

CURRICULUM VITAE

Date Prepared: March 15, 2013

NAME: Scott Anthony Gerber

ADDRESS:

OFFICE

762 Rubin Building, HB-7937
Dartmouth Medical School
Lebanon, NH 03756

HOME

77 Forest Avenue
Lebanon, NH 03766

EDUCATION:

DATE

INSTITUTION

DEGREE

1996-2001 University of Washington (Chemistry)

Ph.D.

1989-1993 Willamette University (Chemistry)

B.A.

POSTDOCTORAL TRAINING:

DATE

SPECIALTY

INSTITUTION

2001-2006 Quantitative proteomics

Harvard Medical School

ACADEMIC APPOINTMENTS:

DATE

ACADEMIC TITLE

INSTITUTION

2012 Associate Professor, Genetics and Biochemistry Geisel School (Dartmouth)

2011 Assistant Professor, Biochemistry Dartmouth Medical School

2010 Investigator Dartmouth Institute for Quantitative Biomedical Sciences

2006 Investigator Norris Cotton Cancer Center

2006 Investigator Dartmouth Center for Cellular and Molecular Mechanisms of Lung Disease (COBRE)

2006 Assistant Professor, Genetics Dartmouth Medical School

OTHER PROFESSIONAL POSITIONS:

<u>DATE</u>	<u>POSITION TITLE</u>	<u>INSTITUTION / ORGANIZATION</u>
1993-1996	Analytical Chemist	Immunex (Amgen) Corporation

TEACHING ACTIVITIES:**Dartmouth Undergraduate Medical Education:**

<u>DATE</u>	<u>TEACHING</u>
2012	DMS – BIOC 110: Biochemical and genetic basis of medicine. Role: Discussion group leader (14 discussion groups, 1 hour each)
2011	DMS – BIOC 110: Biochemical and genetic basis of medicine. Role: Discussion group leader (9 discussion groups, 1 hour each)
2010	DMS – BIOC 110: Biochemical and genetic basis of medicine. Role: Discussion group leader (5 discussion groups, 1 hour each)

Dartmouth Graduate Education:

<u>DATE</u>	<u>TEACHING</u>
2012-present	MCB – BIOC 101 / GENE 102: Molecular information in biological systems. Role: Lecturer. 3 full lectures (Post-translational modifications, Molecular networks, Systems biology), 2 shared lectures (1.33 hours / full lecture) Taught in 2012; scheduled for every fall.
2011	MCB – MI 148: Advanced Molecular Pathogenesis. Role: Invited lecturer. 3 hours paper discussion “Proteomics to study microbial diseases”
2011-present	QBS – GENE 110: Graduate Course in Integrative Biomedical Sciences. Role: Invited lecturer. 1.5 lecture hours “Introduction to Proteomics” Taught in 2011 and 2012.
2010-present	MCB – GENE 148: Biological mass spectrometry and proteomics. Role: Designed & developed curriculum. Sole instructor. 10 lectures (1.5 hours each), 10 paper discussions (1.5 hours each). Taught 2010, 2012; scheduled for every other winter.
2007-2012	PEMM – PEMM 131: Experimental therapeutics. Role: Invited lecturer. 1.5 lecture hours / year. “Introduction to Proteomics” Taught in 2007, 2008, 2009, 2010, and 2012.
2006-present	MCB – GENE 146: Molecular and computational genomics. Role: Invited lecturer. 3 lecture hours / year, 3 hours paper discussions / year. “Introduction to Proteomics” Taught in 2006, 2007, 2008, 2010 & 2012–scheduled for every other year.

