

Chapter Nine: Bibliography



1. Abdul-Sater, A.A., Said-Sadier, N., Lam, V.M., Singh, B., Pettengill, M.A., Soares, F., Tattoli, I., Lipinski, S., Girardin, S.E., Rosenstiel, P., et al. (2010). Enhancement of reactive oxygen species production and chlamydial infection by the mitochondrial Nod-like family member NLRX1. *The Journal of biological chemistry* 285, 41637-41645.
2. Abe, T., Harashima, A., Xia, T., Konno, H., Konno, K., Morales, A., Ahn, J., Gutman, D., and Barber, G.N. (2013). STING recognition of cytoplasmic DNA instigates cellular defense. *Molecular cell* 50, 5-15.
3. Ablasser, A., Schmid-Burgk, J.L., Hemmerling, I., Horvath, G.L., Schmidt, T., Latz, E., and Hornung, V. (2013). Cell intrinsic immunity spreads to bystander cells via the intercellular transfer of cGAMP. *Nature* 503, 530-534.
4. Acin-Perez, R., Fernandez-Silva, P., Peleato, M.L., Perez-Martos, A., and Enriquez, J.A. (2008). Respiratory active mitochondrial supercomplexes. *Molecular cell* 32, 529-539.
5. Aggarwal, B.B., Vijayalekshmi, R.V., and Sung, B. (2009). Targeting inflammatory pathways for prevention and therapy of cancer: short-term friend, long-term foe. *Clinical cancer research : an official journal of the American Association for Cancer Research* 15, 425-430.
6. Allemani, C., Matsuda, T., Di Carlo, V., Harewood, R., Matz, M., Niksic, M., Bonaventure, A., Valkov, M., Johnson, C.J., Esteve, J., et al. (2018). Global surveillance of trends in cancer survival 2000-14 (CONCORD-3): analysis of individual records for 37 513 025 patients diagnosed with one of 18 cancers from 322 population-based registries in 71 countries. *Lancet* 391, 1023-1075.
7. Allen, I.C. (2014). Non-Inflammasome Forming NLRs in Inflammation and Tumorigenesis. *Frontiers in immunology* 5, 169.
8. Anastasiou, D. (2017). Tumour microenvironment factors shaping the cancer metabolism landscape. *Br J Cancer* 116, 277-286.
9. Antonicka, H., and Shoubbridge, E.A. (2015). Mitochondrial RNA Granules Are Centers for Posttranscriptional RNA Processing and Ribosome Biogenesis. *Cell reports*.
10. Arnoult, D., Soares, F., Tattoli, I., Castanier, C., Philpott, D.J., and Girardin, S.E. (2009). An N-terminal addressing sequence targets NLRX1 to the mitochondrial matrix. *Journal of cell science* 122, 3161-3168.
11. Arnoult, D., Soares, F., Tattoli, I., and Girardin, S.E. (2011). Mitochondria in innate immunity. *EMBO reports* 12, 901-910.
12. Baixauli, F., Acin-Perez, R., Villarroya-Beltri, C., Mazzeo, C., Nunez-Andrade, N., Gabande-Rodriguez, E., Ledesma, M.D., Blazquez, A., Martin, M.A., Falcon-Perez, J.M., et al. (2015). Mitochondrial Respiration Controls Lysosomal Function during Inflammatory T Cell Responses. *Cell metabolism* 22, 485-498.
13. Bakhoun, S.F., and Cantley, L.C. (2018). The Multifaceted Role of Chromosomal Instability in Cancer and Its Microenvironment. *Cell* 174, 1347-1360.
14. Bakhoun, S.F., Ngo, B., Laughney, A.M., Cavallo, J.A., Murphy, C.J., Ly, P., Shah, P., Sriram, R.K., Watkins, T.B.K., Taunk, N.K., et al. (2018). Chromosomal instability drives metastasis through a cytosolic DNA response. *Nature* 553, 467-472.
15. Balkwill, F. (2009). Tumour necrosis factor and cancer. *Nature reviews. Cancer* 9, 361-371.
16. Baltz, A.G., Munschauer, M., Schwanhauser, B., Vasile, A., Murakawa, Y., Schueler, M., Youngs, N., Penfold-Brown, D., Drew, K., Milek, M., et al. (2012). The mRNA-bound proteome and its global occupancy profile on protein-coding transcripts. *Molecular cell* 46, 674-690.
17. Barber, G.N. (2015). STING: infection, inflammation and cancer. *Nat Rev Immunol* 15, 760-770.
18. Baumann, K. (2015). Autophagy: Mitophagy receptors unravelled. *Nature reviews. Molecular cell biology* 16, 580.
19. Bell, C., English, L., Boulais, J., Chemali, M., Caron-Lizotte, O., Desjardins, M., and Thibault, P. (2013). Quantitative proteomics reveals the induction of mitophagy in tumor necrosis factor-alpha-activated (TNFalpha) macrophages. *Molecular & cellular proteomics : MCP* 12, 2394-2407.
20. Benard, G., Faustin, B., Passerieux, E., Galinier, A., Rocher, C., Bellance, N., Delage, J.P., Casteilla, L., Letellier, T., and Rossignol, R. (2006). Physiological diversity of mitochondrial oxidative phosphorylation. *American journal of physiology. Cell physiology* 291, C1172-1182
21. Benchoua, A., Couriaud, C., Guegan, C., Tartier, L., Couvert, P., Friocourt, G., Chelly, J., Menissier-de Murcia, J., and Onteniente, B. (2002). Active caspase-8 translocates into the nucleus of apoptotic cells to inactivate poly(ADP-ribose) polymerase-2. *The Journal of biological chemistry* 277, 34217-34222

22. Benson, J.R., and Wishart, G.C. (2013). Predictors of recurrence for ductal carcinoma in situ after breast-conserving surgery. *The lancet oncology* *14*, e348-357
23. Bhatelia, K., Singh, A., Tomar, D., Singh, K., Sripada, L., Chagtoo, M., Prajapati, P., Singh, R., Godbole, M.M., and Singh, R. (2014a). Antiviral signaling protein MITA acts as a tumor suppressor in breast cancer by regulating NF-kappaB induced cell death. *Biochimica et biophysica acta* *1842*, 144-153
24. Bhatelia, K., Singh, K., and Singh, R. (2014b). TLRs: linking inflammation and breast cancer. *Cellular signalling* *26*, 2350-2357
25. Birsoy, K., Possemato, R., Lorbeer, F.K., Bayraktar, E.C., Thiru, P., Yucel, B., Wang, T., Chen, W.W., Clish, C.B., and Sabatini, D.M. (2014). Metabolic determinants of cancer cell sensitivity to glucose limitation and biguanides. *Nature* *508*, 108-112.
26. Biswas, S.K. (2015). Metabolic Reprogramming of Immune Cells in Cancer Progression. *Immunity* *43*, 435-449.
27. Blaser, H., Dostert, C., Mak, T.W., and Brenner, D. (2016). TNF and ROS Crosstalk in Inflammation. *Trends in cell biology* *26*, 249-261.
