Modification No. #2

o

KSTC Contract # 144-401-15

between

Kentucky Science & Technology Corporation

and

University of Kentucky Research Foundation

The purpose of this modification is to make the following changes to the above-cited contract:

DELETE: EXHIBIT B (attached)

ADD: EXHIBIT B (attached)

DELETE: EXHIBIT C (attached)

ADD: EXHIBIT C (attached)

All other terms and conditions remain unchanged.

In witness whereof the parties hereto have affixed their signatures below.

KENTUCKY SCIENCE AND TECHNOLOGY CORPORATION

| BY: Mahendra K. Jain, Executive Director, KSEF Date BY: 3-19-2009 Kris Kimel, KSTC President Date | - - m ^v oq / / |
|-----------------------------------------------------------------------------------------------------|------------------------------|
| UNIVERSITY OF KENTUCKY RESEARCH FOUNDATION | 18 maring |
| BY: Fuhua (Frank) Cheng Date | |
| BY: | |
| Deborah Davis, Director, Office of Sponsored Projects Date | |

DELETE:

3.5

| | | | : CIF. COMMFUND-712 | | | kre fleide a d Black fleide a | ida le input formulas | | |
|------------|--------------------------|---------------|-------------------------------------------|-----------------|--------------|----------------------------------|--------------------------|-------------|-------------|
| | - 1 | | person name/position | - | | | | Ţ | |
| A Sont | | | | | mon | 1.,44 4.00 | nds Request | d month | |
| F - 00 II | Senior Personnel | | | | 1 | - ' | Year 1 | - UANIBUR | الساء سددا |
| | Faculty or | third person | 1 | | | | | | Year |
| | Faculty or | third person | 2 | | 1 1 | \$11 | .333.00 | | |
| | Other | T | | | 1 | | 987.00 | 1 1 | \$11 |
| | Total Sank | r personnet | W Pat Cassady | | 1 | | 348.00 | | \$6, |
| . Uther P | MOUNT (SHOW) | Jumber in not | | | 0 | | 848.00 | 1 | \$3,4 |
| | POST GOOD | al associates | | | | 120,1 | 948.00 | 0 | \$21,4 |
| | Other profes | sionels (lech | nicians, programmers, etc.) | | 0 | - | 00 | | |
| | Graduate stu | dents | actions, programmers, etc.) | | 0 | | | 0 | \$0. |
| | Other | | | | 2 | \$0. | I | . 0 | \$0.0 |
| | Other | | | | 0 | \$30,00 | _ [| 0 | \$32,40 |
| , | Total other Pe | | | | - | \$0.0 | | 0 | \$0.0 |
| inge Ber | offic Otaces | - SULLEC | | - | | \$0.0 | · . | 0 | \$0.00 |
| | efits (Hooliti kras | rance, benef | fts, efc.) | | | \$30,000 | | 0 | \$32,400 |
| | L | '0' | AL SALARY/BENEFITS ALL PERSON | F) - | | 38,519. | | | |
| | | (p) | 356 describe | -1 | - 1 | \$69,167. | 00 | | \$9,084.0 |
| her Direct | | | iase describe - use notes space if needed | , - | | | | - 1 | \$62,939, |
| Į. | Equipment (\$5,0 | 00 000 0000 | | - | - 1 | | 1 | | |
| <u>le</u> | daterials and su | mine | exomum) | _ | | | | - 1 | |
| P | ublication costs | | | | | \$5,000.00 | | | \$5,000.00 |
| h | Otal | | | ┪ | | \$300.00 | | | \$243.00 |
| Direct C | cets (A+B+C+E | | | ┼ | | \$0.00 | | | \$0.00 |
| ct Costs | - Franch | Man(ii | | ┽ | | \$6,300.00 | | | \$5,243.00 |
| (8) | pecify rate and b | | ly pay an indirect cost of 10% | | | \$64,467.00 | | | |
| (Domest | ic Onto | | | 1 | , | | I | | \$68,182.00 |
| Direct Cor | ste | - | | | | \$8,447.00 | - 1 | 1 . | F8,818.00 |
| | | | | | | \$4,086.00 | | | |
| Buni | ness/Consultant | Services | | | | \$0.00 | | | \$0.00 |
| 800 | nees/Consultant Mends | Services | | | | \$0.00 | | | \$0.00 |
| Other | | | | | | \$0.00 | | | \$0.00 |
| | | | | | | \$0.00 | ~∤ | | \$0.00 |
| Total | | | | | 7 | \$0.00 | | ļ | 0.00 |
| L | | TOTAL TRA | VEL + NORECT + OTHER DIRECT | | 7 | \$0.00 | + | 1 | 0.00 |
| | | | COSTS CONTRER DIRECT | | \$ | 10,533.00 | + | | 0.00 |
| | | | TOTAL PROJECT COST - 1 YEAR | | | _ | 1 | \$8,1 | 18.00 |
| | | T1 | OTAL PROJECT COST - OVERALL | | L87 | 6,000.00 | | | |
| | | | | | 1 | | \$150,000.00 | ₹/ 8,0 | 00.00 |

