

1056-92-1799

**John Dambra\*** (jkdambra@buffalo.edu), 244 Mathematics Bldg, University at Buffalo, Buffalo, NY 14260, and **Steven Leuthe**. *Complex dynamics of a single nephron model with tubuloglomerular feedback and a myogenic mechanism.*

The nephron is the basic functional unit of the kidney. The rate at which the nephron filters the blood is controlled by two regulators: the tubuloglomerular feedback system and the myogenic response in the afferent arteriole. In our model we have observed complex dynamics and bifurcations arising through the interaction of these two regulators. (Received September 22, 2009)