COLLEGES AND UNIVERSITIES RATE AGREEMENT

EIN: 1043167352AI
ORGANIZATION: University of Massachusetts Medical School
55 Lake Avenue North
Worcester, MA 01655-

DATE: 03/28/2018
FILING REF.: The preceding agreement was dated 02/23/2017

The rates approved in this agreement are for use on grants, contracts and other agreements with the Federal Government, subject to the conditions in Section III.

SECTION I: Facilities And Administrative Cost Rates

<table>
<thead>
<tr>
<th>RATE TYPES:</th>
<th>FIXED</th>
<th>FINAL</th>
<th>PROV. (PROVISIONAL)</th>
<th>PRED. (PREDETERMINED)</th>
</tr>
</thead>
</table>

**EFFECTIVE PERIOD**

<table>
<thead>
<tr>
<th>TYPE</th>
<th>FROM</th>
<th>TO</th>
<th>RATE(%) LOCATION</th>
<th>APPLICABLE TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRED.</td>
<td>07/01/2017</td>
<td>06/30/2019</td>
<td>67.50 On-Campus</td>
<td>Research</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2017</td>
<td>06/30/2019</td>
<td>26.00 Off-Campus</td>
<td>Research</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2017</td>
<td>06/30/2019</td>
<td>68.00 On-Campus</td>
<td>Research DOD Contract</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2017</td>
<td>06/30/2019</td>
<td>27.80 Off-Campus</td>
<td>Research DOD Contract</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2017</td>
<td>06/30/2019</td>
<td>18.25 All Locations</td>
<td>OSA-CM (SR#3)</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2017</td>
<td>06/30/2019</td>
<td>36.00 On-Campus</td>
<td>Other Sponsored Activities</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2017</td>
<td>06/30/2019</td>
<td>26.00 Off-Campus</td>
<td>Other Sponsored Activities</td>
</tr>
<tr>
<td>PROV.</td>
<td>07/01/2019</td>
<td>Until Amended</td>
<td>26.00 Off-Campus</td>
<td>Use same rates and conditions as those cited for fiscal year ending June 30, 2019.</td>
</tr>
</tbody>
</table>
*BASE*

Modified total direct costs, consisting of all direct salaries and wages, applicable fringe benefits, materials and supplies, services, travel and up to the first $25,000 of each subaward (regardless of the period of performance of the subawards under the award). Modified total direct costs shall exclude equipment, capital expenditures, charges for patient care, rental costs, tuition remission, scholarships and fellowships, participant support costs and the portion of each subaward in excess of $25,000. Other items may only be excluded when necessary to avoid a serious inequity in the distribution of indirect costs, and with the approval of the cognizant agency for indirect costs.
SECTION II: SPECIAL REMARKS

TREATMENT OF FRINGE BENEFITS:

Fringe benefits applicable to direct salaries and wages are treated as direct costs.

TREATMENT OF PAID ABSENCES

Vacation, holiday, sick leave pay and other paid absences are included in salaries and wages and are claimed on grants, contracts and other agreements as part of the normal cost for salaries and wages. Separate claims are not made for the cost of these paid absences.
1. The following rate applies to research effort performed at the Massachusetts Biologics Laboratory (MBL):

<table>
<thead>
<tr>
<th>TYPE</th>
<th>FROM</th>
<th>TO</th>
<th>RATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRED.</td>
<td>07/01/17</td>
<td>06/30/19</td>
<td>26.0%</td>
</tr>
<tr>
<td>PROV.</td>
<td>07/01/19</td>
<td>Until Amended</td>
<td>Use the rate cited for the period ending 6/30/19</td>
</tr>
</tbody>
</table>

The 26% rate noted above applies to the administrative costs of research at MBL. The facilities costs are directly charged for the space used by each project.

