Rotavirus interactions with its host cell: An arms race

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Rotaviruses are the most important cause of acute gastroenteritis in childhood, causing an estimated 400,000 deaths per year in the world. During the infection, rotaviruses trigger an antiviral response in their host cells. We are interested in learning how these viruses deal with the different branches of this response that are turned on upon infection. As obligate parasites, viruses depend on the synthetic machinery of the cell to translate their proteins and on the cell energy and building blocks to replicate their genomes. Cells respond to these virus invasions by eliciting diverse responses to eliminate the incoming parasitic agents. In turn, to establish a successful infection, viruses have developed different strategies to take over the cellular metabolic machinery and to cope with the defense mechanisms of the cell. The characterization of these battles has allowed the discovery of the different elements viruses and cells have developed in the attempt to overcome the enemy. In this talk, Dr. López will discuss what she and her lab have learned from this war, and some of the methodologies they have used in their research.