ADD:

| O. Other Direct Costs Equipment (\$5,000 per year maximum) Materials and supplies Publication costs | mon | Black fields = data manually manually slack fields = for | mulas unds 1 Year 1 | 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | ************************************** |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|----------------------------------------------|-----------------------------------------------------------------------------------------------|
| Faculty or third person 1 Faculty or third person 2 Other Total Senior personnel: B. Other Personnel (show number in notes) Post doctoral associates Other professionals (technicians, programmers, etc.) Graduate students Other Other Total other Personnel: C. Fringe Benefits (Health insurance, benefits, etc.) TOTAL SALARY/BENEFITS ALL PERSONNEL (please describe - use notes space if needed) D. Other Direct Costs Equipment (\$5,000 per year maximum) Materials and supplies | 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | \$11,333 \$5,967. \$3,346. \$20,648. \$0.00 \$0.00 \$0.00 \$30,000.00 \$30,000.00 \$8,519.00 | unds 1 Year 1 0.00 00 00 | 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | Requested (options) \$11.787.0 \$6,206.00 \$3,482.00 \$21,475.00 \$0.00 \$0.00 \$0.00 |
| Faculty or third person 1 Faculty or third person 2 Other Total Senior personnel: B. Other Personnel (show number in notes) Post doctoral associates Other professionals (technicians, programmers, etc.) Graduate students Other Other Total other Personnel: C. Fringe Benefits (Health insurance, benefits, etc.) TOTAL SALARY/BENEFITS ALL PERSONNEL (please describe - use notes space if needed) Equipment (\$5,000 per year maximum) Materials and supplies Publication costs | 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | \$11,333 \$5,967 \$3,346. \$20,648 \$0.00 \$0.00 \$0.00 \$0.00 \$30,000.00 \$30,000.00 \$8,519.00 | 1 Year 1 | 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | Requested (options) \$11.787.0 \$6,206.00 \$3,482.00 \$21,475.00 \$0.00 \$0.00 \$0.00 |
| Facuity or third person 1 Facuity or third person 2 Other Total Senior personnel: B. Other Personnel (show number in notes) Post doctoral associates Other professionals (technicians, programmers, etc.) Graduate students Other Other Total other Personnel: C. Fringe Benefits (Health insurance, benefits, etc.) TOTAL SALARY/BENEFITS ALL PERSONNEL (please describe - use notes space if needed) D. Other Direct Costs Equipment (\$5,000 per year maximum) Materials and supplies Publication costs | 0 0 0 2 0 | \$11.333 \$5,967 \$3,346. \$20,648. \$0.00 \$0.00 \$0.00 \$0.00 \$30,000.00 \$30,000.00 \$8,519.00 | 1 Year 1 | 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | Requested (options) \$11.787.0 \$6,206.00 \$3,482.00 \$21,475.00 \$0.00 \$0.00 \$0.00 |
| Other Total Senior personnel: B. Other Personnel (show number in notes) Poat doctoral associates Other professionals (technicians, programmers, etc.) Graduate students Other Other Total other Personnel: C. Fringe Benefits (Health insurance, benefits, etc.) TOTAL SALARY/BENEFITS ALL PERSONNEL (please describe - use notes space if needed) Equipment (\$5,000 per year maximum) Materials and supplies Publication costs | 0 0 0 2 0 | \$11,333 \$5,967 \$3,346. \$20,648. \$0.00 \$0.00 \$30,000.00 \$30,000.00 \$30,000.00 | 0.00 | 0 0 0 0 0 | \$11.787.0 \$6,206.00 \$3,482.00 \$21,475.00 \$0.00 \$0.00 \$0.00 \$0.00 |
