Name Arthur R. Salomon
Associate Professor
Molecular Biology, Cell Biology, and Biochemistry Department
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Education

1991-1995 **Case Western Reserve University**, Cleveland, OH
B.S. Chemistry, Magna Cum Laude
Undergraduate Research with Professor Michael Zagorski

1995-2000 **Stanford University,** Stanford, CA
Ph.D. Chemistry
with Professor Chaitan Khosla
Dissertation: "Chemistry and Biology of Apoptolidin, an Inhibitor of F0F1-ATPase that Selectively Induces Apoptosis"

Professional Appointments

2000-2004 **Genomics Institute of the Novartis Research Foundation (GNF)**
Postdoctoral Fellow in proteomics with Professor Peter Schultz

2004-2011 **Brown University Department of Molecular Biology, Cell Biology, and Biochemistry**
Assistant Professor

2007-2011 **Brown University Department of Chemistry**
Adjunct Assistant Professor

2011-present **Brown University Department of Molecular Biology, Cell Biology, and Biochemistry**
Associate Professor

2011-present **Brown University Department of Chemistry**
Adjunct Associate Professor

2012-2015 **MCB Graduate Program**
Director

2013-present **Director of the CCRD Proteomic Core Facility**
Director

Honors

1995-1997 NIH Biotechnology Training Grant, Stanford University

2006	Teaching with Technology Award from CIS and the Dean of the College
2006-2010	Beckman Young Investigator Award
2009	Session Chair, 96th American Association of Immunologist Annual Meeting "Technological Innovations in Immunology", Seattle, WA
2010	Teaching with Technology Award from CIS and the Dean of the College
2012	Teaching with Technology Award from CIS and the Dean of the College
2016	Medical School Excellence in Teaching Award (BIOL 3642 IMS I)
2018	Dean's Award for Excellence in Undergraduate Teaching, Advising, and Mentoring in the Biological Sciences

Completed Publications

Refereed Journal Articles (Published from PhD and Postdoc lab)

A. Salomon, K. Marcinowski, R. Friedland, and M. Zagorski (1996). "Nicotine inhibits amyloid formation by the beta-peptide." *Biochemistry* **35**(42): 13568-78.

H. Zeng, H. Shao, N. Menon, J. Yang, **A. Salomon**, R. Freidland, and M. Zagorski (2000). "Nicotine and amyloid formation" *Biological Psychiatry* **49**(3): 248-257.

A. Salomon, D. Voehringer, L. Herzenberg, C. Khosla (2000). "Understanding and exploiting the mechanistic basis for selectivity of polyketide inhibitors of F0F1-ATPase." *Proc. Nat. Acad. Sci.,* **97**(26): 14766-71.

A. Salomon, D. Voehringer, L. Herzenberg, C. Khosla (2001). "Apoptolidin, a selective cytotoxic agent, is an inhibitor of F0F1-ATPase." *Chemistry and Biology*, **8**(1): 71-80.

A. Salomon, Y. Zhang, H. Seto, C. Khosla (2001). "Structure-activity relationships within a family of selectively cytotoxic macrolide natural products." *Organic Letters*, **3**(1): 57-59.

J. Pennington, H. Williams, **A. Salomon**, G. Sulikowski (2002). "Toward a stable apoptolidin derivative: Identification of isoapoptolidin and selective deglycosylation of apoptolidin." *Organic Letters*, **4**(22): 3823-3825.
A. Salomon, S. Ficarro, L. Brill, A. Brinker, Q. Phung, C. Ericson, K. Sauer, D. Horn, P. Schultz, E. Peters (2003). "Profiling of tyrosine phosphorylation pathways in human cells using mass spectrometry." *Proc. Nat. Acad. Sci.*, **100**(2): 443-448.

C. Ericson, Q. Phung, D. Horn, E. Peters, J. Fitchett, S. Ficarro, **A. Salomon**, L. Brill, A. Brock (2003). "An automated noncontact deposition interface for liquid chromatography matrix-assisted laser desorption/ionization mass spectrometry." *Anal. Chem.* **75**(10): 2309-2315.

