetylase. *Science*, 303: 2011-2015.
- 23. Greer EL, Dowlatshahi D, Banko MR, Hoang K, Blanchard D, and **Brunet A** (2007) An AMPK FOXO pathway mediates the extension of lifespan induced by a novel method of dietary restriction in *C. elegans*. *Curr Biol*, 17: 1646-1656.
- 24. Greer EL, Oskoui PR Banko MR, Maniar JM, Gygi MP, Gygi SP, and **Brunet A** (2007) The energy sensor AMP-activated protein kinase directly regulates the mammalian FOXO3 transcription factor. **J Biol Chem**, 282: 30107-30119.
- 25. Greer EL and <u>Brunet A</u> (2009) Different dietary restriction regimens extend lifespan by both independent and overlapping genetic pathways in *C. elegans. Aging Cell*, 8: 113-127.
- 26. Renault VM, Rafalski VA, Morgan AA, Salih DAM, Brett JO, Webb AE, Villeda SA, Thekkat PU, Guillerey C, Denko NC, Palmer TD, Butte AJ, and **Brunet A** (2009) FoxO3 regulates neural stem cell homeostasis. *Cell Stem Cell*, 5: 527-539.
- 27. Valenzano DR, Kirschner J, Kamber RA, Zhang E, Weber D, Cellerino A, Englert C, Platzer M, Reichwald K and **Brunet A** (2009) Mapping loci associated with tail color and sex determination in the short-lived fish *Nothobranchius furzeri*. **Genetics**, 183: 1385-1395.
- 28. de la Torre-Ubieta L, Gaudillière B, Yang Y, Ikeuchi Y, Yamada T, DiBacco S, Stegmüller J, Schüller U, Salih DA, Rowitch D, **Brunet A** and Bonni A (2010) A FOXO-Pak1 transcriptional pathway controls neuronal polarity. **Genes & Dev**, 8: 799-813.

