

Comments received by NICEATM on December 8, 2002, from Mike Sully of Amersham Biosciences:

Dear Sir / Madam,

Please let me introduce myself. I am the Product Manager for Amersham Biosciences' range of Biotrak Assays.

You may be aware of Amersham Biosciences' active presence in the immunoassays market. Amersham's Biotrak range of assays are targeted towards a range of important therapeutic targets, many using novel patented detection technology.

I have been very interested to read about your proposed list of current and new endocrine disruptors. Unfortunately, I am not sufficiently qualified to comment on such an area. My major interest is however in the assay detection technologies.

As far as I can understand, the current NIEHS endocrine disruptor, receptor binding assays use a radiolabelled ligand in a filter binding assay format. Conscious of the fact that such heterogeneous assays involve a considerable amount of 'hands-on' washing time, I would like to introduce you to Amersham's patented Scintillation Proximity Assay (SPA) format.

SPA's are homogeneous assays following exactly the same reaction kinetics as conventional receptor binding assays, but without any washing steps. The assays use glass beads (5 to 10µm diameter), impregnated with a highly efficient scintillant. The beads are directly coated with the specific receptor of interest and form one of the components of a typical receptor binding assay format. Tritium or [125] iodine ligands are used in the assays. After an appropriate incubation period, those radiolabelled ligands bound to the beads result in a detectable scintillation event. Any unbound ligand will not be in close enough proximity to the bead to generate a scintillation event. SPA's are true homogeneous assays and due to the absence of washing steps, are fully amenable to automation.

Amersham Biosciences SPA technology has already been used by a number of pharmaceutical companies for receptor binding assays. The following publications illustrate these specific receptor binding assays:

P. Coward et al., PNAS, Vol. 98, No 15., pp. 8880-8884 (2001). (Estrogen-related receptor)

J. Osmond et al., Biology of Reproduction, 63, pp. 196-205, (2000).

L. Moore et al., PNAS, Vol. 97, No 13., pp. 7500-7502 (2000).

L. Moore et al., Journal of Biological Chemistry., Vol. 275., No 20., pp. 15122-15127, (2000)

Amersham are currently developing an estrogen receptor SPA for general availability. Given a common interest in this type of assay format, we would be very interested in

hearing your views on this application of the SPA format. We would also be very happy to discuss any potential collaborative development projects, or reagent supply, that would be beneficial to both organisations.

I look forward to receiving any comments or ideas on potential collaborative projects that you may have in this area.

Yours faithfully,

Mike Sully

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