PARKINSON'S PROGRESSION MARKERS INITIATIVE

Play a Part in Parkinson's Research

# PPMI Serum Reference Pools

PPMI Biorepository Core – Indiana University School of Medicine

## PPMI Reference Pools

It is important that reference pools of CSF, plasma, serum, and RNA are available to investigators of approved PPMI distributions. The goal of these pools is not to provide the full range of potential biomarker values. Rather, the reference pools are designed to be used across experiments to adjust for assay variation. Reference pools of varying size are created to meet differing needs of investigators.

## Method

1. PPMI Serum Reference Pools 1 – PD and HC

The PPMI Biorepository Core at Indiana University created two serum reference pools, one generated from serum samples from PD subjects and the other from serum samples from HC subjects. Only aliquots from the PPMI Biorepository Core at Indiana University were used for this reference pool experiment.

Serum aliquots with 500µl and <200µl volume were preferentially selected from samples from PD and HC subjects. Aliquots of this volume had been generated by PPMI sites and the PPMI Biorepository Core through several mechanisms: 1) residual aliquots at the time of sample collection and site aliquoting and 2) residual aliquots generated at the time of subaliquoting at the PPMI Biorepository Core; and 3) previous subaliquoting by the PPMI Biorepositories for 500µl volumes. Any visits with ≤ 1500µl serum remaining were excluded from this reference pool. A total of 120 PD serum aliquots and 155 HC aliquots were thawed and pooled within one day to create these pools.

The serum pools were designed to combine a large number of serum aliquots from PD and HC subjects. Each reference pool aliquot would have a volume of 200µl. The goal of this serum reference pool design was to obtain 300 PD serum reference aliquots and 300 HC serum reference aliquots. This number of aliquots will be necessary for any future serum distribution, assuming a comprehensive serum distribution that would utilize a serum sample from every PPMI subject visit.

A total of 323 PD serum aliquots and 337 HC aliquots were produced. Each 200 µl reference pool aliquot was labeled and sequentially numbered.

2. PPMI Serum Reference Pools 2 – PD and HC

The PPMI Biorepository Core at Indiana University created a second set of two serum reference pools, one generated from serum samples from PD subjects and the other from serum samples from HC subjects. Only aliquots from the PPMI Biorepository Core at Indiana University were used for this reference pool experiment.

Serum aliquots with 500µl and <200µl volume were preferentially selected from samples from PD and HC subjects. Aliquots of this volume had been generated by PPMI sites and the PPMI Biorepository Core through several mechanisms: 1) residual aliquots at the time of sample collection and site aliquoting and 2) residual aliquots generated at the time of subaliquoting at the PPMI Biorepository Core; and 3) previous subaliquoting by the PPMI Biorepositories for 500µl volumes. Any visits with ≤ 1500µl serum remaining were excluded from this reference pool. A total of 323 PD serum aliquots and 488 HC aliquots were thawed and pooled within one day to create these pools.

The serum pools were designed to combine a large number of serum aliquots from PD and HC subjects. Each reference pool aliquot would have a volume of 200µl. The goal of this serum reference pool design was to obtain 300 PD serum reference aliquots and 300 HC serum reference aliquots. This number of aliquots will be necessary for any future serum distribution, assuming a comprehensive serum distribution that would utilize a serum sample from every PPMI subject visit.

A total of 314 PD serum aliquots and 330 HC aliquots were produced. Each 200 µl reference pool aliquot was labeled and sequentially numbered.

## References

See also, Reference Pool Creation SOP, Appendix A

## About the Authors

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