- 29. Greer EL, Maures TJ, Hauswirth AG, Green EM, Leeman DS, Maro, GS, Han S, Banko MR, Gozani O and **Brunet A** (2010) Members of the H3K4 trimethylation complex regulate lifespan in a germline-dependent manner in *C. elegans.* **Nature**, 466: 383-387.
- 30. Renault VM, Thekkat PU, Hoang KL, White JL, Brady CA, Kenzelmann Broz D, Venturelli OS, Johnson TM, Oskoui PR, Xuan Z, Santo EE, Zhang MQ, Vogel H, Attardi LD, <u>Brunet A</u> (2011) The pro-longevity gene FoxO3 is a target of the p53 tumor suppressor. *Oncogene*, 30: 3207-3221.
- 31. Brett JO, Renault VM, Rafalski VA, Webb AE and <u>Brunet A</u> (2011) The microRNA cluster miR-106b~25 regulates adult neural stem and progenitor cell proliferation and neuronal differentiation. *Aging*, 3: 108-124.
- 32. Arnold CP, Tan R, Zhou B, Yue SB, Schaffert S, Biggs JR, Doyonnas R, Lo MC, Perry JM, Renault VM, Sacco A, Somervaille T, Viatour P, <u>Brunet A</u>, Cleary ML, Li L, Sage J, Zhang DE, Blau HM, Chen C, and Chen CZ. (2011) MicroRNA programs in normal and aberrant stem and progenitor cells. *Genome Res*, 21: 798-810.
- 33. Maures TJ, Greer EL, Hauswirth AG, and <u>Brunet A</u> (2011). H3K27 demethylase UTX-1 regulates *C. elegans* lifespan in a germline-independent, insulin-dependent, manner. *Aging Cell*, 10: 980-990.
- 34. Greer EL, Maures TJ, Ucar D, Hauswirth AG, Mancini E, Lim JP, Benayoun BA, Shi Y and Brunet A (2011) Transgenerational epigenetic inheritance of longevity in *Caenorhabditis elegans*. *Nature*, 479: 365-371. *Full article*.
- 35. Banko MR, Allen JJ, Schaffer BE, Wilker EW, Tsou P, White JL, Villen J, Wang B, Kim SR, Sakamoto K, Gygi SP, Cantley LC, Yaffe MB, Shokat KM and <u>Brunet A</u> (2011) Chemical genetic screen for AMPKα2 substrates uncovers a network of proteins involved in mitosis. *Mol Cell*, 44:878-892.
- 36. Valenzano DR, Sharp S and <u>Brunet A</u> (2011) Transposon-mediated transgenesis in the short-lived African killifish *Nothobranchius furzeri*, a vertebrate model for aging. *G3, Genes Genome Genetics*, 1: 531-538. *Cover article.*
- 37. Calnan DR, Webb AE, White JL, Stowe TR, Goswami T, Shi X, Espejo A, Bedford MT, Gozani O, Gygi SP, and **Brunet A** (2012) Methylation by Set9 modulates FoxO3 stability and transcriptional activity. **Aging**, 4: 462-79.
- 38. Salih DA, Rashid AJ, Colas D, de la Torre-Ubieta L, Zhu RP, Morgan, AA, Santo EE, Cole CJ, Madison DV, Shamloo M, Butte AJ, Bonni A, Josselyn SA and <u>Brunet A</u> (2012) FoxO6 regulates memory consolidation and synaptic function. *Genes & Dev*, 26: 2780-801.
- 39. Rafalski VA, Ho PO, Brett JO, Ucar D, Dugas JC, Pollina EA, Chow LML, Ibrahim A, Baker SJ, Barres BA, Steinman L, and <u>Brunet A</u> (2013) Expansion of oligodendrocyte progenitor cells upon SIRT1 inactivation in the adult brain. *Nat Cell Biol*, 15: 614-624. *Full article*.
- 40. Liu L, Cheung TH, Charville GW, Hurgo BM, Leavitt T, Shih J, **Brunet A**, and Rando TA (2013) Chromatin Modifications as Determinants of Muscle Stem Cell Quiescence and Chronological Aging. *Cell Rep*, 4: 189-204.
- 41. Webb AE, Pollina EA, Vierbuchen T, Urban N, Ucar D, Leeman D, Sewak M, Rando TA, Guillemot F, Wernig M, and <u>Brunet A</u> (2013) Genome-wide interaction between the prolongevity factor FOXO3 and the neuronal determinant ASCL1 in adult neural stem/progenitor cells. *Cell Rep*, 4: 477-491.
- 42. Wapinski OL, Vierbuchen T, Qu K, Lee QY, Chanda S, Fuentes DR, Giresi PG, Ng YH, Marro S, Neff NF, Drechsel D, Martynoga B, Castro DS, Webb AE, Südhof TC, **Brunet A**, Guillemot F, Chang HY, Wernig M (2013) Hierarchical mechanisms for direct reprogramming of fibroblasts to neurons. *Cell*, 155: 621-635.

