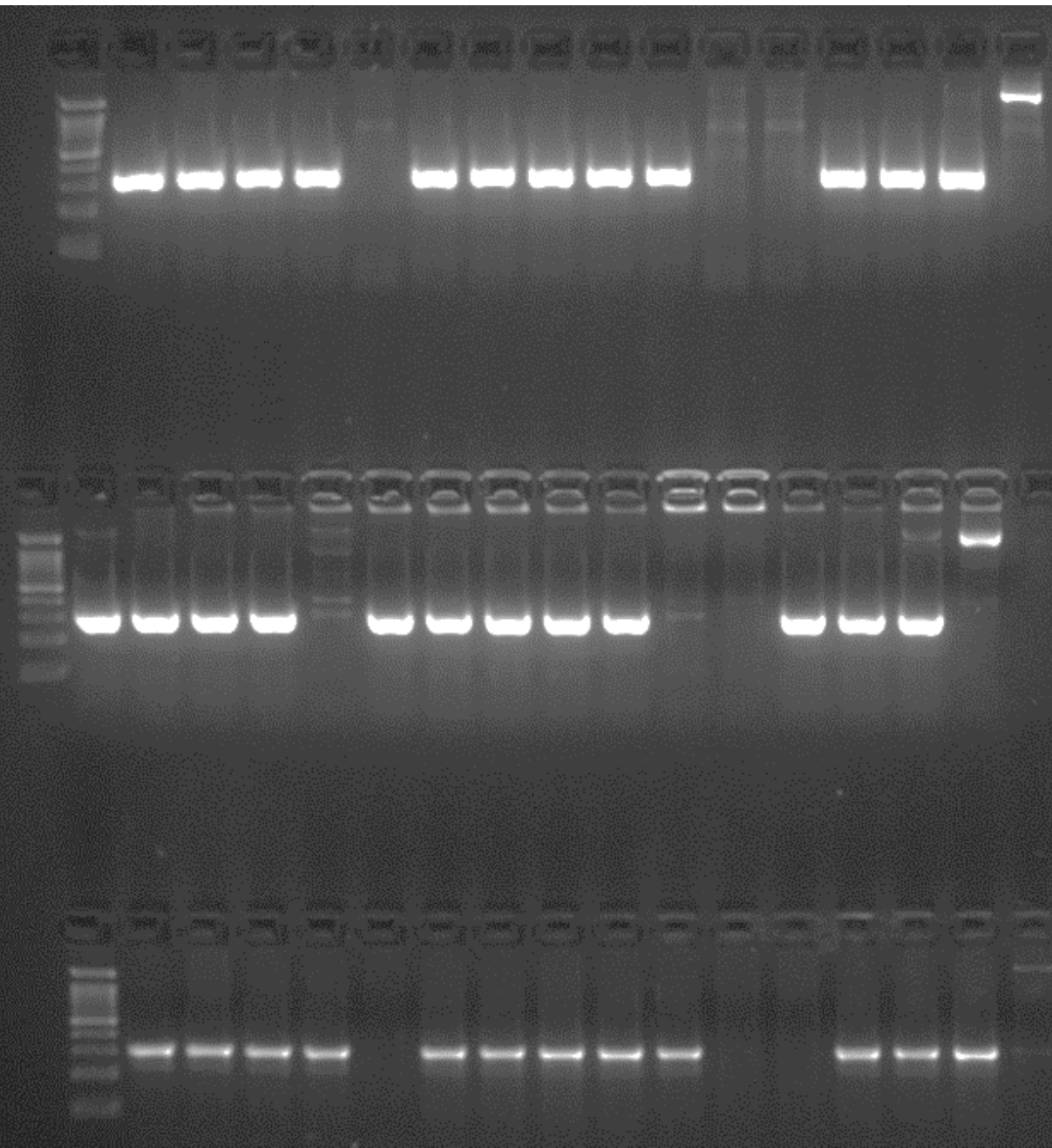


MyTaq Review

- The first PCR tested was at the mouse AW112010 locus. This PCR should produce a 324bp fragment that can be seen in the gel image on slide 2. For this PCR, MyTaq had less off-target bands produced on null samples than the other polymerases except Platinum Taq green. This PCR is 44% GC-rich.
- The second tested was of the human ESR1 locus should produce a 443bp band, which can be seen in the gel image on slide 3 (lane 1). The GC-content of the region is 54%, and no off-target sites were amplified during the reaction.
- The third locus tested was the human NF1 site. The expected product size with the selected primer set should yield a 431bp band, which can be seen on the gel image (lane 2). The GC-content of the region is 45%, and no off-target sites were amplified.
- The fourth test site was human within the SVIG1 locus. The expected product size of 403bp can be seen in lane 2 of the gel image on slide 2. This is a 42% GC-rich area. An off-target band was produced at ~850bp.
