of the year. Although it's possible that Genzyme could face further setbacks, it's likely that Fabrazyme will be back up to full production, and/or Replagal will gain regulatory approval much sooner than any hypothetical competitor could reach the market with a generic version of Fabrazyme.

We are therefore not convinced that overriding patent exclusivity in this case will do more good than harm.

Immune response also connects autism and epilepsy

To the Editor:

In her timely news feature on the comorbidity of epilepsy and autism, Miley[1] cites evidence that altered mTOR signaling may underlie these disorders. There is, however, another potential link between autism and epilepsy; increasing evidence implicates the immune response in the pathogenesis of these disorders. In a recently discovered epileptogenic cascade, injured neurons and glia can release a protein known as high-mobility group box-1 (HMGB1) (ref. 2). Interaction of this protein with Toll-like receptor 4 (TLR4) can affect voltage- and ligand-gated ion channels, which in turn enhance neuronal excitability. The HMGB1-TLR4 interaction has also been implicated in transcriptional activation of genes related both to inflammation and to neurotransmission and synaptic plasticity, which can result in perpetual inflammation and increased seizure susceptibility[3].

It is notable that the development of autism might also involve the immune response, including Toll-like receptor signaling[4,5]. Similarly to epilepsy, autism is associated with enhanced expression of HMGB1 and TLR4 (refs. 6–9), and a recent analysis of gene expression in postmortem brain samples of autistic individuals identified decreased expression of genes mediating synaptic function and increased expression of genes related to inflammation[10]. It is thus possible that an altered immune response might lead to autism and epilepsy. Drugs that modify this immune response may therefore have therapeutic value against both conditions.

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