Non-Dartmouth Graduate Education:

<u>DATE</u>	<u>TEACHING</u>
2008	University of Vermont, Pathology 306: Techniques and translational research in the study of environmental diseases. Role: Invited lecturer. 1.5 lecture hours. “Introduction to Proteomics”

STUDENT/FELLOW ADVISING/MENTORING:

Graduate Rotation Students:

<u>YEAR</u>	<u>STUDENT</u>
2006	Brendan Faherty
2007	Lee Brooks, III
2007	Vinoy Vijayan
2008	Devin Schweppe
2008	Jason Gilmore
2008	Richard Cowper
2009	Dov Pechenick
2010	Sierra Cullati
2011	Robert Worthen
2011	Erin Shoemaker
2011	Alexander Crowell
2012	Kelly Salmon
2012	Timothy Straub
2012	Scott Rusin
2013	Andrew Grasseti
2013	Katelyn Cassidy

Graduate Qualifying Examinations:

<u>YEAR</u>	<u>STUDENT</u>	<u>ROLE</u>	<u>PROGRAM</u>
2012	Anna Hatch	Examiner	Dartmouth MCB
2012	Kinjal Desai	Examiner, Chair	Dartmouth MCB
2012	Patrick Lizzotte	Examiner, Chair	Dartmouth MCB
2012	Kelli Hvorecny	Examiner, Chair	Dartmouth MCB
2011	Dov Pechenick	Examiner, Chair	Dartmouth MCB
2011	Zhengan Wang	Examiner, Chair	Dartmouth MCB
2011	Anda Zhang	Examiner	Dartmouth MCB
2011	Ashley Zurawel	Examiner	Dartmouth MCB
2010	Marianna Kleyman	Examiner	Dartmouth MCB
2009	Scott Turner	Examiner, Chair	Dartmouth MCB
2009	Nima Pouladi	Examiner, Chair	Dartmouth MCB
2008	Ernest Heimsath	Examiner	Dartmouth MCB
2007	Swapna Kollu	Examiner	Dartmouth MCB
2007	Casey Greene	Examiner, Chair	Dartmouth MCB
2007	Samuel Bakhoun	Examiner	Dartmouth MCB
2006	Adam Schmucker	Examiner	Dartmouth MCB

Graduate Thesis Committees:

<u>YEAR</u>	<u>STUDENT</u>	<u>ROLE</u>	<u>PROGRAM</u>
2011-present	Dov Pechenick	Member	Dartmouth MCB
2011-present	Arko Dasgupta	Member	Dartmouth MCB
2010-present	Sierra Cullati	Thesis Advisor	Dartmouth MCB
2010-present	Jeanine Amacher	Member	Dartmouth MCB
2010-present	Bin Wang	Member	Dartmouth MCB
2009-present	Jason Gilmore	Thesis Advisor	Dartmouth MCB

2009-present	Nima Pouladi	Member	Dartmouth MCB
2008-present	Devin Schweppe	Thesis Advisor	Dartmouth MCB
2008-2011	Li-Ju Chang	Member	Dartmouth PEMM
2008-2012	Ernest Heimsath	Member	Dartmouth MCB
2008-2012	Christopher Bahl	Member	Dartmouth MCB
2007-2012	Brendan Faherty	Thesis Advisor	Dartmouth MCB
2007-2010	Mark Yore	Member	Dartmouth PEMM
2007-2009	Samuel Bakhoun	Member	Dartmouth MCB
2006-2010	Christopher Baker	Member	Dartmouth MCB
2006-2010	Kristine Pattin	Member	Dartmouth MCB
2006-2009	Bonnie Ackermann	Member	Dartmouth PEMM

RESEARCH FUNDING:**Present:**

<u>DATE</u>	<u>AWARD</u>
2011-2016	NIH / NCI 1-R01-CA155260-01A1 PI: Gerber \$207,500 total directs / year Title: Translational phosphoproteomics for lung cancer
2008-2013	NIH / NIGMS 1-P20-GM103413-09 (Lung Biology COBRE) PI: Stanton (Gerber, PI Project 1: \$175,000 net directs / year) Project 1 Title: Molecular mechanisms of Aurora kinase A dysfunction in lung cancer.
2008-2013	NIH / NIGMS 1-R01-GM080356-03 PI: Degtarev (Gerber, Co-PI: \$79,995 net directs / year) \$274,122 total directs / year Title: Molecular and functional analysis of the necroptosis initiation complex
2012-2017	NIH / NIAID 1-R01-AI091699-01A1 PI: Madden (Gerber, Co-PI: \$8,000 net directs / year) \$250,000 total directs / year Title: Mechanism of Cif virulence: a bacterial strategy to subvert host-cell defenses
2012-2016	NIH / NIGMS 5-R01-GM034985-25 PI: Dunlap (Gerber, Co-PI: \$10,000 net directs / year) \$425,000 total directs / year Title: Genetic and molecular dissection of the Neurospora clock

