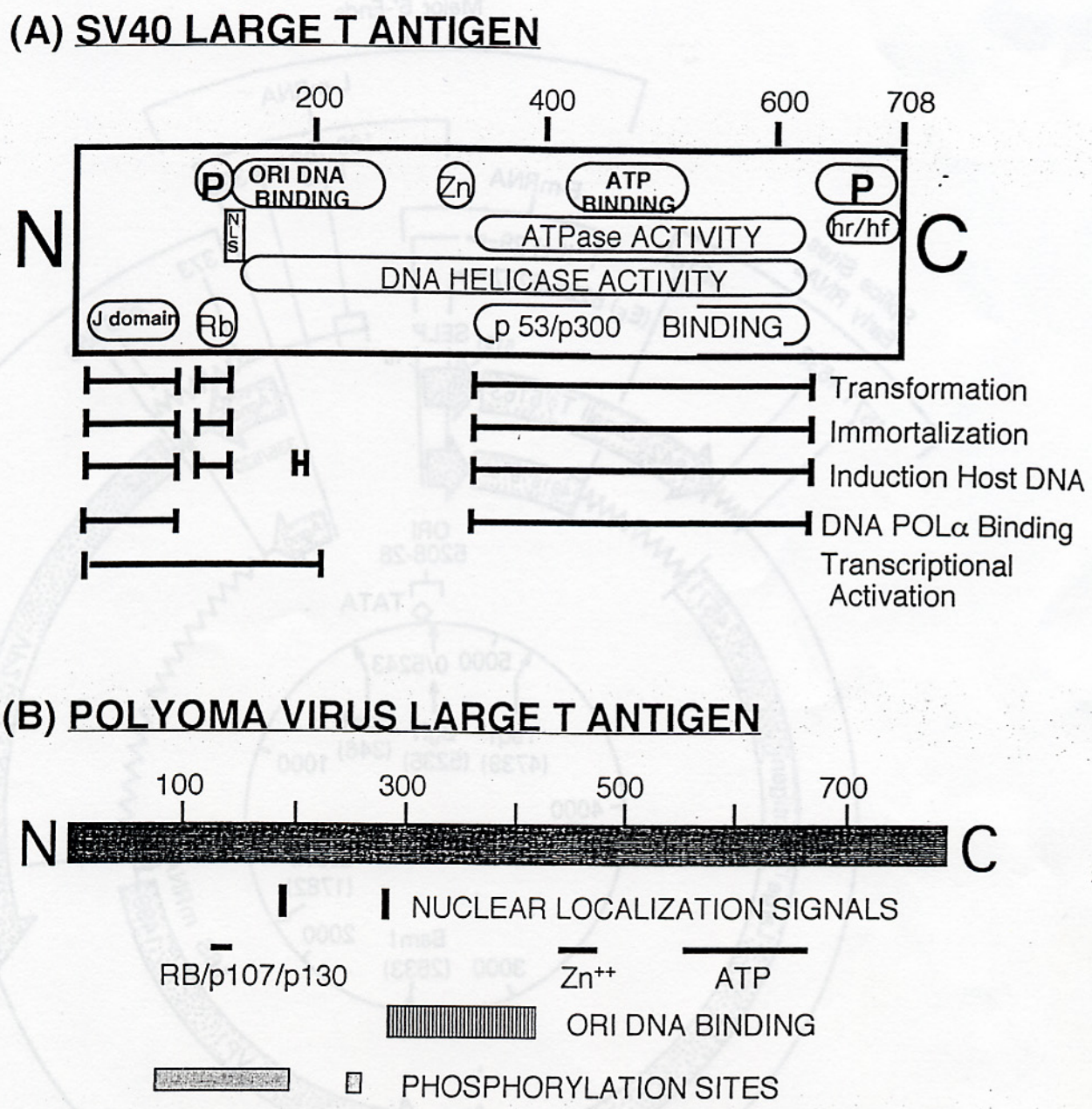

FIG. 6. The domain structures of SV40 large T and mouse polyomavirus large and medium T antigens. **A:** SV40. Shown are the domains of large T antigen required for nuclear localization (*NLS*) and for binding ATP and Zn^{2+} and for binding to the viral origin of DNA replication. The regions of T antigen required for ATPase activity, helicase activity, host range and helper function activity (*hr-hf*), as binding to $p105^{Rb}$/p107/p130 (indicated by *Rb*) and to p53 are shown. The DNA J domain functions like the J domain found in *Escherichia coli* DNA J/hsp40 molecular chaperone proteins and is involved in protein–protein interactions between T antigen and members of the $p105^{Rb}$ family. Also shown are the regions required for transformation of most rodent cell lines, for immortalization of primary mouse fibroblasts, for binding to DNA polymerase α, for induction of host DNA synthesis, and for transcriptional activation of the SV40 late promoter and many simple modular promoters by SV40 large T antigen. **B:** Mouse polyoma virus. Shown are the sequences that serve as nuclear localization signals (*NLS*) and sequences required for binding ATP and Zn^{2+} and for binding to the polyomavirus origin of DNA replication and to $p105^{Rb}$/p107/p130. Sites of phosphorylation are also shown. (**B** courtesy of Dr. Brian Schaffhausen, Tufts University Medical School, Boston, MA.)