A. Brock, D. Horn, E. Peters, C. Shaw, C. Ericson, Q. Phung, **A. Salomon** (2003). "An automated matrix-assisted laser desorption/ionization quadrupole fourier transform ion cyclotron resonance mass spectrometer for 'bottom up' proteomics." *Anal. Chem.* **75**(14):3419-3428.

L. Brill, **A. Salomon**, S. Ficarro, M. Mukherji, M. Stettler-Gill, E. Peters (2004). "Robust phosphoproteomic profiling of tyrosine phosphorylation sites from human T cells using immobilized metal affinity chromatography and tandem mass spectrometry." *Anal. Chem.* **76**(10): 2763-2772.

I. Lee, **A. Salomon**, S. Ficarro, I. Mathes, F. Lottspeich, L. Grossman, M. Huttemann (2005). "cAMP-dependent tyrosine phosphorylation of subunit I inhibits cytochrome c oxidase activity." *J. Biol. Chem.* **280**(7): 6094-6100.

S. Ficarro, **A. Salomon**, L. Brill, D. Mason, M. Stettler-Gill, A. Brock, E. Peters (2005). "Automated immobilized metal affinity chromatography/nano-LC electrospray ionization mass spectrometry platform for profiling protein phosphorylation sites." *Rap. Comm. Mass Spec.* **19**(1):57-71.

Refereed Journal Articles (Published as Assistant Professor)

I. Lee, **A. Salomon**, K. Yu, J. Doan, L. Grossman, M. Huttemann* (2006). "New prospects for an old enzyme: Mammalian cytochrome c is tyrosine phosphoryalted in vivo." *Biochemistry*. **45**(30): 9121-9128.

T. Nuhse, K. Yu, **A. Salomon*** (2006). "Isolation of phosphopeptides by immobilized metal affinity chromatography." In Cur. Prot. Mol. Biol., (Ausubel et al., eds.) 18.13.1-18.13.23. John Wiley & Sons, Hoboken, N.J.

L. Cao, K. Yu, C. Banh, V. Nguyen, A. Ritz, B. Raphael, Y. Kawakami, T. Kawakami, **A. Salomon*** (2007). "Quantitative time-resolved phosphoproteomic analysis of mast cell signaling." *J. Immunology*, **179**(9): 5864-5876.

H. Yu, I. Lee, **A. Salomon**, K. Yu, M. Huttemann* (2008). "Mammalian liver cytochrome c is tyrosine-48 phosphorylated in vivo, inhibiting mitochondrial respiration." BBA-Bioenergetics, **1777**(7-8): 1066-71.

A. Ritz, G. Shakhnarovich, **A. Salomon**, B. Raphael* (2008). "Discovery of phosphorylation motif mixtures in phosphoproteomics data." *Bioinformatics*, **25**(1):14-21.

J. Pezza, S. Langseth, R. Yamamoto, S. Dorris, S. Ulin, **A. Salomon**, T.

Serio* (2009). "The NatA acetyltransferase couples Sup35 prion complexes to the [PSI+] phenotype." *Molec. Biol. Cell.*, **20**(3):1068-80**.**

I. Lee, **A. Salomon**, K. Yu, L. Samavati, P. Pecina, A. Pecinova, M. Hüttemann* (2009). "Isolation of regulatory-competent, phosphorylated cytochrome c oxidase." *Methods Enzymol*, **457**:193-210.

K. Yu, A. Sabelli, L. DeKeukelaere, R. Park, S. Sindi, C. A. Gatsonis, **A. Salomon*** (2009). "Integrated platform for manual and high-throughput statistical validation of tandem mass spectra." *Proteomics*, **9**(11): 3115-25.