Past:

<u>DATE</u>	<u>AWARD</u>
2010-2011	ThermoFinnigan Mass Spectrometry Instruments Division PI: Gerber \$33,500 total directs Title: Development and evaluation of performance enhancements for SEQUEST
2009-2010	American Cancer Society Institutional Research Grant (IRG-82-003-24) PI: Gerber \$30,000 total directs Title: Quantitative proteomics to study polo-like kinase 1 dysregulation in cancer
2009-2010	NCCC Development Fund (Prouty Pilot Award, Dartmouth) PI: Conradt (Gerber, Co-PI: \$10,500 net directs) \$25,000 total directs Title: Identification of transcriptional regulators of the pro-apoptotic gene <i>egl-1</i> BH3-only
2008-2013	NIH / NIGMS 1-R01-GM084205-03 PI: Degtarev (Gerber, Co-PI: \$52,225 net directs / year) \$331,408 total directs / year Title: Mechanistic analysis of necrostatins: specific inhibitors of programmed necrosis
2007-2008	NIH / NIGMS 1-R01-GM081665-01 PI: Brenner (Gerber, Co-PI: \$30,000 net directs / year) \$175,000 total directs / year Title: Quantitative analysis of RING E3 ubiquitin ligases
2011-2012	NIH / NIAID 2-R56-DK042816-20A1 PI: Lienhard (Gerber, Co-PI: \$100,000 net directs / year) \$200,000 total directs / year Title: Phosphoproteins in insulin signaling

Pending:

<u>DATE</u>	<u>PROPOSAL</u>
2013	NIH / OD 1-S10-OD016212-01 PI: Gerber \$600,000 total directs Title: LC-Orbitrap MS/MS system for shotgun proteomics at Dartmouth
2013-2015	NIH / NCI 1-R21-CA178655-01 PI: Gerber \$137,500 directs / year Title: Kinome-wide portfolio of consensus motifs and substrate preferences

MAJOR COMMITTEE ASSIGNMENTS AND CONSULTATIONS:**National / International:**

<u>YEAR</u>	<u>COMMITTEE</u>	<u>ROLE</u>	<u>INSTITUTION</u>
2013	RFA-RM-12-017 (NIH Director's Transformative Research Award; R01)	Grant Reviewer	NIH
2012-2016	Tumor Biology & Genomics Study Section (TBG)	Standing Member (Jan. & June, recurring)	American Cancer Society

2012	RFA-CA-12-003 (Emerging Technology Grant Reviewer for Cancer Research; IMAT Program; R33) Study Section	Grant Reviewer	NIH / NCI
2012	PAR-09-222 (Cutting Edge Basic Research Awards - CEBRA; R21)	Grant Reviewer	NIH / NIDA
2012	SBIR Grant Contract #312	Grant Reviewer	NIH / NCI
2011-2012	Tumor Biology & Genomics Study Section (TBG)	Ad Hoc Member (Jan. & June, recurring)	American Cancer Society
2011	SBIR Grant Contracts #294 & 303	Grant Reviewer	NIH / NCI
2010	RFA-CA-10-016 (U24; Proteome Characterization Centers) Study Section	Grant Reviewer	NIH / NCI
2009	Czech Science Foundation (GA CR)	Grant Reviewer	Czech Republic
2007	Early Detection Initiative Postdoctoral Fellowships	Grant Reviewer	American Cancer Society / Canary Foundation

Regional:

<u>YEAR</u>	<u>COMMITTEE</u>	<u>ROLE</u>	<u>INSTITUTION</u>
2009	New England Regional IDEa Conference	Co-organizer	Dartmouth

Institutional:

