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Krishnakant Dasika, Ksenia Zlobina, Jianhong Chen and Marcella Gomez*, 1156 High St., BSOE, SOE2, Santa Cruz, CA 95064. *Predictive models in wound healing for biological control*. Preliminary report.

Wound healing involves a symphony of biological processes wherein the sequence and timing of said processes play a critical role in maintaining a normal healthy trajectory to wound closure. In the United States alone, chronic wounds affect around 6.5 million patients. It is claimed that an excess of US \$25 billion is spent annually on treatment of chronic wounds, and this number is expected to increase. In order to make advances in wound healing it is important to identify candidate biomarkers as leverage points for intervention as well as arrive at a predictive model for wound healing stage. Here, we present a data-driven method of to uncover underlying dynamics in wound healing. Machine learning methods are used to identify the dynamics present and dynamic models used to simulate the activity of key processes that uniquely identify wound healing stage. (Received March 03, 2020)