V. Nguyen, L. Cao, J. T. Lin, N. Hung, A. Ritz, K. Yu, R. Jianu, S. P. Ulin, B. J. Raphael, D. H. Laidlaw, L. Brossay, **A. Salomon*** (2009). "A new approach for quantitative phosphoproteomic dissection of signaling pathways applied to T cell receptor activation." *Molec. Cell. Proteomics*, **8**:2418-2431.

K. Yu, **A. Salomon*** (2009). "PeptideDepot: Flexible relational database for visual analysis of quantitative proteomic data and integration of existing protein information." *Proteomics*, **9**(23):530-8.

K. Yu, **A. Salomon*** (2010). "HTAPP: High-throughput autonomous proteomic pipeline." *Proteomics*, **10**(11):2113-22.

R. Jianu, K. Yu, L. Cao, V. Nguyen, **A. Salomon**, D. Laidlaw* (2010). "Effective visual integration of quantitative proteomic data, pathways and protein interactions." *IEEE Transactions on Vis. and Comp. Graphics*, **16**(4):609-620.

Refereed Journal Articles (Published as Associate Professor)

P. Agrawal, K. Yu, **A. Salomon**, J. Sedivy* (2010). "Proteomic profiling of Myc-associated proteins." *Cell Cycle*, **9**(24):4908-21.

G. Demirkan, K. Yu, J. Boylan, **A. Salomon**, P. Gruppuso* (2011). "Phosphoproteomic profiling of in vivo signaling in liver by the mammalian target of rapamycin complex 1 (mTORC1)." *PLoS One*, **6**(6):e21729.

X. O'Brien, K. Heflin, L. Lavigne, K. Yu, M. Kim, **A. Salomon**, J. Reichner* (2012). "Lectin site ligation of CR3 induces conformational changes and signaling." *J. Biol Chem*, **287**(5):3337-48.

G. Demirkan, **A. Salomon**, P. Gruppuso* (2012). "Phosphoproteomic analysis of liver homogenates." *Methods Mol Biol*. **909**:151-63.

L. Cao, Y. Ding, N. Hung, K. Yu, A. Ritz, B. Raphael, **A. Salomon*** (2012). "Quantitative phosphoproteomics reveals SLP-76 dependent regulation of PAG and Src family kinases in T cells." *PLoS One*, **7**(10):e46725.

Y. Helou, V. Nguyen, S. Beik, **A. Salomon*** (2013). "ERK positive feedback regulates a widespread network of tyrosine phosphorylation sites across canonical T cell signaling and actin cytoskeletal proteins in T cells." *PLoS One*, **8**(7):e69641**.**

B. DeNardo, M. Holloway, Q. Ji, K. Nguyen, Y. Cheng, M. Valentine, **A. Salomon**, R. Altura* (2013). "Quantitative phosphoproteomic analysis identifies activation of the RET and IGF-1R/IR signaling pathways in neuroblastoma." *PLoS One*, **8**(12):e82513.

T. Sanderson, G. Mahapatra, P. Pecina, Q. Ji, K. Yu, C. Sinkler, A. Varughese, R. Kumar, M. Bukowski, R. Tousignant, **A. Salomon**, M. Huttemann* (2013). "Cytochrome C is tyrosine 97 phosphorylated by neuroprotective insulin treatment." *PLoS One*, **8**(11): e78627.

Y. Li, Y. Nie, Y. Helou, G. Ding, B. Feng, G. Xu, **A. Salomon**, H. Xu* (2013). "Identification of sucrose non-fermenting-related kinase (SNRK) as a suppressor of adipocyte inflammation." *Diabetes*, **62**(7):2396-409.

D. Lamming, G. Demirkan, J. Boylan, M. Mihaylova, T. Peng, J. Ferreira, N. Neretti, **A. Salomon**, D. Sabatini, P. Gruppuso* (2014). "Hepatic signaling by the mechanistic target of rapamycin complex 2 (mTORC2)." *FASEB J*., **28**(1): 300-15.