<u>YEAR</u>	<u>COMMITTEE</u>	<u>ROLE</u>	<u>INSTITUTION</u>
2012-present	Dept. of Genetics – Genomics Faculty Search Committee	Chair	Geisel School
2012-2015	ACS Institutional Research Grant Review Committee	Grant Reviewer	Geisel School
2011-2012	Dartmouth SPSC Working Group: Graduate Education for the Future	Member	Dartmouth
2011-present	DMS – Senior Biostatistician Faculty Search Committee	Member	Dartmouth
2011-2012	NCCC / Biochemistry – Cancer Mechanisms Faculty Search Committee	Member	Dartmouth
2011-2012	Dept. of Genetics – Bioinformatics / Genomics / Data Integration Faculty Search Committee	Member	Dartmouth
2010-present	MCB Graduate Program Website	Genetics Rep.	Dartmouth

	Committee		
2010-2012	MCB Graduate Committee	Chair of Admissions	Dartmouth
2010-present	Council on Graduate Studies	Genetics Rep.	Dartmouth
2009-2012	MCB Graduate Committee	Genetics Rep.	Dartmouth
2007-present	Proteomics Shared Resource	Director	Dartmouth
2006-2007	Molecular Biology & Proteomics Shared Resource	Associate Director	Dartmouth
2006-present	Integrative Biology Group	Member	Dartmouth

MEMBERSHIP, OFFICE & COMMITTEE ASSIGNMENTS IN PROFESSIONAL SOCIETIES:

<u>DATE</u>	<u>SOCIETY</u>	<u>ROLE</u>
2012-2015	US Human Proteome Organization	Board of Directors
2012-present	US Human Proteome Organization	Chair, Semi-annual Newsletter Committee
2008-present	American Society for Biochemistry and Molecular Biology	Member
2009-present	US Human Proteome Organization	Semi-annual Newsletter Committee Member
2008-present	US Human Proteome Organization	Member
2005-present	International Human Proteome Organization	Member
1998-present	American Society for Mass Spectrometry	Member
1993-present	American Chemical Society	Member

JOURNAL REFEREE ACTIVITIES:

<u>DATE</u>	<u>JOURNAL NAME</u>
2012-present	Molecular Biology of the Cell
2012-present	Journal of Proteomics
2011-present	Nature Communications
2011-present	Science Signaling
2011-present	Molecular and Cellular Biology

2011-present Clinica Chimica Acta
2009-present PLoS One
2009-present Cancer Epidemiology, Biomarkers & Prevention
2008-present Nucleic Acids Research
2008-present Proteomics
2008-present Cancer Research
2007-present Molecular Systems Biology
2007-present Analytical and Bioanalytical Chemistry
2007-present Nature Biotechnology
2007-present Genome Biology
2007-present Genome Research
2006-present Bioinformatics
2006-present Rapid Communications in Mass Spectrometry
2006-present Molecular and Cellular Proteomics
2006-present Journal of Proteome Research
2005-present Nature Methods
2003-present Journal of the American Chemical Society
2002-present Analytical Biochemistry
2001-present Analytical Chemistry
2000-present Journal of the American Society for Mass Spectrometry
2000-present Journal of Mass Spectrometry

AWARDS AND HONORS:

<u>DATE</u>	<u>AWARD NAME</u>
1999	Ringold Fellow, University of Washington
1989-1993	Collins Science Scholar, Willamette University

OTHER ACTIVITIES:**Undergraduate Mentoring:**

<u>DATE</u>	<u>STUDENT</u>
2010	Lindsay Dale, Colby College (2010, Chemistry) – SURF Summer Program
2008-2009	Jeffrey Milloy, Dartmouth College (2011, Computer Science) – Honors thesis research
2008	Christopher Lapointe, Colby College (2009, Chemistry) – SURF Summer Program

INVITED PRESENTATIONS:**International:**

<u>DATE</u>	<u>TOPIC</u>	<u>ORGANIZATION</u>	<u>LOCATION</u>
2011	Proteomic Analysis of Kinase Signaling in Mitosis	14 th World Conference on Lung Cancer	Amsterdam
2011	Proteomic Analysis of Kinase Signaling in Mitosis	Institute of Systems Biology / Dept. of Biochemistry	Ottawa, Canada
2009	New Algorithms for High-Throughput Proteomics	5 th HUPO Test Samples Meeting	Barbados
2007	Proteomic Analysis of Cell Cycle Progression	2 nd Austrian Proteomics Platform	Seefeld, Austria
2005	High Mass Accuracy Proteomics	Nanyang Technological University	Singapore
2005	Proteomic Analysis of Cell Cycle Progression	BIOPOLIS	Singapore
2003	Absolute Quantification of Post-Translational Modifications	51 st Conference of the American Society for Mass Spectrometry	Montreal, Canada
2001	New Methods for Quantitative Proteomics	BIOMICS Conference	Frankfurt

