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Identification of Virus-Encoded MicroRNAs

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RNA silencing processes are guided by small RNAs that are derived from double-stranded RNA. To probe for function of RNA silencing during infection of human cells by a DNA virus, we recorded the small RNA profile of cells infected by Epstein-Barr virus (EBV). We show that EBV expresses several microRNA (miRNA) genes. Given that miRNAs function in RNA silencing pathways either by targeting messenger RNAs for degradation or by repressing translation, we identified viral regulators of host and/or viral gene expression.