- 43. Maures TJ, Booth LN, Benayoun BA and <u>Brunet A</u> (2014) Males shorten the life span of C. elegans hermaphrodites via secreted compounds. *Science* 343: 541-544.
- 44. Gopinath SD, Webb AE, **Brunet A** and Rando TA (2014) FOXO3 promotes quiescence in adult muscle stem cells during the process of self-renewal. **Stem Cell Reports**, 2: 414-426.
- 45. Benayoun BA, Pollina EA, Ucar D, Mahmoudi S, Karra K, Wong E, Devarajan K, Daugherty AC, Kundaje A, Mancini E, Rando TA, Snyder MP, Baker JC, Cherry M and **Brunet A** (2014) H3K4me3 breadth is linked to cell identity and transcriptional consistency. *Cell*, 158: 673-688.
- 46. Kareta MS, Gorges LL, Hafeez S, Benayoun BA, Marro S, Zmoos AF, Cecchini MJ, Spacek D, Batista LF, O'Brien M, Ng YH, Ang CE, Vaka D, Artandi SE, Dick FA, **Brunet A**, Sage J, Wernig M (2015) Inhibition of pluripotency networks by the Rb tumor suppressor restricts reprogramming and tumorigenesis. *Cell Stem Cell*.16: 39-50.
- 47. Harel I, Benayoun BA, Machado M, Singh PP, Hu CK, Pech MF, Valenzano DR, Zhang E, Sharp SC, Artandi SE and **Brunet A** (2015) A Platform for rapid exploration of aging and diseases in a naturally short-lived vertebrate. **Cell**, 160: 1013-26
- 48. Li YH, Luo J, Mosley YC, Hedrick VE, Paul LN, Chang J, Zhang G, Wang YK, Banko MR, Brunet A, Kuang S, Wu JL, Chang CJ, Scott MP, Yang JY (2015) AMP-Activated Protein Kinase Directly Phosphorylates and Destabilizes Hedgehog Pathway Transcription Factor GLI1 in Medulloblastoma. *Cell Rep*,12: 599-609
- 49. Schaffer BE, Levin RS, Hertz NT, Maures TJ, Schoof ML, Hollstein PE, Benayoun BA, Banko MR, Shaw RJ, Shokat KM and <u>Brunet A</u> (2015) Identification of AMPK Phosphorylation Sites Reveals a Network of Proteins Involved in Cell Invasion and Facilitates Large-Scale Substrate Prediction. *Cell Metab*, 22: 907-921.
- 50. Pech MF, Garbuzov A, Hasegawa K, Sukhwani M, Zhang RJ, Benayoun BA, Brockman SA, Lin S, **Brunet A**, Orwig KE, Artandi SE (2015) High telomerase is a hallmark of undifferentiated spermatogonia and is required for maintenance of male germline stem cells. **Genes & Dev**, 29: 2420-34.
- 51. Valenzano DR, Benayoun BA, Singh PP, Zhang E, Etter PD, Hu CK, Clement-Ziza M, Willemsen D, Cui R, Harel I, Machado BE, Yee, MC, Sharp SC, Bustamante CD, Beyer A, Johnson EA, and **Brunet A** (2015) The African turquoise killifish genome provides insights into evolution and genetic architecture of lifespan. *Cell*, 163: 1539-1554.
- 52. Webb AE, Kundaje A and **Brunet A** (2016). Characterization of the direct targets of FOXO transcription factors throughout evolution. *Aging Cell*, 15: 673-685.
- 53. Ahlenius H, Chanda S, Webb AE, Yousif I, Karmasin J, Prusiner SB, **Brunet A**, Sudhöf TC and Wernig M (2016). FoxO3 regulates neuronal reprogramming of cells from postnatal and aging mice. **Proc Natl Acad Sci**, 113: 8514-8519.
- 54. Harel I, Valenzano DR and **Brunet A** (2016). Efficient genome engineering approaches for the short-lived African turquoise killifish. *Nature Protocols*, 10: 2010-2028.
- 55. Dulken BW, Leeman DS, Boutet SC, Hebestreit K and <u>Brunet A</u> (2017). Single-cell transcriptomic analysis defines heterogeneity and transcriptional dynamics in the adult neural stem cell lineage. *Cell Rep*, 18: 777-790.
- 56. Han S, Schroeder EA, Silva-Garcia CG, Hebestreit K, Mair WB and <u>Brunet A</u> (2017). Monounsaturated fatty acids link H3K4me3 modifiers to *C. elegans* lifespan. *Nature*, 544: 185-190. *Full article*.