National:

<u>DATE</u>	<u>TOPIC</u>	<u>ORGANIZATION</u>	<u>LOCATION</u>
2012	Identification of Phosphorylation Sites from Tandem MS Data	American Society for Mass Spectrometry Fall Workshop	Boston, MA
2012	Kinase Signaling in Cell Division	University of Washington	Seattle, WA

2012	Proteomic Analysis of Kinase Signaling in Mitosis	University of Vermont Cancer Center	Burlington, VT
2011	Proteomic Analysis of Kinase Signaling in Mitosis	59 th Conference of the American Society for Mass Spectrometry	Denver, CO
2011	Proteomic Analysis of Kinase Signaling in Mitosis	University of Vermont, Chemistry	Burlington, VT
2010	Proteomic Analysis of Kinase Signaling in Mitosis	Vanderbilt-Ingram Medical Center	Nashville, TN
2009	New Algorithms for High-Throughput Proteomics	ThermoFinnigan Mass Spectrometry Instruments Division	San Jose, CA
2009	Proteomic Analysis of Kinase Signaling in Mitosis	Millennium Pharmaceuticals	Boston, MA
2008	Proteomics Workshop	National IDeA Symposium of Biomedical Research Excellence	Washington, DC
2007	High Mass Accuracy Proteomics	Eastern Analytical Symposium	Somerset, NJ
2007	Methods in Quantitative Proteomics	AACR: Advances in Proteomics for Cancer Research	Amelia Island, FL
2005	Proteomic Analysis of Cell Cycle Progression	53 rd Conference of the American Society for Mass Spectrometry	San Antonio, TX
2005	High Mass Accuracy Proteomics	5 th North American FT-ICR-MS Mtg	Key West, FL
2004	High Mass Accuracy Proteomics	San Fran. Bay Area MS User Mtg	San Francisco, CA
2003	Absolute Quantification of Post-translational Modifications	ABRF Conference	Denver, CO
2002	Absolute Quantification of Post-translational Modifications	50 th Conference of the American Society for Mass Spectrometry	Orlando, FL

Regional:

<u>DATE</u>	<u>TOPIC</u>	<u>ORGANIZATION</u>	<u>LOCATION</u>
2012	Kinase Signaling in Cell Division	NCCC 40 th Anniversary Symposium	Dartmouth, NH
2012	Kinase Signaling in Cell Division	NCCC Faculty Retreat	Dartmouth, NH
2011	Proteomic Analysis of Kinase Signaling in Mitosis	Vassar College, Biochemistry Program	Poughkeepsie, NY
2011	Proteomic Analysis of Kinase Signaling in Mitosis	4 th Northeast Regional IDeA Mtg.	Newport, RI

2011	Proteomic Analysis of Kinase Signaling in Mitosis	2 nd Annual Genome Instability Conference	Dartmouth, NH
2011	Proteomic Analysis of Kinase Signaling in Mitosis	NCCC Grand Rounds	Dartmouth, NH
2010	Proteomic Analysis of Kinase Signaling in Mitosis	JAX-UVM-NCCC Regional Cancer Symposium	The Jackson Laboratory, ME
2010	Proteomic Analysis of Kinase Signaling in Mitosis	Colby College Chemistry Colloquim	Colby College, ME
2009	Proteomics Workshop	3 rd Northeast Regional IDeA Mtg.	Waterville, NH
2009	Proteomic Analysis of Kinase Signaling in Mitosis	2 nd Annual Integrative Biology Symposium	Dartmouth, NH
2008	New Algorithms for High-Throughput Proteomics	Dartmouth-UVM Regional COBRE	Burlington, VT
2006	Proteomic Analysis of Cell Cycle Progression	Friends of NCCC Meeting	Dartmouth, NH