28. Brand, A., Singer, K., Koehl, G.E., Kolitzus, M., Schoenhammer, G., Thiel, A., Matos, C., Bruss, C., Klobuch, S., Peter, K., et al. (2016). LDHA-Associated Lactic Acid Production Blunts Tumor Immunosurveillance by T and NK Cells. *Cell metabolism* *24*, 657-671.
29. Brenner, D., Blaser, H., and Mak, T.W. (2015). Regulation of tumour necrosis factor signalling: live or let die. *Nat Rev Immunol* *15*, 362-374.
30. Buck, M.D., O'Sullivan, D., Klein Geltink, R.I., Curtis, J.D., Chang, C.H., Sanin, D.E., Qiu, J., Kretz, O., Braas, D., van der Windt, G.J., et al. (2016). Mitochondrial Dynamics Controls T Cell Fate through Metabolic Programming. *Cell* *166*, 63-76.
31. Burrell, R.A., McGranahan, N., Bartek, J., and Swanton, C. (2013). The causes and consequences of genetic heterogeneity in cancer evolution. *Nature* *501*, 338-345.
32. Cairns, R.A., Harris, I.S., and Mak, T.W. (2011). Regulation of cancer cell metabolism. *Nature reviews. Cancer* *11*, 85-95.
33. Calvo, S.E., Clauser, K.R., and Mootha, V.K. (2016). MitoCarta2.0: an updated inventory of mammalian mitochondrial proteins. *Nucleic acids research* *44*, D1251-1257.
34. Chandel, N.S. (2015). Evolution of Mitochondria as Signaling Organelles. *Cell metabolism* *22*, 204-206.
35. Chin, Y., Janseens, J., Vandepitte, J., Vandenbrande, J., Opdebeek, L., and Raus, J. (1992). Phenotypic analysis of tumor-infiltrating lymphocytes from human breast cancer. *Anticancer Res* *12*, 1463-1466.
36. Chujo, T., Ohira, T., Sakaguchi, Y., Goshima, N., Nomura, N., Nagao, A., and Suzuki, T. (2012). LRPPRC/SLIRP suppresses PNPase-mediated mRNA decay and promotes polyadenylation in human mitochondria. *Nucleic acids research* *40*, 8033-8047.
37. Cleary, A.S., Leonard, T.L., Gestl, S.A., and Gunther, E.J. (2014). Tumour cell heterogeneity maintained by cooperating subclones in Wnt-driven mammary cancers. *Nature* *508*, 113-117.
38. Coutermarsh-Ott, S., Simmons, A., Capria, V., LeRoith, T., Wilson, J.E., Heid, B., Philipson, C.W., Qin, Q., Hontecillas-Magarzo, R., Bassaganya-Riera, J., et al. (2016). NLRX1 suppresses tumorigenesis and attenuates histiocytic sarcoma through the negative regulation of NF-kappaB signaling. *Oncotarget* *7*, 33096-33110.
39. Couvillion, M.T., Soto, I.C., Shipkovenska, G., and Churchman, L.S. (2016). Synchronized mitochondrial and cytosolic translation programs. *Nature* *533*, 499-503.
40. DeBerardinis, R.J., Lum, J.J., Hatzivassiliou, G., and Thompson, C.B. (2008). The biology of cancer: metabolic reprogramming fuels cell growth and proliferation. *Cell metabolism* *7*, 11-20.
41. Demers-Lamarche, J., Guillebaud, G., Tlili, M., Todkar, K., Belanger, N., Grondin, M., Nguyen, A.P., Michel, J., and Germain, M. (2016). Loss of Mitochondrial Function Impairs Lysosomes. *The Journal of biological chemistry* *291*, 10263-10276.
42. DeNardo, D.G., and Coussens, L.M. (2007). Inflammation and breast cancer. Balancing immune response: crosstalk between adaptive and innate immune cells during breast cancer progression. *Breast Cancer Res* *9*, 212.
43. Deng, L., Liang, H., Xu, M., Yang, X., Burnette, B., Arina, A., Li, X.D., Mauceri, H., Beckett, M., Darga, T., et al. (2014). STING-Dependent Cytosolic DNA Sensing Promotes Radiation-Induced Type I Interferon-Dependent Antitumor Immunity in Immunogenic Tumors. *Immunity* *41*, 843-852.
44. Doench, J.G., Fusi, N., Sullender, M., Hegde, M., Vaimberg, E.W., Donovan, K.F.,

- Smith, I., Tothova, Z., Wilen, C., Orchard, R., et al. (2016). Optimized sgRNA design to maximize activity and minimize off-target effects of CRISPR-Cas9. *Nature biotechnology* 34, 184-191.
45. Esquivel-Velazquez, M., Ostoa-Saloma, P., Palacios-Arreola, M.I., Nava-Castro, K.E., Castro, J.I., and Morales-Montor, J. (2015). The role of cytokines in breast cancer development and progression. *J Interferon Cytokine Res* 35, 1-16.
46. Fearon, K.C., Glass, D.J., and Guttridge, D.C. (2012). Cancer cachexia: mediators, signaling, and metabolic pathways. *Cell metabolism* 16, 153-166.
47. Feng, H., Lenarcic, E.M., Yamane, D., Wauthier, E., Mo, J., Guo, H., McGivern, D.R., Gonzalez-Lopez, O., Misumi, I., Reid, L.M., et al. (2017). NLRX1 promotes immediate IRF1-directed antiviral responses by limiting dsRNA-activated translational inhibition mediated by PKR. *Nature immunology* 18, 1299-1309.
48. Ferlay, J., Soerjomataram, I., Dikshit, R., Eser, S., Mathers, C., Rebelo, M., Parkin, D.M., Forman, D., and Bray, F. (2015). Cancer incidence and mortality worldwide: sources, methods and major patterns in GLOBOCAN 2012. *Int J Cancer* 136, E359-386.
49. Gajewski, T.F., Schreiber, H., and Fu, Y.X. (2013). Innate and adaptive immune cells in the tumor microenvironment. *Nature immunology* 14, 1014-1022.
50. Galdiero, M.R., Marone, G., and Mantovani, A. (2018). Cancer Inflammation and Cytokines. *Cold Spring Harb Perspect Biol* 10.
51. Gast, C.E., Silk, A.D., Zarour, L., Riegler, L., Burkhart, J.G., Gustafson, K.T., Parappilly, M.S., Roh-Johnson, M., Goodman, J.R., Olson, B., et al. (2018). Cell fusion potentiates tumor heterogeneity and reveals circulating hybrid cells that correlate with stage and survival. *Sci Adv* 4, eaat7828.
52. Gerlinger, M., Rowan, A.J., Horswell, S., Math, M., Larkin, J., Endesfelder, D., Gronroos, E., Martinez, P., Matthews, N., Stewart, A., et al. (2012). Intratumor heterogeneity and branched evolution revealed by multiregion sequencing. *The New England journal of medicine* 366, 883-892.