- 57. Theret M, Gsaier L, Schaffer B, Juban G, Ben Larbi S, Weiss-Gayet M, Bultot L, Collodet C, Foretz M, Desplanches D, Sanz P, Zang Z, Yang L, Vial G, Viollet B, Sakamoto K, <u>Brunet A</u>, Chazaud B, Mounier R (2017). AMPKα1-LDH pathway regulates muscle stem cell self-renewal by controlling metabolic homeostasis. *EMBO J*, 36: 1946-1962.
- 58. Tan MH, Li Q, Shanmugam M, Piskol R,...Pollina EA, Leeman DS,....Brunet A, Conrad DF, Samuel CE, O'Connell MA, Walkley CR, Nishikura K and Li JB (2017). Dynamic landscape and regulation of RNA editing in mammals. *Nature*, 550: 249-254.
- 59. Daugherty AC, Yeo RW, Buenrostro JD, Greenleaf WJ, Kundaje A, and **Brunet A** (2017). Chromatin accessibility dynamics reveal novel functional enhancers in *C. elegans*. **Genome Research**, 27: 2096-2107
- 60. Wagner JT, Singh PP, Romney AL, Riggs CL, Minx P, Woll SC, Roush J, Waren WC, <u>Brunet A</u>, and Podrabsky JF (2018). The genome of *Austrofundulus limnaeus* offers insights into extreme vertebrate stress tolerance and embryonic development. *BMC Genomics*, 19: 155.
- 61. Leeman DS, Hebestreit K, Ruetz T, Webb AE, McKay A, Pollina EA, Dulken BW, Zhao X, Yeo RW, Ho TT, Mahmoudi S, Devarajan K, Passegué E, Rando TA, Frydman J, and **Brunet A** (2018). Lysosome activation clears aggregates and enhances quiescent neural stem cell activation during aging. **Science**, 359: 1277-1283.
- 62. Lim JP, Fehlauer H\*, Das A, Saro G, Glauser DA, <u>Brunet A\*</u>, and Goodman MB\* (2018). Loss of CaMKI function disrupts salt aversive learning in *C. elegans*. *Journal of Neuroscience*, 38: 6114-6129. \*: co-corresponding authors
- 63. Contrepois K, Mahmoudi S, Ubhi BK, Papsdorf K, Hornburg D, **Brunet A**, and Snyder M (2018). Cross-platform comparison of untargeted and targeted lipidomics approaches on aging mouse plasma. **Sci Rep.**, 8: 17747.
- 64. Benayoun BA, Pollina EA, Singh PP, Mahmoudi S, Harel I, Casey KM, Dulken BW, Kundaje A, and <u>Brunet A</u> (2019). Remodeling of epigenome and transcriptome landscapes with aging in mice reveals widespread induction of inflammatory responses. *Genome Research*, 29: 697-709.
- 65. Dulken BW, Buckley MT, Navarro Negredo P, Saligrama N, Cayrol R, Leeman DS, George BM, Boutet SC, Hebestreit K, Pluvinage JV, Wyss-Coray T, Weissman IL, Vogel H, Davis MM, **Brunet A** (2019). Single-cell analysis reveals T cell infiltration in old neurogenic niches. *Nature*, 571: 205-210.
- 66. Booth LN, Maures TJ, Yeo RW, Tantilert C, <u>Brunet A</u> (2019). Self-sperm induce resistance to the detrimental effects of sexual encounters with males in hermaphroditic nematodes. *Elife*, 8. pii: e46418.
- 67. Mahmoudi S, Mancini E, Xu L, Moore A, Jahanbani F, Hebestreit K, Srinivasan R, Li X, Devarajan K, Prélot L, Ang CE, Shibuya Y, Benayoun BA, Chang ALS, Wernig M, Wysocka J, Longaker MT, Snyder MP, **Brunet A** (2019). Heterogeneity in old fibroblasts is linked to variability in reprogramming and would healing. *Nature*, 574: 553-558.
- 68. Ahadi S, Zhou W, Schüssler-Florenza Rose SM, Sailani MR, Contrepois K, Avina M, Ashland M, <u>Brunet A</u>, Snyder M (2020). Personal aging markers and ageotypes revealed by deep longitudinal profiling. *Nature Medicine*, 26: 83-90.
- 69. Hu CK, Wang W, Brind'Amour J, Singh PP, Reeves GA, Lorincz MC, Alvarado AS, **Brunet A** (2020). Vertebrate diapause preserves organisms long term through Polycomb complex members. **Science**, 367: 870-874.

- 70. Vonk WIM, Rainbolt TK, Dolan PT, Webb AE, **Brunet A**, Frydman J (2020). Differentiation drives widespread rewiring of the neural stem cell chaperone network. **Molecular Cell**, 78:329-345.e9.
- 71. Yan X, Zhao X, Zhou Z, McKay A, **Brunet A**, and Zare RN (2020). Cell-type-specific metabolic profiling achieved by combining desorption electrospray ionization mass spectrometry imaging and immunofluorescence staining. **Anal Chem**, doi:10.1021/acs.analchem.oco2519.
- 72. Wang W, Hu C-K, Zeng A, Alegre D, Hu D, Gotting K, Ortega Granillo A, Wang Y, Robb S, Schnittker R, Zhang S, Alegre D, Li H, Ross E, Zhang N, **Brunet A**, and Sánchez Alvarado A (2020). Changes in regeneration-responsive enhancers shape regenerative capacities in vertebrates. **Science**, 369: eaaz3090.
- 73. Cabruja M, Priotti J, Domizi P, Papsdorf K, Kroetz DL, **Brunet A**, Contrepois K, Snyder MP (2021). In-depth triacylglycerol profiling using MS<sup>3</sup> Q-Trap mass spectrometry. **Anal Chim Acta.** 1184: 339023.
- 74. Booth LN, Shi C, Tantilert C, Yeo RW, Hebestreit K, Hollenhorst CN, Murphy CT, and **Brunet A** (2020). Males deploy multifaceted strategies and hijack longevity pathways to induce premature demise of the opposite sex. *Nature Aging*, 2: 809.
- 75. Buckley MT\*, Sun E\*, Benson GM, Liu L, Schaum N, Xu L, Reyes JM, Goodell MA, Weissman IL, Wyss-Coray T, Rando TA and **Brunet A** Cell type-specific aging clocks to quantify aging and rejuvenation in regenerative regions of the brain. **Nature Aging** (accepted).