BIBLIOGRAPHY:

Journal Articles:

Total publications: 47 (h-index: 27)

Highest cited papers: # 1: 2,963 citations - #2: 793 citations - #3: 413 citations

Papers cited > 20 times: 27

Papers cited > 50 times: 16

Papers cited > 100 times: 15

Original Articles: (* denotes co-corresponding authors)

1. Rice KP, Klinkerch EJ, **Gerber SA**, Schleicher TR, Kraus TJ, Buros CM; Thioredoxin reductase is inhibited by the carbamoylating activity of the anticancer sulfonylhydrazine drug laromustine. *Mol Cell Biochem.* Aug. 5 [Epub] (2012)
2. Milloy JA, Faherty BK, **Gerber SA**; Tempest: GPU-CPU computing for high-throughput peptide spectral matching. *Journal of Proteome Research* v.11, pp. 3581-91 (2012)
3. Kettenbach AN, Wang T, Madden DR, Knapp S, Bailey-Kellogg C, **Gerber SA**; Rapid determination of multiple linear kinase substrate motifs by mass spectrometry. *Chemistry & Biology* v. 19 (5), pp. 608-18 (2012)
4. Christofferson DE, Li Y, Hitomi J, Zhou W, Upperman C, Zhu H, **Gerber SA**, Gygis S, Yuan J; A novel role for RIP1 kinase in mediating TNF α production. *Cell Death Dis.* June 14;3:e320 (2012)

5. Zhang A, Petrov KO, Hyun ER, Liu Z, **Gerber SA**, Myers LC; The Tlo proteins are stoichiometric components of *C. albicans* Mediator anchored via the Med3 subunit. *Eukaryotic Cell* v.11, pp. 874-84 (2012)
6. Hood EA, Kettenbach AN, **Gerber SA**, Compton DA; Plk1 regulates the kinesin-13 protein Kif2b to promote faithful chromosome segregation. *Molecular Biology of the Cell* v. 23, pp. 2264-74 (2012)
7. Wang T, Kettenbach AN, **Gerber SA**, Bailey-Kellogg C; MMFP: A maximal motif finder for phosphoproteomics datasets. *BMC Bioinformatics* v. 28, pp. 1562-70 (2012)
8. Gilmore JM, Kettenbach AN, **Gerber SA**; Increasing phosphoproteomic coverage through sequential digestion by complementary proteases. *Analytical and Bioanalytical Chemistry* v. 402, pp. 711-20 (2012)
9. Liu M, Kang S, Ray SS, Jackson J, Zaitsev AD, **Gerber SA**, Cuny GD, Glicksman MA; Kinetic mechanistic and structural modeling studies of truncated wild-type LRRK2 and the mutant G2019S. *Biochemistry* v. 50, pp. 9399-408 (2011)
10. Kettenbach AN & **Gerber SA**; Rapid and reproducible single-stage phosphopeptide purifications: Application to general and phosphotyrosine-specific phosphoproteomics experiments. *Analytical Chemistry* v. 83, pp. 7635-44 (2011)
11. Yore MM, Kettenbach AN, Sporn MB*, **Gerber SA***, Liby KT*; Proteomic analysis shows synthetic oleanane triterpenoid bind to mTOR. *PLoS One* v. 6, e22862 (2011)
12. Kettenbach AN, Schweppe DK, Faherty BK, Pechenick D, Pletnev AA, **Gerber SA**; Quantitative phosphoproteomics reveals substrates and functional modules of the Aurora and Polo-like kinases in mitotic cells. *Science Signaling* June 28, v.4:rs5 (2011)
13. Sano H, Peck GR, Kettenbach AN, **Gerber SA**, Lienhard GE; Insulin-stimulated GLUT4 protein translocation in adipocytes requires the Rab10 guanine nucleotide exchange factor Dennd4C. *J. Biol. Chem.* v. 286, pp.16541-5 (2011)
14. Kettenbach AN, Rush J, **Gerber SA**; Absolute quantification of protein and post-translational modification abundance with stable isotope-labeled synthetic peptides. *Nature Protocols* v. 6, pp. 175-86 (2011)
15. Faherty BK & **Gerber SA**; MacroSEQUEST: Efficient candidate-centric searching and high resolution correlation analysis for large-scale proteomics data sets. *Analytical Chemistry* v. 82, pp. 6821-9 (2010)
16. Choi SH, Wright JB, **Gerber SA**, Cole MD; Myc protein is stabilized by suppression of a novel E3 ligase complex in cancer cells. *Genes Dev.* v. 24, pp. 1236-41 (2010)
17. Baker CL, Kettenbach AN, Loros JJ, **Gerber SA***, Dunlap JC*; Quantitative proteomics reveals a dynamic interactome and phase-specific phosphorylation in the *Neurospora* circadian clock. *Molecular Cell* v. 34, pp. 354-63 (2009)
18. Wai SC, **Gerber SA**, Li R; Multisite phosphorylation of the guanine nucleotide exchange factor Cdc24 during yeast cell polarization. *PLoS One* v. 4, e6563 (2009)

