

Looking at the Emergence of Life out of Randomness

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Nuclear magnetic resonance provides a means to measure molecular motion and quantify diffusion, flow and other transport processes noninvasively. We will discuss such measurements and their use in studies of a polymer-solvent system near its glass transition and in studies of living neural tissue systems.

Nathan Williamson is a PRAT fellow in the lab of Peter Bassler of the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development (NIH) where he studies new methods to measure water motion in living organisms with magnetic resonance. Dr. Williamson earned his Ph.D. at the University of South Australia under Prof. Magnus Nydén and his Master's at Montana State University in the laboratory of Profs. Joseph Seymour and Sarah Codd studying porous materials and polymers with magnetic resonance.