53. Gloire, G., Legrand-Poels, S., and Piette, J. (2006). NF-kappaB activation by reactive oxygen species: fifteen years later. *Biochemical pharmacology* 72, 1493-1505.
54. Gonzalez, F., Lawrence, D., Yang, B., Yee, S., Pitti, R., Marsters, S., Pham, V.C., Stephan, J.P., Lill, J., and Ashkenazi, A. (2012). TRAF2 Sets a threshold for extrinsic apoptosis by tagging caspase-8 with a ubiquitin shutoff timer. *Molecular cell* 48, 888-899.
55. Gonzalez, F., Schug, Z.T., Houtkooper, R.H., MacKenzie, E.D., Brooks, D.G., Wanders, R.J., Petit, P.X., Vaz, F.M., and Gottlieb, E. (2008). Cardiolipin provides an essential activating platform for caspase-8 on mitochondria. *The Journal of cell biology* 183, 681-696.
56. Gouirand, V., Guillaumond, F., and Vasseur, S. (2018). Influence of the Tumor Microenvironment on Cancer Cells Metabolic Reprogramming. *Front Oncol* 8, 117.
57. Greenberg, P.A., Hortobagyi, G.N., Smith, T.L., Ziegler, L.D., Frye, D.K., and Buzdar, A.U. (1996). Long-term follow-up of patients with complete remission following combination chemotherapy for metastatic breast cancer. *J Clin Oncol* 14, 2197-2205.
58. Grell, M., Douni, E., Wajant, H., Lohden, M., Clauss, M., Maxeiner, B., Georgopoulos, S., Lesslauer, W., Kollias, G., Pfizenmaier, K., et al. (1995). The transmembrane form of tumor necrosis factor is the prime activating ligand of the 80 kDa tumor necrosis factor receptor. *Cell* 83, 793-802.
59. Grivennikov, S.I., Greten, F.R., and Karin, M. (2010). Immunity, inflammation, and cancer. *Cell* 140, 883-899.
60. Guo, B., Fu, S., Zhang, J., Liu, B., and Li, Z. (2016a). Targeting inflammasome/IL-1 pathways for cancer immunotherapy. *Sci Rep* 6, 36107.
61. Guo, H., Konig, R., Deng, M., Riess, M., Mo, J., Zhang, L., Petrucelli, A., Yoh, S.M., Barefoot, B., Samo, M., et al. (2016b). NLRX1 Sequesters STING to Negatively Regulate the Interferon Response, Thereby Facilitating the Replication of HIV-1 and DNA Viruses. *Cell host & microbe* 19, 515-528.
62. Guo, J.Y., Chen, H.Y., Mathew, R., Fan, J., Strohecker, A.M., Karsli-Uzunbas, G., Kamphorst, J.J., Chen, G., Lemons, J.M., Karantza, V., et al. (2011). Activated Ras requires autophagy to maintain oxidative metabolism and tumorigenesis. *Genes & development* 25, 460-470.
63. Guo, J.Y., and White, E. (2016). Autophagy, Metabolism, and Cancer. *Cold Spring Harb Symp Quant Biol* 81, 73-78.
64. Guo, J.Y., Xia, B., and White, E. (2013). Autophagy-mediated tumor promotion. *Cell* 155, 1216-1219.
65. Gyparaki, M.T., and Papavassiliou, A.G. (2014). Lysosome: the cell's 'suicidal bag'

- as a promising cancer target. *Trends Mol Med* 20, 239-241.
67. Habtetsion, T., Ding, Z.C., Pi, W., Li, T., Lu, C., Chen, T., Xi, C., Spartz, H., Liu, K., Hao, Z., et al. (2018). Alteration of Tumor Metabolism by CD4+ T Cells Leads to TNF-alpha-Dependent Intensification of Oxidative Stress and Tumor Cell Death. *Cell metabolism* 28, 228-242 e226.
 68. Hamanaka, R.B., and Chandel, N.S. (2010). Mitochondrial reactive oxygen species regulate cellular signaling and dictate biological outcomes. *Trends in biochemical sciences* 35, 505-513.
 69. Hanahan, D., and Weinberg, R.A. (2000). The hallmarks of cancer. *Cell* 100, 57-70.
 70. Hanahan, D., and Weinberg, R.A. (2011). Hallmarks of cancer: the next generation. *Cell* 144, 646-674.
 71. Harbeck, N., and Gnant, M. (2017). Breast cancer. *Lancet* 389, 1134-1150.
 72. Harlan, L.C., and Warren, J.L. (2015). Global survival patterns: potential for cancer control. *Lancet* 385, 926-928.
 73. Hatzivassiliou, G., Zhao, F., Bauer, D.E., Andreadis, C., Shaw, A.N., Dhanak, D., Hingorani, S.R., Tuveson, D.A., and Thompson, C.B. (2005). ATP citrate lyase inhibition can suppress tumor cell growth. *Cancer cell* 8, 311-321.
 74. He, G., and Karin, M. (2011). NF-kappaB and STAT3 - key players in liver inflammation and cancer. *Cell research* 21, 159-168.
 75. Hong, M., Yoon, S.I., and Wilson, I.A. (2012). Structure and functional characterization of the RNA-binding element of the NLRX1 innate immune modulator. *Immunity* 36, 337-347.
 76. Hsu, P.P., and Sabatini, D.M. (2008). Cancer cell metabolism: Warburg and beyond. *Cell* 134, 703-707.
 77. Hu, B., Ding, G.Y., Fu, P.Y., Zhu, X.D., Ji, Y., Shi, G.M., Shen, Y.H., Cai, J.B., Yang, Z., Zhou, J., et al. (2018). NOD-like receptor X1 functions as a tumor suppressor by inhibiting epithelial-mesenchymal transition and inducing aging in hepatocellular carcinoma cells. *J Hematol Oncol* 11, 28.
 78. Huai, J., Vogtle, F.N., Jockel, L., Li, Y., Kiefer, T., Ricci, J.E., and Borner, C. (2013). TNFalpha-induced lysosomal membrane permeability is downstream of MOMP and triggered by caspase-mediated NDUFS1 cleavage and ROS formation. *Journal of cell science* 126, 4015-4025.
 79. Hutchinson, L. (2010). Breast cancer: challenges, controversies, breakthroughs. *Nat Rev Clin Oncol* 7, 669-670.
 80. Ishigaki, M., Iketani, M., Sugaya, M., Takahashi, M., Tanaka, M., Hattori, S., and Ohsawa, I. (2016). STED super-resolution imaging of mitochondria labeled with TMRM in living cells. *Mitochondrion* 28, 79-87.
 81. Ishikawa, H., and Barber, G.N. (2008). STING is an endoplasmic reticulum adaptor that facilitates innate immune signalling. *Nature* 455, 674-678.