19. Chhabra ES, Ramabhadran V, **Gerber SA**, Higgs HN; INF2 is an endoplasmic reticulum-associated formin protein. *J. Cell Sci.* v. 122, pp. 1430-40 (2009)
20. Motamedi MR, Hong EJ, Li X, **Gerber SA**, Denison C, Gygi S, Moazed D; HP1 proteins form distinct complexes and mediate heterochromatic gene silencing by nonoverlapping mechanisms. *Molecular Cell* v. 32, pp. 778-90 (2008)
21. Lyons PD, Peck GR, Kettenbach AN, **Gerber SA**, Roudaia L, Lienhard GE; Insulin stimulates the phosphorylation of the exocyst protein Sec8 in adipocytes. *Biosci Rep.* v. 29, pp. 229-35 (2008)
22. Bakalarski CE, Elias JE, Villen J, Haas W, **Gerber SA**, Everley PA, Gygi SP; The impact of peptide abundance and dynamic range on stable-isotope-based quantitative proteomic analyses. *J Proteome Res.* v. 7 pp. 4756-65 (2008)
23. Degterev A, Hitomi J, Gemscheid M, Ch'en IL, Korkina O, Teng X, Abbott D, Cuny GD, Yuan C, Wagner G, Hedrick SM, **Gerber SA**, Lugovskoy A, Yuan J; Identification of RIP1 kinase as a specific cellular target of necrostatins. *Nat Chem Biol.* v. 4, pp. 313-21 (2008)
24. Loring GL, Christensen KC, **Gerber SA**, Brenner C; Yeast CHFR homologs retard cell cycle at G1 and G2/M via Ubc4 and Ubc12/Mms2-dependent ubiquitination. *Cell Cycle* v. 7, pp. 96-105 (2008)
25. **Gerber SA**, Kettenbach AN, Rush J, Gygi SP; The absolute quantification strategy: application to phosphorylation profiling of human separase serine 1126. *Methods in Molecular Biology.* v. 359, pp. 71-86 (2007)
26. Moazed D, Buhler M, Buker SM, Colmenares SU, Gerace EL, **Gerber SA**, Hong EJ, Motamedi MR, Verdell A, Villen J, Gygi SP; Studies on the mechanism of RNAi-dependent heterochromatin assembly. *Cold Spring Harb Symp Quant Biol.* v.71, pp. 461-71 (2007)
27. Li X, **Gerber SA**, Rudner AD, Beausoleil SA, Haas W, Villen J, Elias JE, Gygi SP; Large-scale phosphorylation analysis of alpha-factor arrested *Saccharomyces cerevisiae*. *J Proteome Res* v.6, pp. 1190-7 (2007)
28. Villén J, Beausoleil SA, **Gerber SA**, Gygi SP; Large-scale phosphorylation analysis of mouse liver. *Proc Natl Acad Science U S A* v. 104, pp. 1488-93 (2007)
29. Hu X, Eszterhas S, Pallazzi N, Bouhassira EE, Fields J, Tanabe O, **Gerber SA**, Bulger M, Engel JD, Groudine M, Fiering S; Transcriptional interference among the murine β -like globin genes. *Blood* v. 109, pp. 2210-16 (2006)
30. Beausoleil SA, Villén J, **Gerber SA**, Rush J, Gygi SP; A novel probability-based approach for high-throughput protein phosphorylation analysis and site localization. *Nature Biotechnology.* v. 24, pp. 1285-92 (2006)
31. Everley PA, Bakalarski CE, Elias JE, Waghorne CG, Beausoleil SA, **Gerber SA**, Faherty BK, Zetter BR, Gygi SP; Enhanced analysis of metastatic prostate cancer using stable isotopes and high mass accuracy instrumentation. *J Proteome Res.* v. 5, pp 1224-31 (2006)
32. Haas W, Faherty BK, **Gerber SA**, Elias JE, Beausoleil SA, Bakalarski CE, Li X, Villen J, Gygi SP; Optimization and use of peptide mass measurement accuracy in shotgun proteomics. *Mol Cell Proteomics.* v. 5, pp. 1326-37 (2006)

