Dr. Ruvolo and his co-principal investigator, Dr. Steven Kornblau, completed their work supported by a grant from the CLL Foundation in December 2019. They originally intended to compare tissue samples from twenty-five CLL patients with mutations in the SF3B1 gene with tissue samples from twenty-five patients without mutations in that gene to determine whether PPP2R5A, an isoform of the tumor suppressing gene, PP2A, would counteract the effects of the tumor promoting gene, BCL2. Drs. Ruvolo and Kornblau expanded their research to include a comparison of 229 tissue samples—38 with mutated versions of SF3B1 and 191 with unmutated SF3B1. 227 samples were represented on slides—38 with mutations, 189 without. Patient characteristics were analyzed, and the findings were that those patients with the mutations had higher white and lymphocyte cell counts and lower neutrophils and platelet counts. Drs. Ruvolo and Kornblau then used the Reverse Phase Protein Array at MD Anderson to determine the proteins expressed by the genes. They found a number of significant differences in the proteomic profiles of the mutated and unmutated SF3B1 genes. Although Dr. Ruvolo and Dr. Kornblau were unable to determine whether mutations in SF3B1 interfered with the interaction between PPP2R5A and BCL2, the differences they found in the proteomic profiles of the mutated and unmutated forms of the SF3B1 gene will provide a valuable foundation for further CLL research. Their work on the impact of the SF3B1 mutation on resistance to the drug ABT-199 continues.