### Submitted (BioRxiv or Research Square)

- 76. Papsdorf K, Hosseini A, Miklas JW, Cabruja M, Yu Y, Meraz Murphy L, Silva Garcia C, Yao P, de Launoit E, Mair WB, Wang MC, Snyder MP, and <u>Brunet A</u> (2021). A lipid droplet-peroxisome network drives longevity by monounsaturated fatty acids via modulating ether lipid synthesis and ferroptosis. *Research Square* https://assets.researchsquare.com/files/rs-740521/v1 covered.pdf?c=1631876054
- 77. Singh PP, Reeves GA, Contrepois K, Ellenberger M, Hu CK, Snyder MP, and <u>Brunet A</u> (2021). Evolution of diapause in the African turquoise killifish by remodeling ancient gene regulatory landscape. *BioRxiv*. https://www.biorxiv.org/content/10.1101/2021.10.25.465616v1
- 78. Ruetz T, Kashiwagi CM, Morton B, Yeo RW, Leeman DS, Morgens DW, Tsui CK, Li A, Bassik MC, and **Brunet A** (2021). *In vitro* and *in vivo* CRISPR-Cas9 screens reveal drivers of aging in neural stem cells of the brain. *BioRxiv*. <a href="https://www.biorxiv.org/content/10.1101/2021.11.23.469762v1.full">https://www.biorxiv.org/content/10.1101/2021.11.23.469762v1.full</a>
- 79. Liu L\*, Buckley MT\*, Reyes R\*, Kim S, Tian L, Wang M, Mao M, Mateo-Rodriguez C, Ishak H, Jeong M, Jeong M, Wu JC, Goodell MA\*, <u>Brunet A</u>\* and Rando TA\* (2022) Exercise reprograms the inflammatory landscape of multiple stem cell compartments during mammalian aging. *BioRxiv*. https://www.biorxiv.org/content/10.1101/2022.01.12.475145v1
- 80. Chen Y\*, Harel I\*, Singh PP, Ziv I, Moses E, Goshtchevsky U, Machado BE, <u>Brunet A\*</u> and Jarosz D\* (2022) Tissue-specific landscape of protein aggregation and quality control in an aging vertebrate. <u>BioRxiv</u>. <a href="https://www.biorxiv.org/content/10.1101/2022.02.26.482120v1">https://www.biorxiv.org/content/10.1101/2022.02.26.482120v1</a>
- 81. Harel I\*, Chen Y\*, Ziv I, Singh PP, Navarro Negredo P, Goshtchevsky, Wang W, Astre G, Moses E, McKay A, Machado BE, Hebestreit K, Yin S, Sánchez Alvarado A, Jarosz D\* and

- **Brunet A\*** (2022) Identification of protein aggregates in the aging vertebrate brain with prion-like and phase separation properties. *BioRxiv*. https://www.biorxiv.org/content/10.1101/2022.02.26.482115v1
- 82. Nath RD\*, Bedbrook CN\*, Nagvekar R, Deisseroth K and <u>Brunet A\*</u> (2022) Rapid and precise genome engineering in a naturally short-lived vertebrate. *BioRxiv*. https://www.biorxiv.org/content/10.1101/2022.05.25.493454v1
- 83. Zhao X, Yan X, Contrepois K, Vallania F, Ellenberger M, Kashiwagi CM, Gagnon SD, Siebrand CJ, Cabruja M, Traber GM, McKay A, Hornburg D, Khatri P, Snyder MP, Zare RN, Brunet A. Lipidomic profiling reveals age-dependent changes in complex plasma membrane lipids that regulate neural stem cell aging *BioRxiv*. <a href="https://doi.org/10.1101/2022.08.18.503095">https://doi.org/10.1101/2022.08.18.503095</a>
- 84. Yeo RW, Zhou OY, Zhong B, Sharmin M, Ruetz TZ, Hollenhorst CN, Kundaje A, Dunn AR, and <u>Brunet A</u> (2022). Chromatin accessibility dynamics of neurogenic niche cells reveal a reversible decline in neural stem cell migration during aging. *BioRxiv*. <a href="https://doi.org/10.1101/2021.03.29.437585">https://doi.org/10.1101/2021.03.29.437585</a>
- 85. McKay A, Costa, EK, Chen, J, Hu C-K, Chen X, Bedbrook CN, Khondker RC, Thielvoldt M, Singh PP, Wyss-Coray T, and <u>Brunet A</u> (2022). An automated feeding system for the African killifish reveals effects of dietary restriction on lifespan and allows scalable measurement of associative learning. *BioRxiv*. https://doi.org/10.1101/2021.03.30.437790