| Total Senior personnel: B. Other Personnel (show number in notes) Post doctoral associates Other professionals (technicians, programmers, etc.) Graduate students Other Other Total other Personnel: C. Fringe Benefits (Health insurance, benefits, etc.) TOTAL SALARY/BENEFITS ALL PERSONNEL (please describe - use notes space if needed) Equipment (\$5,000 per year maximum) Materials and supplies Publication costs | 0 0 0 2 0 | \$5,967 \$3,346. \$20,648. \$0.00 \$0.00 \$30,000.00 \$0.00 \$30,000.00 \$30,000.00 | 00 00 00 | 0 0 0 0 0 | \$11.787.0 \$6,206.00 \$3,482.00 \$21,475.00 \$0.00 \$0.00 \$0.00 \$0.00 |
| Total Senior personnel: B. Other Personnel (show number in notes) Post doctoral associates Other professionals (technicians, programmers, etc.) Graduate students Other Total other Personnel: C. Fringe Benefits (Health insurance, benefits, etc.) TOTAL SALARY/BENEFITS ALL PERSONNEL (please describe - use notes space if needed) Equipment (\$5,000 per year maximum) Materials and supplies Publication costs | 0 0 0 2 0 | \$5,967 \$3,346. \$20,648. \$0.00 \$0.00 \$30,000.00 \$0.00 \$30,000.00 \$30,000.00 | 00 00 00 | 0 0 0 0 0 | \$6,206.00 \$3,482.00 \$21,475.00 \$0.00 \$0.00 \$0.00 \$0.00 |
| Post doctoral associates Other professionals (technicians, programmers, etc.) Graduate students Other Other Total other Personnel: C. Fringe Benefits (Health insurance, benefits, etc.) TOTAL SALARY/BENEFITS ALL PERSONNEL (please describe - use notes space if needed) Equipment (\$5,000 per year maximum) Materials and supplies Publication costs | 0 0 0 2 0 | \$3,348. \$20,648. \$0.00 \$0.00 \$30,000.00 \$0.00 \$30,000.00 \$8,519.00 | 00 | 0 0 0 0 0 | \$6,206.00 \$3,482.00 \$21,475.00 \$0.00 \$0.00 \$0.00 \$0.00 |
| Other professionals (technicians, programmers, etc.) Graduate students Other Other Total other Personnel: C. Fringe Benefits (Health insurance, benefits, etc.) TOTAL SALARY/BENEFITS ALL PERSONNEL (please describe - use notes space if needed) Equipment (\$5,000 per year maximum) Materials and supplies Publication costs | 0 0 2 0 0 | \$20,648. \$0.00 \$0.00 \$30,000.00 \$0.00 \$30,000.00 \$8,519.00 | ∞ <u> </u> | 0 0 0 0 0 0 0 0 | \$3,482.00 \$21,475.00 \$0.00 \$0.00 \$20,851.00 \$0.00 \$0.00 |
| Other professionals (technicians, programmers, etc.) Graduate students Other Other Total other Personnel: C. Fringe Benefits (Health insurance, benefits, etc.) TOTAL SALARY/BENEFITS ALL PERSONNEL (please describe - use notes space if needed) Equipment (\$5,000 per year maximum) Materials and supplies Publication costs | 0 2 0 0 | \$0.00 \$0.00 \$30,000.00 \$0.00 \$30,000.00 \$8,519.00 | | 0 0 0 0 0 0 | \$21,475.00 \$0.00 \$0.00 \$20,651.00 \$0.00 \$0.00 |