- The fifth site was the mouse Brca2 locus. This PCR should have yielded a 398bp product (likely the middle band in lane 4 of gel image). This PCR had two other off-target sites amplified during this reaction. This is likely due to poor primer design because the same results were obtained using a different polymerase (see slide 4). This site has a GC-content of 44%.
- The final site tested was the mouse Ldlr locus. The expected product size is 243bp, which can be seen in lane 5 of the gel image. Despite the 62% GC-content of the region, no DMSO or optimization was necessary to get amplification. However, there was on off-target band produced at ~900bp.

*Note: Each PCR was done with two different DNA aliquots for each PCR on slide four, one of which is the DNA used for the PCR on slide 3. An annealing temperature of 56°C was used for each reaction. Also, Each PCR was done at a 10µL reaction volume using the same ratio of mixture ingredients as suggested by Bionline.

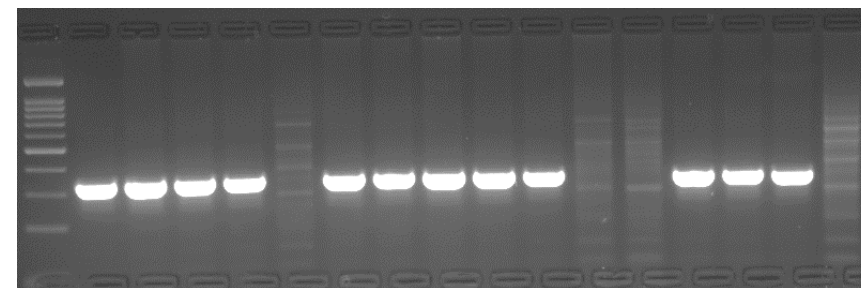
MyTaq



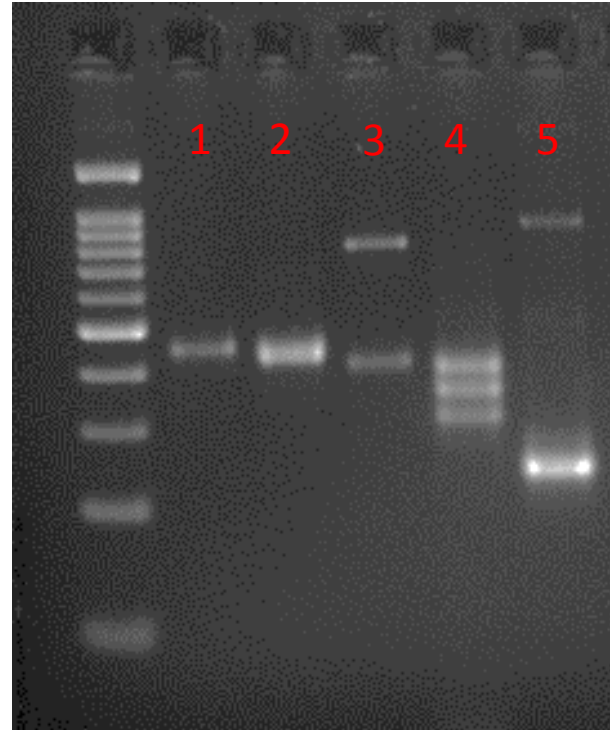
Phire
Green

Platinum
Taq Green

Econotaq



MyTaq



All PCRs redone on next slide with MyTaq, Econotaq, and Phire Green

