Call for Abstracts
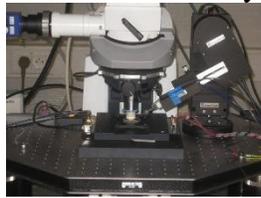**Tool Development in Experimental Neuroscience: A Science-in-Practice Workshop**

To be held in conjunction with the annual meeting of the Alabama Philosophical Society, Hilton Pensacola Beach Hotel, Pensacola Beach, FL September 27-28, 2019 (Friday-Saturday)

Co-organized by **John Bickle** (Mississippi State University and University of Mississippi Medical Center) and **Carl Craver** (Washington University in St. Louis)
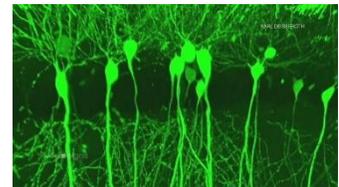
The development of new experiment tools is and has been a fundamental part of neuroscience. Compared to physics, chemistry, and evolutionary biology, neuroscience is relatively poor in overarching theories, but considerably rich in the diversity and sophistication of investigative equipment. This includes both tools to manipulate brain systems and to detect their central features and activities. One simply cannot understand the history of neuroscience or current practices without attending to the tools neuroscientists use to manipulate and measure neural structure and function. Tool development has been a central source of landmark discoveries since neuroscience began.

Given the centrality of tool development across the neurosciences, this relatively recent field is a good place to explore the historical and philosophical dimensions of this neglected aspect of experimental science-in-practice. Recently a few philosophers of neuroscience have begun this investigation, publishing papers discussing optogenetics and chemogenetics, gene targeting techniques, genome-wide association studies, and the development of increasingly specific animal models to study specific psychoneural functions, both healthy and diseased. Philosophical topics range from the epistemology of tool development, both of the norms governing the construction and evaluation of these investigative instruments and the practices in which they are embedded; the nature of scientific change and progress; the extent to which tools have a life of their own, independent of theory; the design of psychological tasks and model organisms as investigative tools; and the symbiotic relationship between theory-driven experimentation and engineering. Yet these initial investigations are only preliminary; they have yet to coalesce into a shared research program. The purpose of this workshop is to begin to seek consensus on the central problems for the history and philosophy of tool development and use across the neurosciences, and to address and compile progress individuals have made addressing these questions into a coherent body of shared work.

Toward these ends we are organizing a two-day workshop at the beachfront Hilton Pensacola Beach Hotel, to be held in conjunction with the annual meeting of the Alabama Philosophical Society. We are calling for abstracts for presentations to be made at this workshop. Participants will be responsible for their own travel costs and arrangements, and will pay the

registration fee ($60) to the Alabama Philosophical Society. Funds from the Department of Philosophy and Religion at Mississippi State University will pay for workshop meeting space, a boxed lunch on Friday for workshop participants to kick off the workshop, and coffee and refreshment breaks. Registration fees to the APS will permit workshop participants to attend the annual Friday night reception and reserve hotel rooms at conference rates.

We envision 11 or 12 one-hour sessions over the two-day period, each session composed of a 25 minute talk by a workshop participant followed by 30 minutes of discussion.

We are calling for **abstracts of up to 750 words** for proposed workshop presentations. The deadline for submitting abstracts is **July 15, 2019**, with acceptances sent to presenters by **August 1, 2019**. We interpret 'tool' broadly, to mean any equipment, apparatus, or technique employed in experimental neuroscience. By 'neuroscience' we mean any research field standardly recognized as such in historical or current practice (i.e., molecular, cellular, cytoarchitectural, topographical, behavioral, systems, cognitive, computational, and affective, to name a few).

Future workshops are also being planned, as is the first published collection of essays on this topic from workshop participants, as a book volume from a major academic press.

Abstracts should be sent to **John Bickle** as Word docs (or docxs) or pdfs, attached to an email to jbickle@philrel.msstate.edu. Authors of accepted abstracts for presentation will be asked to supply a shorter abstract (150 words) for inclusion as an addendum to the APS conference program.

Please direct all queries to John Bickle at the email address given above.