 82. Jha, P., Wang, X., and Auwerx, J. (2016). Analysis of Mitochondrial Respiratory Chain Supercomplexes Using Blue Native Polyacrylamide Gel Electrophoresis (BN-PAGE). *Current protocols in mouse biology* 6, 1-14.
 83. Jin, C., Henao-Mejia, J., and Flavell, R.A. (2013). Innate immune receptors: key regulators of metabolic disease progression. *Cell metabolism* 17, 873-882.
 84. Jin, Z., Li, Y., Pitti, R., Lawrence, D., Pham, V.C., Lill, J.R., and Ashkenazi, A. (2009). Cullin3-based polyubiquitination and p62-dependent aggregation of caspase-8 mediate extrinsic apoptosis signaling. *Cell* 137, 721-735.
 85. Jones, R.G., and Thompson, C.B. (2009). Tumor suppressors and cell metabolism: a recipe for cancer growth. *Genes & development* 23, 537-548.
 86. Jourdain, A.A., Boehm, E., Maundrell, K., and Martinou, J.C. (2016). Mitochondrial RNA granules: Compartmentalizing mitochondrial gene expression. *The Journal of cell biology* 212, 611-614.
 87. Jourdain, A.A., Popow, J., de la Fuente, M.A., Martinou, J.C., Anderson, P., and Simarro, M. (2017). The FASTK family of proteins: emerging regulators of mitochondrial RNA biology. *Nucleic acids research* 45, 10941-10947.
 88. Kang, M.J., Yoon, C.M., Kim, B.H., Lee, C.M., Zhou, Y., Sauler, M., Homer, R., Dhamija, A., Boffa, D., West, A.P., et al. (2015). Suppression of NLRX1 in chronic obstructive pulmonary disease. *The Journal of clinical investigation* 125, 2458-2462.
 89. Karantza-Wadsworth, V., Patel, S., Kravchuk, O., Chen, G., Mathew, R., Jin, S., and White, E. (2007). Autophagy mitigates metabolic stress and genome damage in mammary tumorigenesis. *Genes & development* 21, 1621-1635.

90. Karin, M. (2006). Nuclear factor-kappaB in cancer development and progression. *Nature* 441, 431-436.
91. Karin, M. (2009). NF-kappaB as a critical link between inflammation and cancer. *Cold Spring Harb Perspect Biol* 1, a000141.
92. Kastl, L., Sauer, S.W., Ruppert, T., Beissbarth, T., Becker, M.S., Suss, D., Krammer, P.H., and Gulow, K. (2014). TNF-alpha mediates mitochondrial uncoupling and enhances ROS-dependent cell migration via NF-kappaB activation in liver cells. *FEBS Lett* 588, 175-183.
93. Kim, J.J., Lee, S.B., Park, J.K., and Yoo, Y.D. (2010). TNF-alpha-induced ROS production triggering apoptosis is directly linked to Romo1 and Bcl-X(L). *Cell death and differentiation* 17, 1420-1434.
94. Kimmelman, A.C., and White, E. (2017). Autophagy and Tumor Metabolism. *Cell metabolism* 25, 1037-1043.
95. Kohrt, H.E., Nouri, N., Nowels, K., Johnson, D., Holmes, S., and Lee, P.P. (2005). Profile of immune cells in axillary lymph nodes predicts disease-free survival in breast cancer. *PLoS Med* 2, e284.
96. Kors, L., Rampanelli, E., Stokman, G., Butter, L.M., Held, N.M., Claessen, N., Larsen, P.W.B., Verheij, J., Zuurbier, C.J., Liebisch, G., et al. (2018). Deletion of NLRX1 increases fatty acid metabolism and prevents diet-induced hepatic steatosis and metabolic syndrome. *Biochim Biophys Acta Mol Basis Dis* 1864, 1883-1895.
97. Kotas, M.E., and Medzhitov, R. (2015). Homeostasis, inflammation, and disease susceptibility. *Cell* 160, 816-827.
98. Kouidhi, S., Elgaaied, A.B., and Chouaib, S. (2017). Impact of Metabolism on T-Cell Differentiation and Function and Cross Talk with Tumor Microenvironment. *Frontiers in immunology* 8, 270.
99. Kretschmer, S., and Lee-Kirsch, M.A. (2017). Type I interferon-mediated autoinflammation and autoimmunity. *Curr Opin Immunol* 49, 96-102.
100. Kufer, T.A., and Sansonetti, P.J. (2011). NLR functions beyond pathogen recognition. *Nature immunology* 12, 121-128.
101. Kveler, K., Starosvetsky, E., Ziv-Kenet, A., Kalugny, Y., Gorelik, Y., Shalev-Malul, G., Aizenbud-Reshef, N., Dubovik, T., Briller, M., Campbell, J., et al. (2018). Immune-centric network of cytokines and cells in disease context identified by computational mining of PubMed. *Nature biotechnology* 36, 651-659.
102. Landskron, G., De la Fuente, M., Thuwajit, P., Thuwajit, C., and Hermoso, M.A. (2014). Chronic inflammation and cytokines in the tumor microenvironment. *J Immunol Res* 2014, 149185.
103. Lanning, N.J., Looyenga, B.D., Kauffman, A.L., Niemi, N.M., Sudderth, J., DeBerardinis, R.J., and MacKeigan, J.P. (2014). A mitochondrial RNAi screen defines cellular bioenergetic determinants and identifies an adenylate kinase as a key regulator of ATP levels. *Cell reports* 7, 907-917.
104. Lei, A., and Maloy, K.J. (2016). Colon Cancer in the Land of NOD: NLRX1 as an Intrinsic Tumor Suppressor. *Trends in immunology* 37, 569-570.
105. Lei, Y., Kansy, B.A., Li, J., Cong, L., Liu, Y., Trivedi, S., Wen, H., Ting, J.P., Ouyang, H., and Ferris, R.L. (2016). EGFR-targeted mAb therapy modulates autophagy in head and neck squamous cell carcinoma through NLRX1-TUFM protein complex. *Oncogene* 35, 4698-4707.
106. Lei, Y., Wen, H., Yu, Y., Taxman, D.J., Zhang, L., Widman, D.G., Swanson, K.V., Wen, K.W., Damania, B., Moore, C.B., et al. (2012). The mitochondrial proteins NLRX1 and TUFM form a complex that regulates type I interferon and autophagy. *Immunity* 36, 933-946.
107. Li, S., Wang, L., Berman, M., Kong, Y.Y., and Dorf, M.E. (2011). Mapping a dynamic innate immunity protein interaction network regulating type I interferon production. *Immunity* 35, 426-440.
108. Li, T., and Chen, Z.J. (2018). The cGAS-cGAMP-STING pathway connects DNA damage to inflammation, senescence, and cancer. *The Journal of experimental medicine* 215, 1287-1299.
109. Liao, S.J., Zhou, Y.H., Yuan, Y., Li, D., Wu, F.H., Wang, Q., Zhu, J.H., Yan, B., Wei, J.J., Zhang, G.M., et al. (2012). Triggering of Toll-like receptor 4 on metastatic breast cancer cells promotes alphavbeta3-mediated adhesion and invasive migration. *Breast Cancer Res Treat* 133, 853-863.
