

Cybergenetics: TrueAllele DNA Casework System

Justification for Non-Competitive Procurement

Award No. 2010-DN-BX-K050

Is the award open? Yes

Type of Procurement Non-competitive bid (Sole Source)

Does the budget include purchases with a single vendor that totals over \$ 100,000? Yes

Are there vendors in the budget which may cumulatively reach \$ 100K? Yes

1. A brief description of the program and what is being contracted for.	1. <u>Description</u> <p>The TrueAllele Casework System is a tool for the deconvolution of complex DNA mixtures, as encountered in forensic DNA casework. TrueAllele represents a quantitative data analysis approach based on data modeling and probabilistic processes.</p> <p>This purchase includes the scientific software for DNA mixture deconvolution, 8 Linux servers for computer modeling and 4 work stations including licenses. The vendor will provide long-distance training for 4 casework analysts.</p>
2. Explanation of why it is necessary to purchase noncompetitively.	2. <u>Explanation for Sole Source</u> <p>The TrueAllele is unique because it is the only available system that has been validated for forensic DNA data using mathematical modeling. (Mathematical modeling is being used extensively in other sciences such as medicine and environmental sciences) The model is extremely sophisticated such that it reports mixture weights of DNA contributors and their statistical certainty even in an environment where the DNA is degraded to different degrees. Mathematical modeling, depending on the complexity of the data, takes at least several hours per run.</p> <p>TrueAllele supports efficiency through batch workflow for simultaneous setups of multiple DNA questions.</p> <p>BFS has followed the development of deconvolution expert software for years. Only TrueAllele has been developed and validated to a point where the probabilistic outcomes from mathematical models are rock-solid and acceptable in court. Cybergenetics is the patent holder and sole distributor of this product.</p>
3. Time constraints: • When Contractual	3. <u>Time Constraints</u>

<p>Coverage Is Required and Why</p> <ul style="list-style-type: none"> • Impact on Program If Dates Are Not Met • How Long Would it Take Another Contractor to Reach the Same Level of Competence? (Equate to Dollars, If Desired) 	<p>The BFS has determined that TrueAllele the state of the art and the most appropriate for DNA casework at this time. The system should be purchased now, so that it can be brought on line to have a measurable effect on the DNA backlog reduction.</p>
<p>4. Uniqueness</p>	<p>4. <u>Uniqueness</u></p> <p>Cybergenetics is the patent holder and sole distributor of this product.</p>
<p>5. Other points that should be covered to “sell the case”</p>	<p>5. <u>Other Points</u></p> <p>The capacity of forensic DNA analysis is constantly being tested by the challenge of interpreting increasingly complex samples. Especially in the arena of touch DNA, the demand for a mathematical tool for the DNA mixture interpretation has lead to various ideas and different approaches over the years. The national Scientific Working Group for DNA Analysis Methods (SWGDM) and our own experts have followed the development of the TrueAllele system and determined that TrueAllele has the properties necessary for the reliable deconvolution of DNA mixtures and that the results are so well founded that they will be accepted in court.</p>
<p>6. Declaration that this action is in the best interest of the agency</p>	<p>6. <u>Declaration</u></p> <p>This expenditure is in the best interest of the Bureau of Forensic Services because it represents an upgrade of the current approach. The purchase of TrueAllele will allow BFS to interpret data that remain currently inconclusive. By virtue of batch processing, the TrueAllele will also ensure efficiency for a high case throughput.</p>

Explanation of dollar amounts of the sole source request:

	Cost per Item	# if Items Requested	Total Cost	Previous Sole Source GAN Approved for:	Current Sole Source GAN Request for:
TrueAllele Casework System, 8-parallel interpreter model (=8 servers for parallel modeling), 4 analyst work stations	180,260.00	1	180,260.00	N/A	180.260.00

	Cost per Item	# if Items Requested	Total Cost	Previous Sole Source GAN Approved for:	Current Sole Source GAN Request for:
TrueAllele Long Distance Training by the Vendor, 2 classes/4 persons, \$ 5000/class	10,000.00	4	40,000.00	N/A	40,000.00
Total Sole Source Request					220,260.00