**Introduction**

Q: What is a G-quadruplex (GQ)?
A: A region of guanine-rich DNA that *can* fold into a hill-like structure (Fig. 1a,c).

Q: Where are GQs found?
A: In regulatory regions like gene promoters (Fig. 1d) and telomeres (Fig. 1a,b).

Q: Why model GQs?
A: To better our understanding of gene regulation and motivate new disease therapies.

**Data**

Q: Where did the data come from?
A: "Pull-down" experiments detected folded GQs in human cells. We compared folded GQ sequences to GQ sequence motifs that did not fold (Fig. 2a).

**Results**

Q: How are the pull-down data used?
A: We use a probabilistic model to detect the unique features of the pulled-down sequences. We translate the probability that a sequence folds into a score, which we call the "QPD Score."

**Aims**

- Model G-quadruplex folding
- Predict the folding of new sequences

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