### **Invited Reviews and Commentaries**

- Brunet A, Brondello JM, L'Allemain G, Lenormand P, McKenzie F, Pagès G and Pouysségur J (1995) MAP kinase module: role in the control of cell proliferation C R Seances Soc Biol, 189: 43-57
- 2. **Brunet A** (1998) Signal transduction from membrane to the nucleus: variation on common themes. **Bull Cancer**, 85: 527-537
- 3. Datta SR, <u>Brunet A</u> and Greenberg ME (1999) Cellular survival: a play in three Akts. *Genes & Dev.* 13: 2905-2927.
- 4. **Brunet A**, Datta SR and Greenberg ME (2001) Transcription-dependent and -independent control of neuronal survival by the PI3K-Akt signaling pathway. *Curr Opin Neurobiol*, 11: 297-305.
- 5. Tran H, <u>Brunet A</u>, Griffith E, and Greenberg ME (2003) The Many Forks in FOXO's Road. *Sci STKE*, 172: RE5.
- 6. Greer EL, and <u>Brunet A</u> (2005) FOXO transcription factors at the interface between longevity and tumor suppression. *Oncogene*, 24:7410-7425.
- 7. Carter, ME, and Brunet A (2007) FOXO transcription factors. Curr Biol, 7: R113-114.
- 8. Brunet A and Rando T (2007) Aging: From stem to stern. Nature, 449: 288-289.
- 9. **Brunet A** (2007) Aging and cancer: killing two birds with one worm. **Nature Genetics**, 39: 1306-1307.
- 10. Greer EL and <u>Brunet A</u> (2008) FOXO transcription factors in ageing and cancer. *Acta Physiol*, 192: 19-28.
- 11. Greer EL and Brunet A (2008) Signaling networks in aging. J Cell Sci, 121: 407-412.
- 12. Calnan DR and **Brunet A** (2008) The FoxO code. **Oncogene**, 27: 2276-2288.
- 13. Salih DAM and <u>Brunet A</u> (2008) FoxO transcription factors in the maintenance of cellular homeostasis during aging. *Curr Opin Cell Biol*, 20: 126-136.