110. Lim, C.Y., and Zoncu, R. (2016). The lysosome as a command-and-control center for cellular metabolism. *The Journal of cell biology* 214, 653-664.
111. Lim, K.H., and Staudt, L.M. (2013). Toll-like receptor signaling. *Cold Spring Harb Perspect Biol* 5, a011247.
112. Lin, W.W., and Karin, M. (2007). A cytokine-mediated link between innate

- immunity, inflammation, and cancer. *The Journal of clinical investigation* *117*, 1175-1183.
113. Lippitz, B.E. (2013). Cytokine patterns in patients with cancer: a systematic review. *The lancet oncology* *14*, e218-228.
114. Lopez-Fabuel, I., Le Douce, J., Logan, A., James, A.M., Bonvento, G., Murphy, M.P., Almeida, A., and Bolanos, J.P. (2016). Complex I assembly into supercomplexes determines differential mitochondrial ROS production in neurons and astrocytes. *Proceedings of the National Academy of Sciences of the United States of America* *113*, 13063-13068.
115. Lunt, S.Y., and Vander Heiden, M.G. (2011). Aerobic glycolysis: meeting the metabolic requirements of cell proliferation. *Annu Rev Cell Dev Biol* *27*, 441-464.
116. Lyssiotis, C.A., and Kimmelman, A.C. (2017). Metabolic Interactions in the Tumor Microenvironment. *Trends in cell biology* *27*, 863-875.
117. Madhusudan, S., Foster, M., Muthuramalingam, S.R., Braybrooke, J.P., Wilner, S., Kaur, K., Han, C., Hoare, S., Balkwill, F., Talbot, D.C., et al. (2004). A phase II study of etanercept (Enbrel), a tumor necrosis factor alpha inhibitor in patients with metastatic breast cancer. *Clinical cancer research : an official journal of the American Association for Cancer Research* *10*, 6528-6534.
118. Mallath, M.K., Taylor, D.G., Badwe, R.A., Rath, G.K., Shanta, V., Pramesh, C.S., Digumarti, R., Sebastian, P., Borthakur, B.B., Kalwar, A., et al. (2014). The growing burden of cancer in India: epidemiology and social context. *The lancet oncology* *15*, e205-212.
119. Mantovani, A., and Dejana, E. (1989). Cytokines as communication signals between leukocytes and endothelial cells. *Immunol Today* *10*, 370-375.
120. Mantovani, A., Sozzani, S., Locati, M., Allavena, P., and Sica, A. (2002). Macrophage polarization: tumor-associated macrophages as a paradigm for polarized M2 mononuclear phagocytes. *Trends in immunology* *23*, 549-555.
121. Mar, K.B., and Schoggins, J.W. (2016). NLRX1 Helps HIV Avoid a STING Operation. *Cell host & microbe* *19*, 430-431.
122. Marusyk, A., Tabassum, D.P., Altmann, P.M., Almendro, V., Michor, F., and Polyak, K. (2014). Non-cell-autonomous driving of tumour growth supports sub-clonal heterogeneity. *Nature* *514*, 54-58.
123. Maycotte, P., Gearheart, C.M., Barnard, R., Aryal, S., Mulcahy Levy, J.M., Fosmire, S.P., Hansen, R.J., Morgan, M.J., Porter, C.C.,
124. Gustafson, D.L., et al. (2014). STAT3-mediated autophagy dependence identifies subtypes of breast cancer where autophagy inhibition can be efficacious. *Cancer research* *74*, 2579-2590.
125. McCarthy, N. (2011). Autophagy: limiting factors. *Nature reviews. Cancer* *11*, 313.
126. McLaughlin, S.A. (2013). Surgical management of the breast: breast conservation therapy and mastectomy. *Surg Clin North Am* *93*, 411-428.
127. McWhirter, S.M., Tenoever, B.R., and Maniatis, T. (2005). Connecting mitochondria and innate immunity. *Cell* *122*, 645-647.
128. Medzhitov, R. (2008). Origin and physiological roles of inflammation. *Nature* *454*, 428-435.
129. Meisinger, C., Sickmann, A., and Pfanner, N. (2008). The mitochondrial proteome: from inventory to function. *Cell* *134*, 22-24.
130. Mendez-Garcia, L.A., Nava-Castro, K.E., Ochoa-Mercado, T.L., Palacios-Arreola, M.I., Ruiz-Manzano, R.A., Segovia-Mendoza, M., Solleiro-Villavicencio, H., Cazarez-Martinez, C., and Morales-Montor, J. (2018). Breast Cancer Metastasis: Are Cytokines Important Players During Its Development and Progression? *J Interferon Cytokine Res*.
131. Mercer, T.R., Neph, S., Dinger, M.E., Crawford, J., Smith, M.A., Shearwood, A.M., Haugen, E., Bracken, C.P., Rackham, O., Stamatoyannopoulos, J.A., et al. (2011). The human mitochondrial transcriptome. *Cell* *146*, 645-658.
132. Meunier, E., and Broz, P. (2017). Evolutionary Convergence and Divergence in NLR Function and Structure. *Trends in immunology* *38*, 744-757.
133. Mezrich, J.D., Fechner, J.H., Zhang, X., Johnson, B.P., Burlingham, W.J., and Bradfield, C.A. (2010). An interaction between kynurenine and the aryl hydrocarbon receptor can generate regulatory T cells. *Journal of immunology* *185*, 3190-3198.
134. Micheau, O., and Tschopp, J. (2003). Induction of TNF receptor I-mediated apoptosis via two sequential signaling complexes. *Cell* *114*, 181-190.
135. Mills, E.L., Kelly, B., and O'Neill, L.A.J. (2017). Mitochondria are the powerhouses of immunity. *Nature immunology* *18*, 488-498.
136. Min, Y., Wi, S.M., Shin, D., Chun, E., and Lee, K.Y. (2017). Peroxiredoxin-6 Negatively Regulates Bactericidal Activity and NF-kappaB Activity by Interrupting TRAF6-

- ECSIT Complex. *Front Cell Infect Microbiol* 7, 94.
137. Minton, K. (2015). Cell death. Silencing the immune response of apoptotic cells. *Nat Rev Immunol* 15, 68-69.
138. Mishra, P., and Chan, D.C. (2016). Metabolic regulation of mitochondrial dynamics. *The Journal of cell biology* 212, 379-387.
139. Monlun, M., Hyernard, C., Blanco, P., Lartigue, L., and Faustin, B. (2017). Mitochondria as Molecular Platforms Integrating Multiple Innate Immune Signalings. *Journal of molecular biology* 429, 1-13.
140. Montoya, J., Gaines, G.L., and Attardi, G. (1983). The pattern of transcription of the human mitochondrial rRNA genes reveals two overlapping transcription units. *Cell* 34, 151-159.