| Other Other Other Total other Personnel: C. Fringe Benefits (Health insurance, benefits, etc.) TOTAL SALARY/BENEFITS ALL PERSONNEL (please describe - use notes space if needed) D. Other Direct Costs Equipment (\$5,000 per year maximum) Materials and supplies Publication costs | 0 2 0 0 | \$0.00 \$30,000.00 \$0.00 \$0.00 \$30,000.00 \$8,518.00 | | 0 0 0 | \$0.00 \$0.00 \$20,851.00 \$0.00 |
| Other Other Other Total other Personnel: C. Fringe Benefits (Health insurance, benefits, etc.) TOTAL SALARY/BENEFITS ALL PERSONNEL (please describe - use notes space if needed) Equipment (\$5,000 per year maximum) Materials and supplies Publication costs | 0 | \$0.00 \$30,000.00 \$0.00 \$0.00 \$30,000.00 \$8,518.00 | , | 0 0 0 | \$0.00 \$20,851.00 \$0.00 \$0.00 |
| Other Other Other Total other Personnel: C. Fringe Benefits (Health insurance, benefits, etc.) TOTAL SALARY/BENEFITS ALL PERSONNEL (please describe - use notes space if needed) Equipment (\$5,000 per year maximum) Materials and supplies Publication costs | 0 | \$30,000.00 \$0.00 \$0.00 \$30,000.00 \$8,518.00 | , | 0 0 | \$0.00 \$20,851.00 \$0.00 \$0.00 |
| Total other Personnel: C. Fringe Benefits (Health insurance, benefits, etc.) TOTAL SALARY/BENEFITS ALL PERSONNEL (please describe - use notes space if needed) Equipment (\$5,000 per year maximum) Materials and supplies Publication costs | 0 | \$0.00 \$0.00 \$30,000.00 \$8,519.00 | | 0 | \$20,851.00 \$0.00 \$0.00 |
| D. Other Direct Costs Continue of the Costs Continue of the Costs | 0 | \$0.00 \$30,000.00 \$8,510.00 | # | 0 | \$0.00 \$0.00 |
| D. Other Direct Costs Continuous Costs Co | | \$30,000.00 \$8,519.00 | # | 0 | \$0.00 |
| O. Other Direct Costs (please describe - use notes space if needed) Equipment (\$5,000 per year maximum) Materials and supplies Publication costs | | \$8,519.00 | + | | |
| O. Other Direct Costs (please describe - use notes space if needed) Equipment (\$5,000 per year maximum) Materials and supplies Publication costs | \exists | \$8,519.00 | | <u>- </u> | \$20,654.00 |
| Other Direct Costs Equipment (\$5,000 per year maximum) Materials and supplies Publication costs | | | | | *************************************** |
| Materials and supplies Publication costs | | | | | \$9,011.00 |
| Materials and supplies Publication costs | | | - 1 | T | \$51,137.00 |
| Publication costs | - 1 | | | | |
| Publication costs | | | - [| - 1 | |
| | | \$0.00 | | | |
| Total | | \$5,300.00 | | | \$0.00 |
| Total Direct Costs (A+B+C+D) | | \$0.00 | | | \$12,954.00 |
| We will | _ T | \$5,300.00 | - | \perp | \$0.00 |
| (apecify rate and base) We will only pay an indirect cost of 10% | | \$64,487.00 | | _ | \$12,954.00 |
| Water (Domestic Onto) | | | | | \$64,091.00 |
| ther Direct Coats | _1 | \$6,447.00 | , | | |
| Business/Consultant Services | | \$4,086.00 | | | \$6,409.00 |
| Business/Consultant Services | | \$0.00 | | T- | \$0.00 |
| Business/Consultant Services Subswards | _ | \$0.00 | | 1 | \$0.00 |
| Other | | \$0.00 | _ | — | \$0.00 |
| Total | + | \$0.00 | | | \$0.00 |
| | + | | | | \$0.00 |
| TOTAL TRAVEL + INDIRECT + OTHER DIRECT COSTS | + | \$0.00 | | | .500.00 |
| DIRECT COSTS | | \$0.00 | | | |
| PROJECT COST - 1 VEAD | | 0,633.00 | | | 500.00 |
| ill have the opportunity to provide a budget narrative in t | \$7 | 5,000.00 | | | 909.00 |

