Ronin and Caspases in Embryonic Stem Cells:
A New Perspective on Regulation of the Pluripotent State

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Abstract:
Embryonic stem (ES) and ES-like cells (induced pluripotent stem cells, iPS) afford ideal model systems for unraveling the complex molecular networks that give rise to cellular identity. They are relatively easy to generate and maintain in culture and are amenable to manipulation with the growing repertoire of molecular research tools now in the hands of cell biologists. More importantly, they have the property of pluripotency, meaning that they can differentiate to many cell types in the body, even to germ cells. Yet, recent discoveries in our laboratory suggest that the complement of factors needed to direct ES cell pluripotency is considerably larger than originally thought.