

## This week in therapeutics

| Indication  | Target/marker/<br>pathway  | Summary  | Licensing<br>status    | Publication and contact<br>information  |
|---|--|--|------------------------|---|
| <b>Neurology</b>  |  |  |                        |   |
| Pain  | MicroRNA let-7b (MIRLET7B; LET-7B); toll-like receptor 7 (TLR7); transient receptor potential A1 (TrpA1) | Cell culture and mouse studies suggest inhibiting extracellular MIRLET7B could help treat pain. In mouse dorsal root ganglion neurons, the pain-inducing chemical formalin increased Mirlet7b secretion compared with vehicle. In these neurons, Mirlet7b was shown to bind to Tlr7 and result in subsequent activation of Trpa1, a cation channel associated with inflammatory pain. In mouse models of formalin-induced inflammatory pain, pretreatment with a Mirlet7b-inhibiting oligomer decreased pain-related behaviors compared with pretreatment using a scrambled control oligomer. Planned work includes identifying whether other miRNAs activate nociceptive neurons. | Unpatented; unlicensed | Park, C.-K. <i>et al. Neuron</i> ; published online April 2, 2014; doi:10.1016/j.neuron.2014.02.011<br><b>Contact:</b> Ru-Rong Ji, Duke University Medical Center, Durham, N.C.<br>e-mail: <a href="mailto:ru-rong.ji@duke.edu">ru-rong.ji@duke.edu</a> |
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