33. Dieguez-Acuna FJ, **Gerber SA**, Kodama, S, Elias JE, Beausoleil SA, Faustman D, Gygi SP; Characterization of mouse spleen cells by subtractive proteomics. *Mol Cell Proteomics*. v. 4, pp. 1459-70 (2005)
34. Denison C, Rudner AD, **Gerber SA**, Bakalarski CE, Moazed D, Gygi SP; A proteomic approach to gaining insights into protein sumoylation in yeast. *Mol Cell Proteomics*. v. 4, pp. 246-54 (2005)
35. Ballif B, Roux PP, **Gerber SA**, MacKeigan JP, Blenis J, Gygi SP; Quantitative phosphorylation profiling of the ERK/p90 ribosomal S6 kinase-signaling cassette and its targets, the tuberous sclerosis tumor suppressors. *Proc Natl Acad Science U S A*. v.102, pp. 667-72 (2005)
36. Motamedi MR, Verdel A, Colmenares S, **Gerber SA**, Gygi SP, Moazed D; Two RNAi complexes, RITS and RDRC, associate together and localize to noncoding centromeric RNAs. *Cell* v. 119, pp. 789-802 (2004)
37. Tanny JC, Kirkpatrick D, **Gerber SA**, Gygi SP, Moazed D; Budding yeast silencing complexes and regulation of Sir2 activity by protein-protein interactions. *Mol Cell Biology*. v. 24, pp. 6931-46 (2004)
38. Verdel A, Jia S, **Gerber SA**, Sugiyama T, Gygi SP, Grewal SI, Moazed D; RNAi-mediated targeting of heterochromatin by the RITS complex. *Science* v. 303, pp. 672-6 (2004)
39. Vrabioiu AM, **Gerber SA**, Gygi SP, Field CM, Mitchison TM; The majority of *Saccharomyces cerevisiae* septin complexes do not exchange guanine nucleotides. *J Biol Chem* v. 279, pp. 3111-8 (2004)
40. **Gerber SA**, Rush J, Stemmann O, Kirschner M, Gygi SP; Absolute quantification of proteins and phosphoproteins from cell lysates by tandem MS. *Proc Natl Acad Science U S A*. v. 100, pp. 6940-5 (2003)
41. Hoppe GJ, Tanny JC, Rudner AD, **Gerber SA**, Danaie S, Gygi SP, Moazed D; Steps in assembly of silent chromatin in yeast: Sir3-independent binding of a Sir2/Sir4 complex to silencers and role of Sir2-dependent deacetylation. *Mol Cell Biology* v. 22, pp. 4167-80 (2002)
42. Stemmann O, Zou H, **Gerber SA**, Gygi SP, Kirschner MW; Dual inhibition of sister chromatid separation at metaphase. *Cell* v. 107, pp. 715-726 (2001)
43. **Gerber SA**, Turecek F, Gelb MH; Design and synthesis of substrate and internal standard conjugates for profiling enzyme activity in the Sanfilippo syndrome by affinity chromatography/electrospray ionization mass spectrometry. *Bioconj Chemistry* v. 12, pp. 603-15 (2001)
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