B. Feng, P. Jiao, Y. Helou, Q. He, M. Walters, **A. Salomon**, H. Xu* (2014). "Mitogen-activated protein kinase phosphatase 3 (MKP-3)-deficient mice are resistant to diet induced-obesity." *Diabetes*, **63**(9):2924-34.

W. Wimuttisuk, M. West, B. Davidge, K. Yu, **A. Salomon**, JD. Singer* (2014). "Novel Cul3 binding proteins function to remodel E3 ligase complexes." *BMC Cell Biol*, **15:**28.

Q. Ji, Y. Ding, **A. Salomon*** (2015). "SRC homology 2 domain-containing leukocyte phosphoprotein of 76 kDa (SLP-76) N-terminal tyrosine residues regulate a dynamic signaling equilibrium involving feedback of proximal T-cell receptor (TCR) signaling." *Molecular and Cellular Proteomics*, **14**(1):30-40.

Y. Helou, **A. Salomon*** (2015). "Protein networks and activation of lymphocytes." *Cur Opinion Immunology*, **33**:78-85.

Y. Helou, A. Petrashen, **A. Salomon*** (2015). "Vav1 regulates T cell activation through feedback mechanisms and crosstalk between the T cell receptor and CD28." *J. Proteome Research*, **14**:2963-75.

Q. Ji, **A. Salomon*** (2015). "Wide-scale quantitative phosphoproteomic analysis reveals that cold treatment of T cells closely mimics soluble antibody stimulation." *J. Proteome Research*, **14**:2082-9.

H. Goodfellow, M. Frushicheva, Q. Ji, D. Cheng, A. Cantor, J. Kuriyan, A. Chakraborty*, **A. Salomon***, A. Weiss* (2015). "The catalytic activity of the kinase ZAP-70 mediates basal signaling and negative feedback of the T cell receptor pathway." *Science Signaling*, **8:**ra49.

J. Boylan, **A. Salomon**, U. Tantravahi, P. Gruppuso* (2015). "Adaptation of HepG2 cells to steady-state reduction in the content of protein phosphatase 6 (PP6) catalytic subunit." *Exp Cell Res.,* **335**:224-37.

N. Ahsan, R. Rao, P. Gruppuso, B. Ramratnam, **A. Salomon*** (2016). "Targeted proteomics: Current status and future perspectives for quantification of food allergens." *J. Proteomics*, **40**:15-23.

G. Mahapatra, A. Varughese, Q. Ji, I. Lee, J. Liu, A. Vaishnav, C. Sinkler, A. Kapralov, C. Moraes, T. Sanderson, T. Stemmler, L. Grossman, V. Kagan, J. Brunzelle, **A. Salomon**, B. Edwards, M. Huttemann* (2017). "Phosphorylation of cytochrome c threonine 28 regulates electron transport chain activity in kidney: Implications for AMP kinase." *J. Biol. Chem.*, **292**:64-79.

J. Belmont, T. Gu, A. Mudd, **A. Salomon*** (2017). "A PLC-g1 feedback pathway regulates Lck substrate phosphorylation at the T cell receptor and SLP-76 Complex." *J. Proteome Res.*, **16**(8):2729-42.
N. Ahsan, J. Belmont, Z. Chen, J. Clifton, **A. Salomon*** (2017). "Highly reproducible improved label-free quantitative analysis of cellular phosphoproteome by optimization of LC-MS/MS gradient and analytical column construction." *J. Proteomics*, **165**:69-74.

A. Qadir, P. Ceppi, S. Brockway, C. Law, L Mu, N. Khodarev, J. Kim, J. Zhao, W. Putzbach, A. Murrmann, Z. Chen, W. Chen, X. Liu, **A. Salomon**, H. Liu, R. Weichselbaum, J. Yu, M. Peter* (2017) "CD95/Fas increases stemness in cancer cells by inducing STAT1 dependent Type I Interferon Response." *Cell Reports*, **18**:2373-2386.