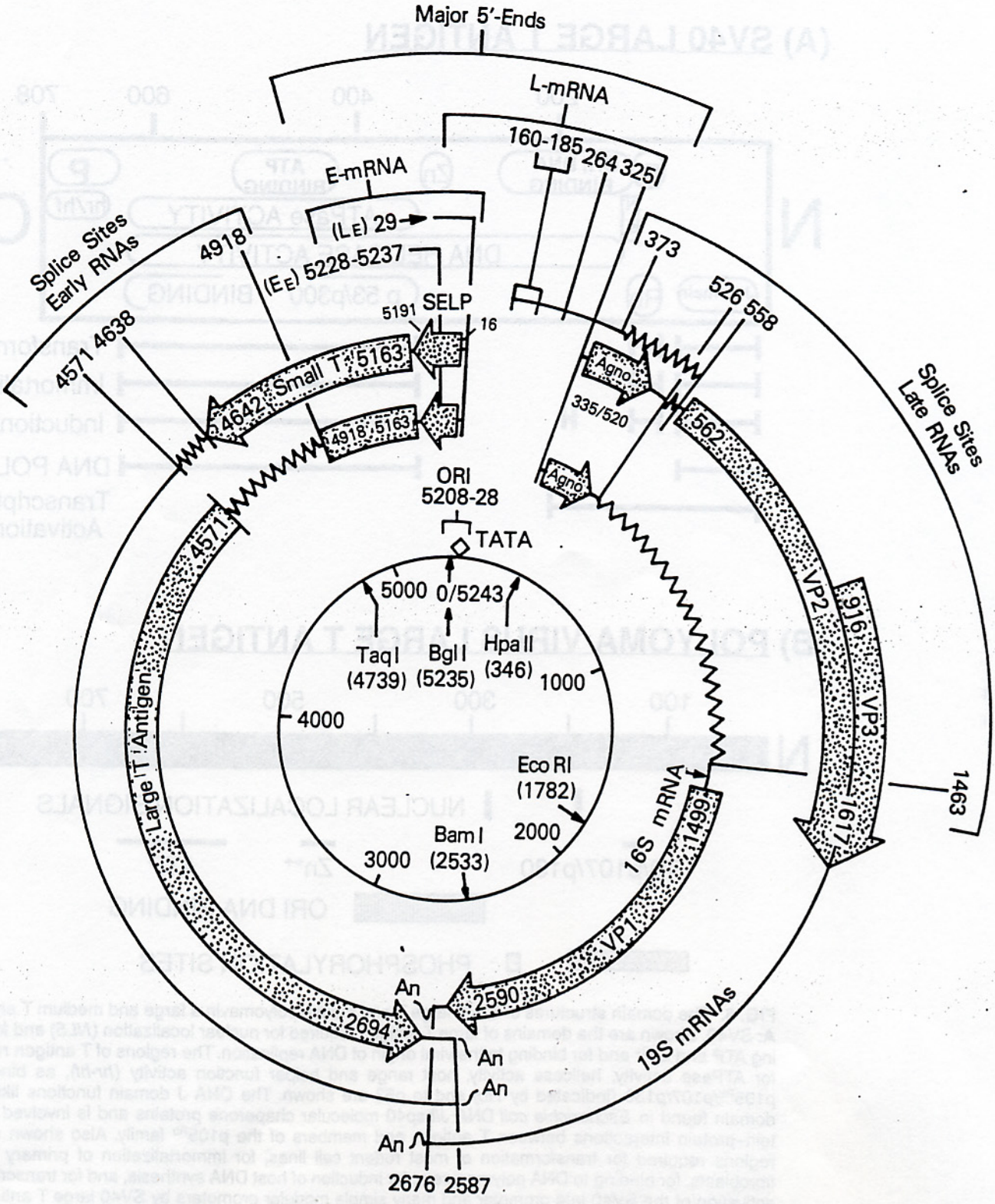

FIG. 2. Genomic organization of SV40 and mouse polyoma virus. **A:** SV40. The origin of replication and transcriptional regulatory region is at the top. The early region extends counterclockwise and the late region clockwise from the top. The regions encoding viral proteins are shaded. Also shown are the nucleotide positions for the 5' and 3' ends of viral mRNAs and the positions of introns. (From ref. 26, with permission).