

Analysis of Industry Requests for Biospecimens

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Background: To achieve long term financial sustainability of biobank infrastructures, shifting biobanking from a product oriented activity to an end-user focused endeavor is required. But what do customers really want? A very interesting group of end-users are researchers from industry. However, little is known about their requirements concerning biospecimens and data. One of the services provided by Canadian company Trans-Hit Biomarkers Inc. is the search for biospecimens and data on behalf of their clients.

Methods: We analyzed 104 consecutive requests for biospecimens published by Trans-Hit.

Results: Total number of samples in the 104 requests was 18,960 (average 182.3, median 100, range 5 – 1,500 samples per request). 56.7 % of requests were for tissue: (72.9 % (n = 43) FFPE, 27.1 % fresh frozen (FF)). Requests for FF were typically smaller than for FFPE: 80.8/25 and 182.1/90 (mean/median). In 41.3 % of cases serum, plasma or blood was requested. Most requests were looking for malignancies (n = 81; 77.9%), half of them as FFPE samples, one out of 8 as FF sample and about one third as liquid samples. Within the 81 requests for malignant cases the sizes were comparable for FFPE and liquid samples (mean/median/range 194.5/100/5–1,200 and 192.2/100/10– 1,500) and smaller for FF samples (83.3/70/10–200). Very few requests involved DNA and/or RNA.

Conclusions: The average size of a request is comparable to the sample size of published papers (about 200 samples). Based on the analysis presented here; biobanks interested in collaboration with industry should emphasize the collection of FFPE rather than FF, and include medical follow-up data whenever possible. To our knowledge this is the first analysis of requests of samples from industry. More such information is needed to support management of long-term sustainability of biobanks.