DELETE:

KENTUCKY COMMERCIALIZATION FUND FINANCIAL REPORT AND INVOICE TEMPLATE Contract #: 144-401-15

Proposal #: COMMFUND-712-RFP-006

Invoice #:

| | - worth OldDe | 172-KFP-008 |
|-------|----------------------------------------------|---------------|
| TO: | John Wehrle, Chief Financial Officer KSTC | ••• |
| | P.O. 80x 1049 | From: |
| | Lexington, KY 40588-1049 | |
| Curre | nt Billing Period: from | _ to . |
| A | imount of Request: | £0.00 |

\$0.00

| DESCRIPTION | Total Subaward Funds to Subawardee | Actual Cumulative Expanditures to Subawardee | Requested Expenditures | |
|---------------------|---------------------------------------|----------------------------------------------|------------------------|-----------------|
| 'ersonnel | \$50.840.00 | | to Subawardee | Funds Remaining |
| ringe Benefits | \$50,648.00 | \$0.00 | | |
| ravel | \$8,519.00 | \$0.00 | \$0.00 | \$50,648.00 |
| aterials & Supplies | \$4,086.00 | \$0.00 | \$0.00 | \$8,519.00 |
| iblication costs | \$300.00 | \$0.00 | \$0.00 | \$4,086.00 |
| nsultant Services | \$0.00 | | \$0.00 | |
| | \$0.00 | \$0.00 | \$0.00 | \$300.00 |
| uipment | \$5,000.00 | \$0.00 | \$0.00 | \$0.00 |
| bawards | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| er Direct | \$0.00 | \$0.00 | | \$5,000.00 |
| rtotal | | \$0.00 | \$0.00 | \$0.00 |
| rect (10%) | \$68,553.00 | \$0.00 | \$0.00 | \$0.00 |
| | \$6,447.00 | \$0.00 | \$0.00 | \$68,553.00 |
| | \$76,000.00 | \$0.00 | \$0.00 | \$6,447.00 |
| Subaward Budget | 1000 | 40.00 | \$0.00 | |
| | 100% | 0% | | \$75,000.00 |

[&]quot;I certify that all expenditures reported (or payment requested) are for appropriate purposes and are in accordance with the contract agreement set forth in the application and agreement documents."

| Name/Title: | and an accordance with the contract agreement |
|-------------|-----------------------------------------------|
| | Signature/Date: |
| | |

ADD:

EXHIBIT C KENTUCKY COMMERCIALIZATION FUND FINANCIAL REPORT AND INVOICE TEMPLATE

| Contract #: KSTC-144-40 | 04.07.045 | | |
|-----------------------------------------------------------------------------------------------|----------------------------|-------|------------|
| Proposal#: COMMFUND | 01-07-015 0-712-RFP-006 | | Invoice #: |
| TO: John Wehrle, Chief Financial Officer KSTC P.O. Box 1049 Lexington, KY 40588-1049 | | From: | |
| Current Billing Period: from | to | | |
| Amount of Request: | \$0.00 | | |

| | APRIL APRIL | AWARD FUNES TO AWARD | | Alberta menta inche wat i sa a a a a |
|----------------------|-------------------------------------------|----------------------------------------------|------------------------|--------------------------------------|
| DESCRIPTION | Total Award Funds to Awardee: Year One | Actual Cumulative Expenditures to Awardee | Requested Expenditures | |
| Personnel | | | to Awardee | Funds Remaining |
| | \$92,774.00 | \$0.00 | | |
| ringe Benefits | \$17,530.00 | | \$0.00 | \$0.00 |
| quipment | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| laterials & Supplies | \$18,254.00 | \$0.00 | \$0.00 | \$0.00 |
| ublication Costs | \$0.00 | \$0.00 | \$0.00 | |
| direct Costs (10%) | \$12,856.00 | \$0.00 | \$0.00 | \$0.00 |
| ravel (Domestic) | | \$0.00 | \$0.00 | \$0.00 |
| usiness/Consultant | \$4,086.00 | \$0.00 | \$0.00 | \$0.00 |
| ibawards | \$0.00 | \$0.00 | | \$0.00 |
| ther | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| otal | \$4,500.00 | \$0.00 | \$0.00 | \$0.00 |
| of Award Budget | \$150,000.00 | \$0.00 | \$0.00 | \$0.00 |
| Budger | 100% | 0% | \$0.00 0% | \$0.00 |

[&]quot;I certify that all expenditures reported (or payment requested) are for appropriate purposes and are in accordance with the contract agreement set forth in the application and agreement documents."

| Name/Title: | |
|----------------|--|
| Ci t | |
| Signature/Date | |
| | |