A. Michael, N. Ahsan, V. Zabala, H. Francois-Vaughan, S. Post, K. Brilliant, **A. Salomon**, J. Sanders, and P. Gruppuso* (2017). "Proteomic Analysis of Laser Capture Microdissected Focal Lesions in a Rat Model of Progenitor Marker-Positive Hepatocellular Carcinoma." *Oncotarget,* **8**:26041-56.

W. Lo, N. Shah, N. Ahsan, V. Horkova, O. Stepanek, **A. Salomon**, J. Kuriyan, A. Weiss* (2018). "Lck promotes Zap70-dependent LAT phosphorylation by bridging Zap70 to LAT." *Nat. Immun.,* **19**:733-41.

M. Curtis, H. Kenny, B. Ashcroft, A. Mukherjee, A. Johnson, Y. Zhang, Y. Helou, R. Batlle, X. Liu, N. Gutierrez, X. Gao, S. Yamada, R. Lastra, A. Montag, N. Ahsan, J. Locasale, **A. Salomon**, A. Nebreda, E. Lengyel* (2018). "Fibroblasts mobilize tumor cell glycogen to promote proliferation and metastasis." *Cell Metabolism*, **28**:1-15.

J. Li, B. Feng, Y. Nie, P. Jiao, X. Lin, M. Huang, R. An, Q. He, HE Zhou, **A. Salomon**, K. Sigrist, Z. Wu, S. Liu, H. Xu* (2018). "Sucrose Nonfermenting-Related Kinase Regulates Both Adipose Inflammation and Energy Homeostasis in Mice and Humans." *Diabetes*, **67**:400-411.

N. Ahsan, J. Boylan, **A. Salomon**, J. Sanders, P. Gruppuso* (2019). "Quantitative proteomics and phosphoproteomics from formalin-fixed, paraffin-embedded tissue samples." *Methods Mol. Biol.*, In press.

Non-refereed Journal Articles

E. Peters, A. Brock, D. Horn, Q. Phung, C. Ericson, **A. Salomon**, S. Ficarro, L. Brill* (2002). "An automated LC-MALDI FT-ICR MS platform for high-throughput proteomics." *LCGC Europe*, **15**(7): 423-8.

E. Peters, A. Brock, Q. Phung, J. Fitchett, D. Horn, C. Ericson, S. Ficarro, **A. Salomon*** (2002). "Automated liquid chromatography MALDI FT-ICR MS platform for proteomics: Rationale for an off-line approach and optimized implementation" *Am. Pharma. Rev.*, **5**(3): 72-81.

A. Brock, D. Horn, C. Shaw, E. Peters*, C. Ericson, Q. Phung, S. Ficarro, **A. Salomon*** (2002). "FT-ICR MS platform for proteomics: Automated high performance mass spectrometry and data analysis" *Am. Pharma. Rev.*, **5**(4): 94-99.

N. Ahsan, **A. Salomon*** (2016), "Proteomic Tools for the Investigation of Nodule Organogenesis." In: *Agricultural Proteomics,* Springer, pp 127-145.

Chapters in Books

H. Shao, K. Marcinowski, E. Clancy, **A. Salomon** and M. Zagorski* (1997). "The solution structures of the ß-amyloid peptide provide a molecular approach for the treatment of Alzheimer's disease." In K. Iqbal, B. Winblad, T. Nishimura, M. Takeda and H. M. Wisniewski (eds), *Alzheimer's Disease: Biology, Diagnosis and Therapeutics* New York, John Wiley & Sons, pp 729-739.

L. Cao, K. Yu, **A. Salomon*** (2006). "Phosphoproteomic analysis of

lymphocyte signalling." In Advances in Experimental Medicine and Biology, Vol. **584**, C. Tsoukas, ed. Springer, New York, NY. chapter 19, Pgs. 277-88.

N. Ahsan, **A. Salomon*** (2017). "Quantitative phosphoproteomic analysis of T cell receptor signaling." *Methods in Molecular Biology, The Immune Synapse:Methods and Protocols*, Springer, **1584**:369-382.