2. Fringe benefits are claimed using approved rates contained in the Massachusetts State-Wide Cost Allocation Plan. The following additional fixed fringe benefit charges are approved for the University:

<table>
<thead>
<tr>
<th>FYE 6/30/18</th>
<th>FYE 6/30/19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workers' Compensation Insurance</td>
<td>.36%(S&amp;W)</td>
</tr>
<tr>
<td>Medicare</td>
<td>(1)</td>
</tr>
<tr>
<td>Health and Welfare</td>
<td>1.00%(S&amp;W)</td>
</tr>
<tr>
<td>Unemployment</td>
<td>(1)</td>
</tr>
</tbody>
</table>

(1) Beginning for Fiscal Year 2008 the State negotiated rate incorporated Unemployment Insurance and Medicare in the Federally negotiated State "6B" rate.

3. Commonwealth Medicine is the public, non-profit consulting and service organization founded by the University of Massachusetts Medical School. The Other Sponsored Activities - Commonwealth Medicine (OSA-CM) base consists of the direct costs of public service programs that have evolved through partnerships with State agencies.

This separate OSA-CM rate receives an allocation of applicable general and administrative and information services costs only. Departmental administration, sponsored projects administration and facilities costs are not applicable to these programs.

This rate agreement updates fringe benefit rates.

** Your next fringe benefit proposal based on actual costs for fiscal year ending June 30, 2018 will be due in our office by December 31, 2018.

** Your next indirect cost rate proposal for the fiscal year ending June 30, 2018 will be due in our office by December 31, 2018.
Equipment means tangible personal property (including information technology systems) having a useful life of more than one year and a per-unit acquisition cost which equals or exceeds the lesser of the capitalization level established by the non-Federal entity for financial statement purposes, or $5,000.
SECTION III: GENERAL

A. LIMITATIONS:
The rates in this Agreement are subject to any statutory or administrative limitations and apply to a given grant, contract or other agreement only to the extent that funds are available. Acceptance of the rates is subject to the following conditions: (1) Only costs incurred by the organization were included in its facilities and administrative cost pools as finally accepted; such costs are legal obligations of the organization and are allowable under the governing cost principles; (2) The same costs that have been treated as facilities and administrative costs are not claimed as direct costs; (3) Similar types of costs have been accorded consistent accounting treatment; and (4) The information provided by the organization which was used to establish the rates is not later found to be materially incomplete or inaccurate by the Federal Government. In such situations the rate(s) would be subject to renegotiation at the discretion of the Federal Government.

B. ACCOUNTING CHANGES:
This Agreement is based on the accounting system purported by the organization to be in effect during the Agreement period. Changes to the method of accounting for costs which affect the amount of reimbursement resulting from the use of this Agreement require prior approval of the authorized representative of the cognizant agency. Such changes include, but are not limited to, changes in the charging of a particular type of cost from facilities and administrative to direct. Failure to obtain approval may result in cost disallowances.

C. FIXED RATES:
If a fixed rate is in this Agreement, it is based on an estimate of the costs for the period covered by the rate. When the actual costs for this period are determined, an adjustment will be made to a rate of a future year(s) to compensate for the difference between the costs used to establish the fixed rate and actual costs.

D. USE BY OTHER FEDERAL AGENCIES:
The rates in this Agreement were approved in accordance with the authority in Title 2 of the Code of Federal Regulations, Part 200 (2 CFR 200), and should be applied to grants, contracts and other agreements covered by 2 CFR 200, subject to any limitations in A above. The organization may provide copies of the Agreement to other Federal Agencies to give them early notification of the Agreement.

E. OTHER:
If any Federal contract, grant or other agreement is reimbursing facilities and administrative costs by a means other than the approved rate(s) in this Agreement, the organization should (1) credit such costs to the affected programs, and (2) apply the approved rate(s) to the appropriate base to identify the proper amount of facilities and administrative costs allocable to these programs.

BY THE INSTITUTION:
University of Massachusetts Medical School

(INSTITUTION)

(SIGNATURE)

(NAME)

(TITLE)

4/23/19

(DATE)

ON BEHALF OF THE FEDERAL GOVERNMENT:

DEPARTMENT OF HEALTH AND HUMAN SERVICES

(AGENCY)

(Digitally signed by Darryl W. Mayes - S)

(SIGNATURE)

Darryl W. Mayes

(NAME)

Deputy Director, Cost Allocation Services

(TITLE)

3/28/2018

(DATE) 7073

HHS REPRESENTATIVE: Michael Stanco

Telephone: (312) 264-2069