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Recent Work

Title

CRADA Final Report: ErbB2 Targeted Cancer Therapeutics

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**CRADA Final Report
CRADA No. BG99-103**

1. **Parties:** Coulter Pharmaceuticals. and UC Regents/LBNL

2. **Title of the Project:** "ErbB2 Targeted Cancer Therapeutics"

3. **Summary of the specific research and project accomplishments:**

A number of better peptido mimetic agents were generated but unfortunately not sufficient activity was retained to generate a therapeutic derived tool.

Monoclonal antibodies were made , no significant improvements was made on the collaborator site.

4. **Deliverables:**

Deliverable Achieved	Party (LBNL, Participant, Both)	Delivered to Other Party?
None	No	No

5. **Identify publications or presentations at conferences directly related to the CRADA?**

No publications were made

6. **List of Subject Inventions and software developed under the CRADA:**

None

7. **A final abstract suitable for public release:**

The aim of the study was to design novel therapeutic strategies for the treatment of carcinomas which overexpress the *erbB-2* oncogene product and/or the activator (HRG). *erbB-2* is a tyrosine kinase growth factor receptor, that overexpression of which in invasive breast, prostate, ovarian and lung carcinomas correlates with poor prognosis and poor overall survival. In breast carcinomas, *erbB-2* is overexpressed in 25%-30% of the invasive phenotype and in 70% of ductal carcinomas *in situ*. On the other hand, the *erbB-2* activator, heregulin (HRG) is expressed in about 30% of invasive breast carcinomas and it is highly expressed in other carcinomas including, ovarian, lung, and prostate. Interestingly, only 6% of invasive breast carcinomas co-express both HRG and *erbB-2*. **It is known today that tumors that overexpress *erbB-2* are a leading cause of death, making *erbB-2* and its activator HRG critical targets for therapy.** Targeting both the receptors and the activator would be beneficial for a significant number of cancer patients. At the final stages of the project we had obtained significant improvements over the peptide quality but not significant improvements were made towards the generation of humanized monoclonal antibodies.

8. Benefits to DOE, LBNL, Participant and/or the U.S. economy.

The collaboration will provide a great deal of synergy to quickly develop lead compounds for clinical development. Coulter is excited about having the benefit of Dr. Lupu's expertise, technology, and materials. Particularly, Dr. Lupu will be key to provide experimental leads based on biological assays that Coulter can make humanized antibodies, peptides, peptidomimetics, and small molecules with Coulter's strengths in protein and medicinal chemistry. This will then lead into Coulter's strong clinical development group that has a proven track record of clinical introduction.

9. Financial Contributions to the CRADA:

DOE Funding to LBNL	\$	540,000
Participant Funding to LBNL	\$	240,000
Participant In-Kind Contribution Value	\$	590,000
Total of all Contributions	\$	1,370,000

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