



[PAIN Q&A – The Big3Bio Interview and Event Preview](#)

October 14, 2015

([Big3Bio](#)) **Hydra Biosciences**, a Cambridge company leading the field in **Transient Receptor Potential (TRP)** ion channel modulation for pain, inflammation, renal disease, anxiety and pulmonary disease, is hosting a panel discussion entitled “**PAIN: a conversation.**” Taking place at The Liberty Hotel in Boston from 6 p.m. to 9 p.m. on Thursday, Oct. 22, the event will consist of a networking reception followed by a dynamic discussion focused on the need for new treatment options for those suffering from chronic pain.



Russ Herndon, CEO of Hydra Biosciences

Earlier this week, Big3Bio caught up with **Russ Herndon, CEO of Hydra Biosciences**, to hear more about Hydra, the event and the company’s novel approach to pain management.

If any Big3Bio readers are interested in attending this event, please email: llecain@lavoiehealthscience.com.

Q: Why is Hydra Biosciences is hosting **PAIN: A Conversation**?

Herndon: We are bringing together an esteemed panel of clinicians, scientists, patients and patient advocacy group leaders that work, live and lead others in developing solutions for patients experiencing chronic pain. We want to focus the conversation on how chronic pain continues to be a tremendous burden for the people who have to live with it day in and day out and how by using scientific innovation, we can begin to address this significant unmet need.

Q: Why now?

Herndon: Given all the data and heart-wrenching anecdotes right here in Massachusetts on how most substance abuse problems start with prescription drug abuse, with opioid pain medication playing a

significant role, we know there is a huge need for alternative therapeutic and non-addictive options. Gov. Charlie Baker, Attorney General Maura Healy, Boston Mayor Marty Walsh and so many public officials and public policy experts have come together to develop awareness campaigns and support treatment programs that focus on this issue, and we want to expand the conversation to focus on patients who suffer from chronic pain for whom we know opioid-based drugs are not the best answer. We have a group of speakers who will help us expand the dialogue on this issue and look to innovative science as a potential solution.

Q: What is Hydra Biosciences doing about this issue?

Herndon: At Hydra, we have chosen to focus on chronic pain because of this unmet need, lack of highly effective non-opioid treatment options, and most importantly, because we believe we have a solution. We know now is the time to invest and innovate in novel, small-molecule treatments. Moving this idea from something scientific to a reality for patients, we are in the process of completing a Phase 1 clinical trial with our lead product candidate, HX-100. The outcome of this study will provide the safety data necessary for Phase 2 studies in Painful Diabetic Neuropathy (PDN), expected to begin next year.

Q: Who's joining you for this discussion?

Herndon: We have an exciting group of panelists and will discuss the impact chronic pain has and the innovative science behind new, non-addictive treatment options. We are very pleased to say a number of clinicians, biologists, patients and public advocacy group members will be presenting, including:

- **Cheryl Bartlett**, Executive Director of the Cape Cod Regional Substance Abuse Prevention Initiative (CCRSAPI) and Public Health, and the former Commissioner of the state Department of Public Health. Ms. Bartlett's expertise substance abuse prevention programs means she will bring a unique public health perspective to the discussion.
- **David Clapham**, M.D., Ph.D., a leading scientist in the ion channel and TRP space, a founding member of Hydra and professor at Harvard Medical School. Dr. Clapham studies TRP channels and their control of intracellular and intraorganellar calcium signaling. I am looking forward to hearing him talk about how TRP channels can be useful in the treatment of pain.
- We will also have **Nathaniel Katz, M.D., M.S.**, a leading expert in the treatment of pain and a past professor at Tufts School of Medicine presenting at the event. Dr. Katz' work in clinical trials for pain treatments and opioid addiction have changed the way the medical community and those suffering from chronic pain approach pain management and treatment. A neurologist and pain management specialist, Dr. Katz founded and serves as president of Analgesic Solutions.
- **Cindy Steinberg**, a chronic pain sufferer herself and prominent figure in the pain advocacy community, will also be a key contributor to the panel. Ms. Steinberg serves as the National Director of Policy and Advocacy for the U.S. Pain Foundation, Policy Chair for Massachusetts Pain Initiative and Federal Appointee for Interagency Pain Research Coordinating Committee (IPRCC). Ms. Steinberg was appointed by Massachusetts Governor Charlie Baker to his Opioid Working Group and subsequently was chosen by Governor Baker to be a Commissioner on the MA Drug Formulary Commission.

Q: Why are opioids not an ideal way to treat pain?

Herndon: For a number of reasons—every day in the United States, approximately 46 people die from a opioid prescription overdose. In 2012, physicians wrote 259 million opioid pain medication prescriptions, enough for every adult American to get a bottle. Somewhere between five and nine million Americans use opioids to treat their chronic pain condition and nearly two million Americans are living with prescription opioid abuse or dependence. These numbers are not sustainable or scalable and show a tremendous market need for distinct treatment options.

Q: What is Hydra’s solution to the pain problem?

Herndon: Using our expertise in novel Transient Receptor Potential (TRP) ion channels to discover and develop medicines offering improved outcomes with fewer side effects for people with serious diseases and conditions. TRP ion channels, discovered in the late 1990s, are membrane-bound proteins that help regulate calcium levels and cellular excitability. They are critically important for the transmission of information within a cell. Because TRP ion channels are so diverse, they offer more opportunities for the generation of selective modulators than more commonly-known voltage-gated ion channels. By targeting a patient’s TRP ion channels, we have opportunity to offer a more efficacious, and less dangerous, pain management solution.

Q: What is the scientific rationale that makes you believe this will treat pain?

Herndon: Hydra’s industry-leading expertise in non-voltage gated ion channels has enabled us to create first-in-class small molecules with novel mechanisms of action. Hydra leads the industry in TRP research and development, with approximately 15 years’ experience and a team of biologists, chemists and electrophysiologists focused specifically on the modulation of these ion channels and TRP modulation. TRPA1 is a unique member of the TRP super family, activated by reactive chemicals, products of aberrant glucose metabolism, tissue injury, and inflammation. Environmental irritants that lead to channel activity include common pain and asthma triggers. TRP channels are membrane-bound proteins that play a role in controlling cellular calcium levels and excitability in response to a variety of stimuli.

Q: Why is pain such a challenging clinical area for biotech and pharma?

Herndon: Pain is experienced differently by everyone and big pharma’s investments in novel treatment options are not commensurate with the public health importance. At Hydra, we see a major opportunity for companies looking to develop new treatment therapies. The challenges in research is that there are subjective, highly variable experiences with pain.

Q: Can anyone come to PAIN: A conversation on Oct. 22, from 6 to 9 p.m., at The Liberty Hotel?

Herndon: Anyone with a particular interest in hearing how innovation can help meet the need for new treatment options for those suffering from chronic pain is welcome. Space is limited, so please e-mail Lindsay LeCain at llecain@lavoiehealthscience.com to RSVP.

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