141. Moore, C.B., Bergstralh, D.T., Duncan, J.A., Lei, Y., Morrison, T.E., Zimmermann, A.G., Accavitti-Loper, M.A., Madden, V.J., Sun, L., Ye, Z., et al. (2008). NLRX1 is a regulator of mitochondrial antiviral immunity. *Nature* 451, 573-577.
142. Mullen, A.R., Hu, Z., Shi, X., Jiang, L., Boroughs, L.K., Kovacs, Z., Boriack, R., Rakheja, D., Sullivan, L.B., Linehan, W.M., et al. (2014). Oxidation of alpha-ketoglutarate is required for reductive carboxylation in cancer cells with mitochondrial defects. *Cell reports* 7, 1679-1690.
143. Murphy, M.P. (2018). Newly made mitochondrial DNA drives inflammation. *Nature* 560, 176-177.
144. Murray, P.J. (2016). Amino acid auxotrophy as a system of immunological control nodes. *Nature immunology* 17, 132-139.
145. Newman, L.E., and Shadel, G.S. (2018). Pink1/Parkin link inflammation, mitochondrial stress, and neurodegeneration. *The Journal of cell biology* 217, 3327-3329.
146. Newton, K., and Dixit, V.M. (2012). Signaling in innate immunity and inflammation. *Cold Spring Harb Perspect Biol* 4.
147. Noy, R., and Pollard, J.W. (2014). Tumor-associated macrophages: from mechanisms to therapy. *Immunity* 41, 49-61.
148. Palm, W., and Thompson, C.B. (2017). Nutrient acquisition strategies of mammalian cells. *Nature* 546, 234-242.
149. Parisien, J.P., Lenoir, J.J., Mandhana, R., Rodriguez, K.R., Qian, K., Bruns, A.M., and Horvath, C.M. (2018). RNA sensor LGP2 inhibits TRAF ubiquitin ligase to negatively regulate innate immune signaling. *EMBO reports* 19.
150. Park, S.Y., Gonen, M., Kim, H.J., Michor, F., and Polyak, K. (2010). Cellular and genetic diversity in the progression of in situ human breast carcinomas to an invasive phenotype. *The Journal of clinical investigation* 120, 636-644.
151. Pavlova, N.N., and Thompson, C.B. (2016). The Emerging Hallmarks of Cancer Metabolism. *Cell metabolism* 23, 27-47.
152. Pearce, S.F., Rebelo-Guiomar, P., D'Souza, A.R., Powell, C.A., Van Haute, L., and Minczuk, M. (2017). Regulation of Mammalian Mitochondrial Gene Expression: Recent Advances. *Trends in biochemical sciences* 42, 625-639.
153. Perou, C.M., Sorlie, T., Eisen, M.B., van de Rijn, M., Jeffrey, S.S., Rees, C.A., Pollack, J.R., Ross, D.T., Johnsen, H., Akslen, L.A., et al. (2000). Molecular portraits of human breast tumours. *Nature* 406, 747-752.
154. Pisarsky, L., Bill, R., Fagiani, E., Dimeloe, S., Goosen, R.W., Hagmann, J., Hess, C., and Christofori, G. (2016). Targeting Metabolic Symbiosis to Overcome Resistance to Anti-angiogenic Therapy. *Cell reports* 15, 1161-1174.
155. Polyak, K. (2011). Heterogeneity in breast cancer. *The Journal of clinical investigation* 121, 3786-3788.
156. Pourcelot, M., and Arnoult, D. (2014). Mitochondrial dynamics and the innate antiviral immune response. *FEBS J* 281, 3791-3802.
157. Prochnicki, T., and Latz, E. (2017). Inflammasomes on the Crossroads of Innate Immune Recognition and Metabolic Control. *Cell metabolism* 26, 71-93.
158. Qin, Y., Xue, B., Liu, C., Wang, X., Tian, R., Xie, Q., Guo, M., Li, G., Yang, D., and Zhu, H. (2017). NLRX1 mediates MAVS degradation to attenuate hepatitis C virus-induced innate immune response through PCBP2. *J Virol*.
159. Rackham, O., Mercer, T.R., and Filipovska, A. (2012). The human mitochondrial transcriptome and the RNA-binding proteins that regulate its expression. *Wiley interdisciplinary reviews. RNA* 3, 675-695.
160. Ran, F.A., Hsu, P.D., Wright, J., Agarwala, V., Scott, D.A., and Zhang, F. (2013). Genome engineering using the CRISPR-Cas9 system. *Nature protocols* 8, 2281-2308.
161. Rebsamen, M., Vazquez, J., Tardivel, A., Guarda, G., Curran, J., and Tschopp, J. (2011). NLRX1/NOD5 deficiency does not affect MAVS signalling. *Cell death and differentiation* 18, 1387.

162. Restifo, N.P. (2013). A "big data" view of the tumor "immunome". *Immunity* 39, 631-632.
163. Rieusset, J. (2018). Mitochondria-associated membranes (MAMs): An emerging platform connecting energy and immune sensing to metabolic flexibility. *Biochemical and biophysical research communications* 500, 35-44.
164. Rios Garcia, M., Steinbauer, B., Srivastava, K., Singhal, M., Mattijssen, F., Maida, A., Christian, S., Hess-Stumpp, H., Augustin, H.G., Muller-Decker, K., et al. (2017). Acetyl-CoA Carboxylase 1-Dependent Protein Acetylation Controls Breast Cancer Metastasis and Recurrence. *Cell metabolism* 26, 842-855 e845.
165. Robinson, B.H., Petrova-Benedict, R., Buncic, J.R., and Wallace, D.C. (1992). Nonviability of cells with oxidative defects in galactose medium: a screening test for affected patient fibroblasts. *Biochemical medicine and metabolic biology* 48, 122-126.
166. Rongvaux, A. (2018). Innate immunity and tolerance toward mitochondria. *Mitochondrion* 41, 14-20.
167. Ruffell, B., Affara, N.I., and Coussens, L.M. (2012). Differential macrophage programming in the tumor microenvironment. *Trends in immunology* 33, 119-126.
168. Saftig, P., and Haas, A. (2016). Turn up the lysosome. *Nature cell biology* 18, 1025-1027.
169. Sander, L.E., and Garaude, J. (2018). The mitochondrial respiratory chain: A metabolic rheostat of innate immune cell-mediated antibacterial responses. *Mitochondrion* 41, 28-36.
170. Sardiello, M., Palmieri, M., di Ronza, A., Medina, D.L., Valenza, M., Gennarino, V.A., Di Malta, C., Donaudy, F., Embrione, V., Polishchuk, R.S., et al. (2009). A gene network regulating lysosomal biogenesis and function. *Science* 325, 473-477.
171. Scorrano, L. (2008). Caspase-8 goes cardiolipin: a new platform to provide mitochondria with microdomains of apoptotic signals? *The Journal of cell biology* 183, 579-581.