- Greer EL, Banko MR and Brunet A (2009) AMP-activated protein kinase and FoxO transcription factors in dietary restriction-induced longevity. *Ann NY Acad Sci*, 1170: 688-692.
- 15. Brunet A (2009) Cancer: When restriction is good. Nature, 458: 713-714.
- 16. Rafalski V and <u>Brunet A</u> (2011) Energy metabolism in adult neural stem cell fate. *Prog Neurobiol*, 93: 182-203
- 17. Pollina EA and **Brunet A** (2011) Epigenetic regulation of aging stem cells. **Oncogene** 30: 3105-26
- 18. Brunet A (2011) A CRTCal link between energy and life span. Cell Metab, 13: 358-360.
- 19. Han S and <u>Brunet A</u> (2012) Histone methylation: making its mark on longevity. *Trends in Cell Biol.* 22: 42-9.
- 20. Mahmoudi S and <u>Brunet A</u> (2012) Aging and reprogramming: a two-way street. *Curr Opinion in Cell Biol*, 24: 744-756.
- 21. Rafalski VA, Mancini E and **Brunet A** (2012) Energy metabolism and energy-sensing pathways in mammalian embryonic and adult stem cell fate. *J Cell Science*, 125: 5597-608.
- 22. Lim JP and <u>Brunet A</u> (2013) Bridging the transgenerational gap with epignetic memory. *Trends in Genetics*, 29: 176-186.
- 23. Webb AE and **Brunet A** (2013) FOXO flips the longevity SWItch. **Nat Cell Biol**, 15: 444-6.
- 24. Leeman DS and **Brunet A** (2014) Stem cells: Sex specificity in the blood. **Nature**, 505: 488-490.
- 25. Webb AE and **Brunet A** (2014) FOXO transcription factors: key regulators of cellular quality control. **Trends Biochem Sci**, 39: 159-169.
- 26. <u>Brunet A</u>, Berger SL (2014) Epigenetics of aging and aging-related disease. *J Gerontol A Biol Sci Med Sci Suppl*, 1: S17-20.
- 27. Kennedy BK, Berger SL, **Brunet A**, Campisi J, Cuervo AM, Epel ES, Franceschi C, Lithgow GJ, Morimoto RI, Pessin JE, Rando TA, Richardson A, Schadt EE, Wyss-Coray T, and Sierra F (2014) Geroscience: linking aging to chronic disease. *Cell*, 159: 709-713.
- 28. Han S and **Brunet A** (2015) Cell biology: Lysosomal lipid lengthens life span. **Science**, 347: 32-33.
- 29. Dulken B, <u>Brunet A (2015)</u> Stem Cell Aging and Sex: Are We Missing Something? *Cell Stem Cell*. 16: 588-90.
- 30. Booth LN, <u>Brunet A</u> (2015) Shockingly early: Chromatin-mediated loss of the heat shock response. *Mol Cell*, 59: 515-6.
- 31. Schroeder EA, <u>Brunet A</u> (2015) Lipid Profiles and Signals for Long Life. *Trends Endocrinol Metab*, 26: 589-92.
- 32. Benayoun BA, Pollina EA, <u>Brunet A</u> (2015) Epigenetic regulation of aging: linking environmental inputs to genomic stability. *Nat Rev Mol Cell Biol*, 16: 593-610.
- 33. Harel I, <u>Brunet A</u> (2015) The African Turquoise Killifish: A Model for Exploring Vertebrate Aging and Diseases in the Fast Lane. *Cold Spring Harb Symp Quant Biol*, 80:275-9.
- 34. Hardie DG, Schaffer BE, <u>Brunet A</u> (2016) AMPK: An Energy-Sensing Pathway with Multiple Inputs and Outputs. *Trends Cell Biol*, 26: 190-201.
- 35. Yeo R and **Brunet A** (2016). Deconstructing dietary restriction: a case for systems approaches in aging. **Cell Metab**, 23: 395-96.
- 36. Booth LN and Brunet A (2016). The aging epigenome. Molecular Cell, 62: 728-44.
- 37. Mahmoudi S and **Brunet A** (2016). Burst of reprogramming: a path to extend lifespan? **Cell.** 167: 1672-1674.
- 38. **Brunet A** and Rando T (2017). Interaction between epigenetic and metabolism in stem cell aging. **Current Opinion in Cell Biology**, 45:1-7.

- 39. Kao AW, McKay A, Singh PP, <u>Brunet A</u>, Huang EJ (2017). Proganulin, lysosomal regulation and neurodegenerative disease. *Nature Rev Neuroscience*, 18:325-333.
- 40. Russell JJ, Theriot JA, Sood P, Marshall WF, Landweber LF, Fritz-Laylin L, Polka JK, Oliferenko S, Gerbich T, Gladfelter A, Umen J, Bezanilla M, Lancaster MA, He S, Gibson MC, Goldstein B, Tanaka EM, Hu CK, **Brunet A** (2017) **BMC Biol**, 15: 55.
- 41. Dulken BW and <u>Brunet A</u> (2018). Same path, different beginnings. *Nature Neuroscience*, 21: 159-160.
- 42. Hu CK and **Brunet A** (2018). The African turquoise killifish: A research organism to study vertebrate aging and diapause. **Aging Cell**, 17: e12757.
- 43. Papsdorf K and **Brunet A** (2019). Linking Lipid Metabolism to Chromatin Regulation in Aging. **Trends Cell Biol**, 29:97-116.
- 44. Mahmoudi S, Xu L, and <u>Brunet A</u> (2019). Turning back time with emerging rejuvenation strategies. *Nat Cell Biol*, 21: 32-43.
- 45. Singh PP, Demmitt BA, Nath RD, and **Brunet A** (2019). The Genetics of Aging: A Vertebrate Perspective. *Cell*, 177: 200-220.
- 46. Miklas JW, <u>Brunet A</u> (2020). Support cells in the brain promote longevity. *Science*, 367: 365-366.
- 47. **Brunet A** (2020). Old and new models for the study of human ageing. **Nature Reviews Molecular Cell Biology**, doi: 10.1038/s41580-020-0266-4.
- 48. Navarro Negredo P, Yeo RW, and <u>Brunet A</u> (2020). Aging and rejuvenation of neural stem cell niches. *Cell Stem Cell*, 27: 202-223.
- 49. Navarro Negredo P and <u>Brunet A</u> (2021). Unwanted help from T cells in the aging central nervous system. *Nature Aging*, 1:330-331.
- 50. Miklas JW and <u>Brunet A</u> (2022). Long life depends on open communication. *Nature Cell Biology*, 24:808-810.
- 51. Brunet A, Goodell MA, and Rando TA (2022). Ageing and rejuvenation of stem cells and their niches. *Nature Rev. Mol Cell Biol*, doi: 10.1038/s41580-022-00510-w.

