



**Metropolitan Water
Reclamation District
of Greater Chicago**



2022 MWRD AFRICAN AMERICAN HISTORY MONTH

Tyrone Hayes

Tyrone Hayes, born July 29, 1967, is currently a professor in the Department of Integrative Biology at University of California Berkeley. As a child he studied lizards and frogs, particularly interested in the way that frogs morphed from tadpoles to their adult form. He won a state science fair with research that showed anole lizards had to be awake to change color. Tyrone went on to attain B.A. and M.A. degrees from Harvard; his dissertation was on the genetic and environmental mechanisms determining the gender of the wood frog.

Today his research focuses on the role of steroid hormones in amphibian development and he conducts both laboratory and field studies in the U.S. and Africa. The two main areas of interest are metamorphosis and sex differentiation, but he is also interested in growth and hormonal regulation of aggressive behavior. He's widely known for his research concluding that the herbicide atrazine is an endocrine disruptor that demasculinizes and feminizes male frogs. He is also an advocate for critical review and regulation of pesticides and other chemicals that may cause adverse health effects. He has presented hundreds of papers, talks, and seminars on his conclusions that environmental chemical contaminants have played a role in global amphibian declines and in the health disparities that occur in minority and low income populations. Tyrone's warning is that "if you're black or Hispanic, you're more likely to live or work in areas where you're exposed to crap". While a biologist on the Public Broadcasting Service, National Geographic program *Strange Days*, he expressed his concerns for human health, particularly that of minority and low-paid workers exposure to agricultural chemicals.



Research published by Hayes and other scientists was used as evidence in a class action lawsuit against Syngenta (the manufacturer of atrazine) by 15 water providers in Illinois that was settled for \$105 million in May 2012, which reimbursed more than 1,000 water systems for the costs of filtering atrazine from drinking water, although the company denies any wrongdoing.