172. Scott, I. (2010). The role of mitochondria in the mammalian antiviral defense system. *Mitochondrion* 10, 316-320.
173. Seton-Rogers, S. (2018). Genomic instability: The sting of metastasis. *Nature reviews. Cancer* 18, 137.
174. Settembre, C., Fraldi, A., Medina, D.L., and Ballabio, A. (2013). Signals from the lysosome: a control centre for cellular clearance and energy metabolism. *Nature reviews. Molecular cell biology* 14, 283-296.
175. Sharma, D.C. (2016). Cancer data in India show new patterns. *The lancet oncology* 17, e272.
176. Sharma, P., and Allison, J.P. (2015). Immune checkpoint targeting in cancer therapy: toward combination strategies with curative potential. *Cell* 161, 205-214.
177. Shyu, R.Y., Chang, S.C., Yu, J.C., Hsu, S.J., Chou, J.M., Lee, M.S., and Jiang, S.Y. (2005). Expression and regulation of retinoid-inducible gene 1 (RIG1) in breast cancer. *Anticancer Res* 25, 2453-2460.
178. Singh, K., Poteryakhina, A., Zheltukhin, A., Bhatelia, K., Prajapati, P., Sripada, L., Tomar, D., Singh, R., Singh, A.K., Chumakov, P.M., et al. (2015). NLRX1 acts as tumor suppressor by regulating TNF-alpha induced apoptosis and metabolism in cancer cells. *Biochimica et biophysica acta* 1853, 1073-1086.
179. Singh, K., Sripada, L., Lipatova, A., Roy, M., Prajapati, P., Gohel, D., Bhatelia, K., Chumakov, P.M., and Singh, R. (2018). NLRX1 resides in mitochondrial RNA granules and regulates mitochondrial RNA processing and bioenergetic adaptation. *Biochim Biophys Acta Mol Cell Res* 1865, 1260-1276.
180. Sistigu, A., Yamazaki, T., Vacchelli, E., Chaba, K., Enot, D.P., Adam, J., Vitale, I., Goubar, A., Baracco, E.E., Remedios, C., et al. (2014). Cancer cell-autonomous contribution of type I interferon signaling to the efficacy of chemotherapy. *Nat Med* 20, 1301-1309.
181. Soares, F., Tattoli, I., Rahman, M.A., Robertson, S.J., Belcheva, A., Liu, D., Streutker, C., Winer, S., Winer, D.A., Martin, A., et al. (2014). The mitochondrial protein NLRX1 controls the balance between extrinsic and intrinsic apoptosis. *The Journal of biological chemistry* 289, 19317-19330.
182. Soares, F., Tattoli, I., Wortzman, M.E., Arnoult, D., Philpott, D.J., and Girardin, S.E. (2013). NLRX1 does not inhibit MAVS-dependent antiviral signalling. *Innate Immun* 19, 438-448.
183. Sorlie, T., Perou, C.M., Tibshirani, R., Aas, T., Geisler, S., Johnsen, H., Hastie, T., Eisen, M.B., van de Rijn, M., Jeffrey, S.S., et al. (2001). Gene expression patterns of breast carcinomas distinguish tumor subclasses with clinical implications. *Proceedings of the National*

- Academy of Sciences of the United States of America 98, 10869-10874.
184. Sousa, C.M., Biancur, D.E., Wang, X., Halbrook, C.J., Sherman, M.H., Zhang, L., Kremer, D., Hwang, R.F., Witkiewicz, A.K., Ying, H., et al. (2016). Pancreatic stellate cells support tumour metabolism through autophagic alanine secretion. *Nature* 536, 479-483.
185. Spinazzi, M., Casarin, A., Pertegato, V., Salviati, L., and Angelini, C. (2012). Assessment of mitochondrial respiratory chain enzymatic activities on tissues and cultured cells. *Nature protocols* 7, 1235-1246.
186. Sripada, L., Singh, K., Lipatova, A.V., Singh, A., Prajapati, P., Tomar, D., Bhatelia, K., Roy, M., Singh, R., Godbole, M.M., et al. (2017). hsa-miR-4485 regulates mitochondrial functions and inhibits the tumorigenicity of breast cancer cells. *Journal of molecular medicine* 95, 641-651.
187. Stokman, G., Kors, L., Bakker, P.J., Rampanelli, E., Claessen, N., Teske, G.J.D., Butter, L., van Andel, H., van den Bergh Weerman, M.A., Larsen, P.W.B., et al. (2017). NLRX1 dampens oxidative stress and apoptosis in tissue injury via control of mitochondrial activity. *The Journal of experimental medicine* 214, 2405-2420.
188. Subramanian, N., Natarajan, K., Clatworthy, M.R., Wang, Z., and Germain, R.N. (2013). The adaptor MAVS promotes NLRP3 mitochondrial localization and inflammasome activation. *Cell* 153, 348-361.
189. Sullivan, L.B., Gui, D.Y., Hosios, A.M., Bush, L.N., Freinkman, E., and Vander Heiden, M.G. (2015). Supporting Aspartate Biosynthesis Is an Essential Function of Respiration in Proliferating Cells. *Cell* 162, 552-563.
190. Sullivan, R., Badwe, R.A., Rath, G.K., Pramesh, C.S., Shanta, V., Digumarti, R., D'Cruz, A., Sharma, S.C., Viswanath, L., Shet, A., et al. (2014). Cancer research in India: national priorities, global results. *The lancet oncology* 15, e213-222.
191. Sun, L., Liu, S., and Chen, Z.J. (2010). SnapShot: pathways of antiviral innate immunity. *Cell* 140, 436-436 e432.
192. Tattoli, I., Carneiro, L.A., Jehanno, M., Magalhaes, J.G., Shu, Y., Philpott, D.J., Arnoult, D., and Girardin, S.E. (2008). NLRX1 is a mitochondrial NOD-like receptor that amplifies NF-kappaB and JNK pathways by inducing reactive oxygen species production. *EMBO reports* 9, 293-300.
193. Tattoli, I., Killackey, S.A., Foerster, E.G., Molinaro, R., Maisonneuve, C., Rahman, M.A., Winer, S., Winer, D.A., Streutker, C.J., Philpott, D.J., et al. (2016). NLRX1 Acts as an Epithelial-Intrinsic Tumor Suppressor through the Modulation of TNF-Mediated Proliferation. *Cell reports* 14, 2576-2586.
194. Tomar, D., Prajapati, P., Lavie, J., Singh, K., Lakshmi, S., Bhatelia, K., Roy, M., Singh, R., Benard, G., and Singh, R. (2015). TRIM4; a novel mitochondrial interacting RING E3 ligase, sensitizes the cells to hydrogen peroxide (H2O2) induced cell death. *Free radical biology & medicine* 89, 1036-1048.
195. Tomar, D., Prajapati, P., Sripada, L., Singh, K., Singh, R., Singh, A.K., and Singh, R. (2013). TRIM13 regulates caspase-8 ubiquitination, translocation to autophagosomes and activation during ER stress induced cell death. *Biochimica et biophysica acta* 1833, 3134-3144.
