COLLEGES AND UNIVERSITIES RATE AGREEMENT

EIN: 060646973                                      DATE: 02/23/2016
ORGANIZATION:                                          FILING REF.: The preceding
Yale University                                        agreement was dated
47 College St., Suite 216Y                            09/18/2015
New Haven, CT 06510-3209

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: INDIRECT COST RATES

<table>
<thead>
<tr>
<th>RATE TYPES:</th>
<th>FINAL</th>
<th>FINAL</th>
<th>PROV. (PROVISIONAL)</th>
<th>PRED. (PREDETERMINED)</th>
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<tr>
<td>EFFECTIVE PERIOD</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>TYPE</td>
<td>FROM</td>
<td>TO</td>
<td>RATE (%) LOCATION</td>
<td>APPLICABLE TO</td>
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<td>FINAL</td>
<td>07/01/2014</td>
<td>06/30/2015</td>
<td>66.50 On-Campus</td>
<td>Organized Research</td>
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<td>69.70 On-Campus 2</td>
<td>Res DOD Contract</td>
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<td>07/01/2015</td>
<td>06/30/2018</td>
<td>69.90 On-Campus 2</td>
<td>Res DOD Contract</td>
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<td>06/30/2015</td>
<td>30.90 Mod On- Campus 3</td>
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<tr>
<td>FINAL</td>
<td>07/01/2014</td>
<td>06/30/2015</td>
<td>41.80 On-Campus</td>
<td>Other Sponsored Activities</td>
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</tbody>
</table>
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 I: FRINGE BENEFIT RATES**

<table>
<thead>
<tr>
<th>TYPE</th>
<th>FROM</th>
<th>TO</th>
<th>RATE(%)</th>
<th>LOCATION</th>
<th>APPLICABLE TO</th>
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<tbody>
<tr>
<td>FIXED</td>
<td>7/1/2015</td>
<td>6/30/2016</td>
<td>30.80</td>
<td>All</td>
<td>Exempt (9)</td>
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<tr>
<td>FIXED</td>
<td>7/1/2015</td>
<td>6/30/2016</td>
<td>61.70</td>
<td>All</td>
<td>Non-Exempt (10)</td>
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<td>FIXED</td>
<td>7/1/2015</td>
<td>6/30/2016</td>
<td>8.90</td>
<td>All</td>
<td>Part-Time (11)</td>
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<td>FIXED</td>
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<td>6/30/2017</td>
<td>31.10</td>
<td>All</td>
<td>Exempt (9)</td>
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<td>FIXED</td>
<td>7/1/2016</td>
<td>6/30/2017</td>
<td>62.50</td>
<td>All</td>
<td>Non-Exempt (10)</td>
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<td>FIXED</td>
<td>7/1/2016</td>
<td>6/30/2017</td>
<td>8.70</td>
<td>All</td>
<td>Part-Time (11)</td>
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<tr>
<td>PROV.</td>
<td>7/1/2017</td>
<td>Until amended</td>
<td>31.10</td>
<td>All</td>
<td>Exempt (9)</td>
</tr>
<tr>
<td>PROV.</td>
<td>7/1/2017</td>
<td>Until amended</td>
<td>62.50</td>
<td>All</td>
<td>Non-Exempt (10)</td>
</tr>
<tr>
<td>PROV.</td>
<td>7/1/2017</td>
<td>Until amended</td>
<td>8.70</td>
<td>All</td>
<td>Part-Time (11)</td>
</tr>
</tbody>
</table>

**DESCRIPTION OF FRINGE BENEFITS RATE BASE:**
Salaries and wages.
SECTION II: SPECIAL REMARKS

TREATMENT OF FRINGE BENEFITS:

The fringe benefits are charged using the rate(s) listed in the Fringe Benefits Section of this Agreement. The fringe benefits included in the rate(s) are listed below.

TREATMENT OF PAID ABSENCES

Vacation, holiday, sick leave pay and other paid absences (excluding terminal vacation pay and vested sick pay) 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 rates in this agreement have been negotiated to reflect the administrative cap provisions of the revision to OMB Circular A-21 published by the Office of Management and Budget on May 8, 1996. No rate, except see #2 below, affecting the institution's fiscal components is in excess of that 26 percent cap.

2. This rate is not subject to the 26 percent cap in #1 above.

3. This rate applies only to existing grants and contracts that began prior to July 1, 2005 and are conducted in rented buildings or non-owned buildings within or adjacent to the Yale University campus (Rate is cancelled effective July 1, 2015 due to inactivity).

4. The Off-Campus rate applies to effort performed on premises not owned by the University at locations sufficiently far from the campus to prohibit the normal use of University facilities and services.

5. This rate is applicable to grants and contracts awarded to Yale for Yale employees directly involved in the performance of work at the Connecticut Mental Health Center.

6. This rate is applicable to grants and contracts awarded to Yale for Yale employees directly involved in the performance of work at the Veterans Hospital in West Haven.

7. Equipment means an article of nonexpendable, tangible personal property having a useful life of more than one year, and an acquisition cost of $5,000 or more per unit.
8. Treatment of Fringe Benefits: Fringe benefits applicable to direct salaries and wages are treated as direct costs. The fringe benefit Exempt and Non-Exempt rates consist of Social Security, University Health Plans, Post Retirement Medical Benefits, Health Maintenance Organizations, Worker's Compensation, Salary Continuation, Employee Tuition Program, Dental Plans, Long-Term Disability, Unemployment Compensation, New Haven Housing Incentive Program, Employee Counseling Program and Group Life Insurance, Employee Education Program, Staff Retirement Plan, Vested Sick Pay, Death Benefits, and Terminal Vacation Payments. In addition the Exempt rate includes: Retirement Annuity Pension Plan, Faculty Early Retirement Plan, and Sabbatical Leave. The Non-Exempt rate includes Supplemental Retirement Annuity Plan. A category for part-time personnel consists only of Social Security, Worker's compensation, Employee Education Program and Unemployment Compensation. These rates shall apply to direct salaries and wages in lieu of individual direct charges.

9. The Exempt rate category (Formerly TIAA/CREF F/T) consists of Managerial & Professional Employees, Post-Doctoral Associates and Faculty.

10. The Non-Exempt rate category (Formerly Non-TIAA/CREF F/T) consists of the Service & Maintenance and Clerical & Technical employees.

11. Part Time rate category consists of temporary and PT permanent employees (< 20hrs per week) ineligible for benefits.

Your next Fringe Benefit proposal based on actual costs for the fiscal year ending 06/30/2016 is due in our office by 12/31/2016.

This Rate Agreement updates Fringe Benefit rates only.
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:
Yale University

[INSTITUTION]

[signature]

SM Girvin

(NAME)

Deputy Provost Research

(TITLE)

3/11/16

(DATE)

ON BEHALF OF THE FEDERAL GOVERNMENT:

DEPARTMENT OF HEALTH AND HUMAN SERVICES

(AGENCY)

Darryl W. Mayes

(SIGNATURE)

Darryl W. Mayes

(NAME)

Deputy Director, Cost Allocation Services

(TITLE)

2/23/2016

(DATE) 0586

HHS REPRESENTATIVE: Ryan McCarthy

Telephone: (212) 264-2069