



EcoArray – The Data Sharing Program

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EcoArray has designed a program for research in environmental toxicology using our fathead minnow arrays. We call it the Data Sharing Program. The DSP is designed to give **you** some substantial **research and financial benefits** that get you to publication quickly and with good data. The DSP gives EcoArray access to your valuable data.

The DSP gives you **discounts** on our products as well as a valuable analysis created by running your data against our database. You get **top quality microarrays** and we get access to your raw data files. You get **valuable analysis and can publish** under the MIAME standard (<http://www.mged.org/Workgroups/MIAME/miame.html>). For more features and details, read on.

Why did we come up with this plan? We think microarrays will come to play an important role in compound screening, environmental evaluation and routine environmental screening. However, success in applying this technology positively to the environment will depend on developing a database of many, many exposure results and on analyzing those results to build a comprehensive picture of gene expression patterns related to compounds in the environment. We intend to be the leader in the commercial development of this technology. We have spent 3 years and nearly \$1 million to develop a microarray that is capable of providing large-scale screening and generating the database that will be required for commercial use. While we could build the database on our own, your research is valuable and can be an important addition to the database, and we are willing to provide discounts and services to get that data.

Here are some details of how the program works:

- To join the program, you need to register in advance by using the form on our website. You must agree to purchase 50 fathead minnow microarrays over 24 months. The minimum purchase is 6 microarrays at any one time. You scan the array, then send your scan (.tif file) to EcoArray for data extraction. Each time you submit data, EcoArray sends you the extracted files, together with a quality assessment report that indicates whether the data has been accepted into the database. When we have received data from 50 arrays that pass our QA/QC tests and therefore enter the EcoArray database, you earn a \$3,000 credit for bioinformatics to run your data against the EcoArray database any time within 36

months of achieving the credit. You get credit for each array's worth of data, much as you get credit for miles in a frequent flyer program.

- Agilent may provide discounted pricing on the arrays themselves and related reagents. These discounts depend on existing arrangements Agilent has with your institution and may be substantial (20-30+ %). Contact us to find out how to get these discounts.
- The program applies to both arrays processed for you by EcoArray and to arrays you process yourself or through another facility. If you choose EcoArray to process the arrays, you will insure that processing will be carried out according to EcoArray protocols and standards. In a recent survey we conducted of core facility processing charges, EcoArray's processing charges were slightly less than the average fees charged by the core labs we could sample.
- We welcome your data whether we process the arrays or you use another source. There are two requirements: you **must** use the Agilent Spike-in Kit (one color or two-color) in combination with your sample, and you **must** use a late model Agilent or Axon scanner to read the arrays. We use primarily Agilent protocols and the single dye labeling system. We supply information on our experience using these protocols via CD and through our website. If you use these protocols, our experience is that good quality RNA will yield array data that passes our quality assessment. Most important, using our suggested protocols and reagents will maximize the usefulness of the results you get from queries into our database.
- EcoArray provides methods templates that you can use to speed the process of writing for publication.
- When you purchase arrays from us, you also purchase a license to our BLASTQuest data that defines the genes on our array. BLASTQuest is extensively curated. We have assembled over 40,000 genes from public ESTs and from our own sequencing efforts, BLASTed them to 2 databases (NR and NT), further evaluated them for inclusion in important pathways and put 21,000 with e-values of $\leq E-04$ on an Agilent 60-mer oligo array, together with extensive spikes and controls.
- For publication under the MIAME standard, you may need to publish full length gene sequences and probe sequences for your particular biomarkers or genes of interest.

This directly addresses our database. We make the nominal charge of \$50 per sequence for genes of interest to you under a license agreement that allows publication with notice to EcoArray and limits your use of the sequences to research conducted in your laboratory.

- We do not expose any raw data contributed to our database. You may publish it, but we never expose it. We run statistical significance tests against what is in the database. This might, for example, confirm or deny a relationship you have seen, or broaden the scope of your claim by comparing it over a greater exposure range to different conditions; but the decision to publish is yours.

We are excited by the possibilities this new technology brings to environmental toxicology, and we are pleased to have designed a program that gives a strong boost to the kind of research that will build its credibility and value in the environmental and commercial communities. We hope you will join us.

For further information, contact us at dsp@ecoarray.com.