196. Tomar, D., Singh, R., Singh, A.K., Pandya, C.D., and Singh, R. (2012a). TRIM13 regulates ER stress induced autophagy and clonogenic ability of the cells. *Biochimica et biophysica acta* 1823, 316-326.
197. Tomar, D., Sripada, L., Prajapati, P., Singh, R., Singh, A.K., and Singh, R. (2012b). Nucleo-cytoplasmic trafficking of TRIM8, a novel oncogene, is involved in positive regulation of TNF induced NF-kappaB pathway. *PLoS one* 7, e48662.
198. Torre, L.A., Bray, F., Siegel, R.L., Ferlay, J., Lortet-Tieulent, J., and Jemal, A. (2015). Global cancer statistics, 2012. *CA: a cancer journal for clinicians* 65, 87-108.
199. Van Haute, L., Pearce, S.F., Powell, C.A., D'Souza, A.R., Nicholls, T.J., and Minczuk, M. (2015). Mitochondrial transcript maturation and its disorders. *Journal of inherited metabolic disease* 38, 655-680.
200. Vander Heiden, M.G., Cantley, L.C., and Thompson, C.B. (2009). Understanding the Warburg effect: the metabolic requirements of cell proliferation. *Science* 324, 1029-1033.
201. Vander Heiden, M.G., Locasale, J.W., Swanson, K.D., Sharfi, H., Heffron, G.J., Amador-Noguez, D., Christofk, H.R., Wagner, G., Rabinowitz, J.D., Asara, J.M., et al. (2010). Evidence for an alternative glycolytic pathway in rapidly proliferating cells. *Science* 329, 1492-1499.
202. Visvader, J.E. (2009). Keeping abreast of the mammary epithelial hierarchy and breast tumorigenesis. *Genes & development* 23, 2563-2577.
203. Wang, D., and DuBois, R.N. (2015). Immunosuppression associated with chronic

- inflammation in the tumor microenvironment. *Carcinogenesis* *36*, 1085-1093.
204. Wang, L., Du, F., and Wang, X. (2008). TNF-alpha induces two distinct caspase-8 activation pathways. *Cell* *133*, 693-703.
205. Ward, P.S., and Thompson, C.B. (2012). Metabolic reprogramming: a cancer hallmark even warburg did not anticipate. *Cancer cell* *21*, 297-308.
206. Weinberg, S.E., Sena, L.A., and Chandel, N.S. (2015). Mitochondria in the regulation of innate and adaptive immunity. *Immunity* *42*, 406-417.
207. West, A.P., Brodsky, I.E., Rahner, C., Woo, D.K., Erdjument-Bromage, H., Tempst, P., Walsh, M.C., Choi, Y., Shadel, G.S., and Ghosh, S. (2011a). TLR signalling augments macrophage bactericidal activity through mitochondrial ROS. *Nature* *472*, 476-480.
208. West, A.P., Shadel, G.S., and Ghosh, S. (2011b). Mitochondria in innate immune responses. *Nat Rev Immunol* *11*, 389-402.
209. White, E., and DiPaola, R.S. (2009). The double-edged sword of autophagy modulation in cancer. *Clinical cancer research : an official journal of the American Association for Cancer Research* *15*, 5308-5316.
210. White, E., Mehnert, J.M., and Chan, C.S. (2015). Autophagy, Metabolism, and Cancer. *Clinical cancer research : an official journal of the American Association for Cancer Research* *21*, 5037-5046.
211. Widau, R.C., Parekh, A.D., Ranck, M.C., Golden, D.W., Kumar, K.A., Sood, R.F., Pitroda, S.P., Liao, Z., Huang, X., Darga, T.E., et al. (2014). RIG-I-like receptor LGP2 protects tumor cells from ionizing radiation. *Proceedings of the National Academy of Sciences of the United States of America* *111*, E484-491.
212. Wise, D.R., and Thompson, C.B. (2010). Glutamine addiction: a new therapeutic target in cancer. *Trends in biochemical sciences* *35*, 427-433.
213. Wu, S., Rhee, K.J., Albesiano, E., Rabizadeh, S., Wu, X., Yen, H.R., Huso, D.L., Brancati, F.L., Wick, E., McAllister, F., et al. (2009). A human colonic commensal promotes colon tumorigenesis via activation of T helper type 17 T cell responses. *Nat Med* *15*, 1016-1022.
214. Xia, T., Konno, H., Ahn, J., and Barber, G.N. (2016). Dereglulation of STING Signaling in Colorectal Carcinoma Constrains DNA Damage Responses and Correlates With Tumorigenesis. *Cell reports* *14*, 282-297.
215. Xia, X., Cui, J., Wang, H.Y., Zhu, L., Matsueda, S., Wang, Q., Yang, X., Hong, J., Songyang, Z., Chen, Z.J., et al. (2011). NLRX1 negatively regulates TLR-induced NF-kappaB signaling by targeting TRAF6 and IKK. *Immunity* *34*, 843-853.
216. Xiao, T.S., and Ting, J.P. (2012). NLRX1 has a tail to tell. *Immunity* *36*, 311-312.
217. Yang, Z., Wang, Y., Zhang, Y., He, X., Zhong, C.Q., Ni, H., Chen, X., Liang, Y., Wu, J., Zhao, S., et al. (2018). RIP3 targets pyruvate dehydrogenase complex to increase aerobic respiration in TNF-induced necroptosis. *Nature cell biology* *20*, 186-197.
218. Yuan, D., Huang, S., Berger, E., Liu, L., Gross, N., Heinzmann, F., Ringelhan, M., Connor, T.O., Stadler, M., Meister, M., et al. (2017). Kupffer Cell-Derived Tnf Triggers Cholangiocellular Tumorigenesis through JNK due to Chronic Mitochondrial Dysfunction and ROS. *Cancer cell* *31*, 771-789 e776.
219. Zevini, A., Olagnier, D., and Hiscott, J. (2017). Crosstalk between Cytoplasmic RIG-I and STING Sensing Pathways. *Trends in immunology* *38*, 194-205.
220. Zhang, D.W., Shao, J., Lin, J., Zhang, N., Lu, B.J., Lin, S.C., Dong, M.Q., and Han, J. (2009). RIP3, an energy metabolism regulator that switches TNF-induced cell death from apoptosis to necrosis. *Science* *325*, 332-336.
221. Zhao, Y., Sun, X., Nie, X., Sun, L., Tang, T.S., Chen, D., and Sun, Q. (2012). COX5B regulates MAVS-mediated antiviral signaling through interaction with ATG5 and repressing ROS production. *PLoS pathogens* *8*, e1003086.
222. Zhong, Z., Umemura, A., Sanchez-Lopez, E., Liang, S., Shalpour, S., Wong, J., He, F., Boassa, D., Perkins, G., Ali, S.R., et al. (2016). NF-kappaB Restricts Inflammasome Activation via Elimination of Damaged Mitochondria. *Cell* *164*, 896-910.