WILEY

The drug overdose epidemic is largely driven by opioids, which continue to be prescribed for chronic pain despite recommendations to use non-opioids for most cases. A new review published in the *British Journal of Pharmacology* examines the interaction between pain and the abuse of opioids, and investigates the circuits in the brain that may be behind this link. The review is part of a special theme issue on Emergent Areas of Opioid Pharmacology.

“We have shown that the brain’s natural opioid system is drastically changed by the presence of pain, and these changes may very well contribute to the difficulty of treating chronic pain with opioids,” said first author Adrianne Wilson-Poe, PhD of the Washington University in Saint Louis School of Medicine. “We have just glimpsed the tip of theÂÂ iceberg when it comes to pain’s effect on the brain, however, and we need a lot more research and grant funding to get to the bottom of the extremely complex interaction between drug abuse and pain.”

She and senior author Jose Moron-Concepcion, PhD, Associate Professor in the Department of Anesthesiology at Washington University, note that without a fundamental understanding of pain-induced changes in the brain and how these adaptations interact with subsequent drug exposure, investigators are merely fishing for solutions to the opioid crisis.ÂÂ “Our work is attacking this problem head-on by diligently characterizing the mechanisms involved in pain, addiction, and the interaction between them,” said Dr. Wilson-Poe. “We envision a future where chronic pain is considered aÂÂ disease in its own right, not merely a symptom of some other biological process.”

The review stresses that opioids are the most powerful analgesics known to man, and their continued use in the treatment of severe pain is inevitable; however, opioid therapy of the future must look very different from how it does today. Efforts to address this issue include a 2016 guideline by the Centers for Disease Control and Prevention that recommends using non-opioids for most cases of chronic pain, using the lowest effective dose when prescribing opioids, and ensuring that patients who are treated with opioids are closely monitored.

The review is part of a larger themed issue, ‘Emergent Areas of Opioid Pharmacology,’ that will publish at a later time.

The National Institute on Drug Abuse notes that the emergence of illicitly manufactured

synthetic opioids including fentanyl, carfentanil, and their analogues represents an escalation of the ongoing opioid overdose epidemic. Also, prescription opioid misuse is a significant risk factor for heroin use, and 80% of heroin users first misuse prescription opioids.

Additional Information

NOTE: The information contained in this release is protected by copyright. Members of the media may sign up for embargoed news or to request a copy of any study please contact:

Dawn Peters (US) +1 781-388-8408
sciencenewsroom@wiley.com
Follow us on Twitter @WileyNews

Full citation: "The dynamic interaction between pain and opioid misuse." Adrianne R. Wilson-Poe, & Jose A. Morón. British Journal of Pharmacology; Published Online: June 12, 2017 (DOI: 10.1111/bph.13873).

URL Upon Publication: http://doi.wiley.com/10.1111/bph.13873

Author Contact: Jim Dryden, of the Washington University in Saint Louis School of Medicine's Public Affairs Department, at jdryden@wustl.edu of +1 (314) 286-0110.

About the Journal

The *British Journal of Pharmacology* is a broad-based journal giving leading international coverage of all aspects of pharmacology research. Its scope includes all aspects of

pharmacology from hypothesis generation and target validation through to model development, safety pharmacology and to early translational research. BJP's 2015 Impact Factor is 5.259, and as such it is a leading general research pharmacology journal (Thomson Reuters Science Citation Index).

About The British Pharmacological Society

The British Pharmacological Society is a charity with a mission to promote and advance the whole spectrum of pharmacology. Founded in 1931, it is now a global community at the heart of pharmacology, with over 3,500 members from more than 60 countries worldwide. The Society leads the way in the research and application of pharmacology around the world through its scientific meetings, educational resources and peer-reviewed journals: the *British Journal of Clinical Pharmacology*
,
Pharmacology Research & Perspectives
, and theÂÂ
British Journal of Pharmacology
, which includes the Concise Guide to PHARMACOLOGY, featuring open access overviews of the key properties of over 1,700 human therapeutic targets and their drugs, and links to www.guidetopharmacology.org
.