### **Book Chapters**

- 1. **Brunet A** and Pouysségur J (1997) Mammalian MAP kinase modules: how to transduce specific signals. **Essays Biochem**, 32: 1-16.
- 2. <u>Brunet A.</u> Tran H and Greenberg ME (2003) The FOXO family of transcription factors: key targets of the PI3K-Akt pathway that regulate cell proliferation, survival and organismal aging. *Handbook of Cellular Signaling*. 3: 251.
- 3. Greer EL and <u>Brunet A</u> (2010) The genetic network of lifespan extension by caloric restriction. *Handbook on the Biology of Aging*.
- 4. <u>Brunet A</u>, Mahmoudi S, Mancini E, Rafalski VA, and Webb AE (2014) Longevity pathways in mammalian stem cells. *Annual Review of Gerontology and Geriatrics*, Volume 34, 2014: Genetics.

### **Commentaries on our Research**

- 1. Chen E and Finkel T (2009) Preview. The Tortoise, the hare, and the FoxO. *Cell Stem Cell*, 5: 451-452.
- 2. Suh Y. and Vijg J (2010) Preview. The Long and Short of Fertility and Longevity. *Cell Metabolism*, 12: 209-210
- 3. Mango SE (2011). News and Views. Ageing: generations of longevity. *Nature*, 479: 302-303.

- 4. Muers M (2011). New and Views. Epigenetics: inheriting a long life. *Nat Rev Genet*, 12: 806-807.
- 5. Berger SL (2012). Preview: Transgenerational Inheritance of Longevity: Epigenetic Mysteries Abound. *Cell Metabolism*, 15: 6-7.
- 6. Robitaille AM and Hall MN (2012) Ramping up mitosis: an AMPKα2-regulated signaling network promotes mitotic progression. *Molecular Cell*, 45: 8-9.
- 7. Zuccaro E and Arlotta P (2013) The quest for myelin in the adult brain. *Nat Cell Biol* 2013 15: 572-575.
- 8. Promislow DE and Kaeberlein M (2014) Chemical warfare in the battle of the sexes. **Science**, 343: 491-492
- 9. Finch CE and Tower J (2014) Sex-specific aging in flies, worms, and missing great-granddads. *Cell*, 156: 398-399.
- 10. Wang AM, Promislow DE, Kaeberlein M (2015) Fertile water for aging research. *Cell*, 160:814-815.
- 11. Lakhina V, Murphy CT (2015) Genome Sequencing Fishes out Longevity. *Cell*, 163:1312-1313.
- 12. Simic MS, Dillin A (2018) The Lysosome, Elixir of Neural Stem Cell Youth. *Cell Stem Cell*, 22: 619-620.
- 13. Bond AM, Song H (2019) Infiltration of old brains by T cells causes dysfunction of neural stem cells. *Nature*, 571: 178-179.
- 14. Rustenhoven J, Herz J, Kipnis J (2019) Old T cells interfer(on) with neurogenesis. *Trends Immunol.* 40: 783-785.
- 15. Sutphin GL (2019) A new defense in the battle of the sexes. *ELife*, pii: e50140.
- 16. Van Gilst M (2020) A time to grow and a time to pause. Science, 367: 851-852.
- 17. Sifoglu D, Alcedo J (2022) Homme fatal: how males cause demise. *Nature Aging*, 2: 773-774.