```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE ST26SequenceListing PUBLIC "-//WIPO//DTD Sequence Listing
1.3//EN" "ST26SequenceListing_V1_3.dtd">
<ST26SequenceListing originalFreeTextLanguageCode="en"
dtdVersion="V1_3" fileName="PAT 111647-2 Sequence Listing ST26.xml"
softwareName="WIPO Sequence" softwareVersion="2.1.2.0"
productionDate="2022-10-05 2023-04-21">
      <ApplicationIdentification>
            <IPOfficeCode>US</IPOfficeCode>
            <ApplicationNumberText>17/962,055</ApplicationNumberText>
            <FilingDate>2022-10-07</FilingDate>
      </ApplicationIdentification>
      <ApplicantFileReference>PAT 111647-2</ApplicantFileReference>
      <EarliestPriorityApplicationIdentification>
            <IPOfficeCode>US</IPOfficeCode>
            <ApplicationNumberText>63/253,781</ApplicationNumberText>
            <FilingDate>2021-10-08</FilingDate>
      </EarliestPriorityApplicationIdentification>
      <ApplicantName languageCode="en">MAHLA POUDINEH</ApplicantName>
      <InventionTitle languageCode="en">HYDROGEL MICRONEEDLES FOR
BIOSENSING</InventionTitle>
      <SequenceTotalQuantity>28</SequenceTotalQuantity>
      <SequenceData sequenceIDNumber="1">
            <INSDSeq>
                  <INSDSeq_length>30</INSDSeq_length>
                  <INSDSeq_moltype>DNA</INSDSeq_moltype>
                  <INSDSeq_division>PAT</INSDSeq_division>
                  <INSDSeq_feature-table>
                        <INSDFeature>
                              <INSDFeature_key>source</INSDFeature_key>

      <INSDFeature_location>1..30</INSDFeature_location>
                              <INSDFeature_quals>
                                    <INSDQualifier>

      <INSDQualifier_name>mol_type</INSDQualifier_name>
                                          <INSDQualifier_value>other
DNA</INSDQualifier_value>
                                    </INSDQualifier>
                                    <INSDQualifier id="q1">

      <INSDQualifier_name>organism</INSDQualifier_name>
                                          <INSDQualifier_value>synthetic
construct</INSDQualifier_value>
                                    </INSDQualifier>
                              </INSDFeature_quals>
                        </INSDFeature>
                  </INSDSeq_feature-table>

      <INSDSeq_sequence>ggtggtgggggggttggtagggtgtcttc</INSDSeq_sequenc
e>
            </INSDSeq>
```

```
      </SequenceData>
      <SequenceData sequenceIDNumber="2">
            <INSDSeq>
                  <INSDSeq_length>27</INSDSeq_length>
                  <INSDSeq_moltype>DNA</INSDSeq_moltype>
                  <INSDSeq_division>PAT</INSDSeq_division>
                  <INSDSeq_feature-table>
                        <INSDFeature>
                              <INSDFeature_key>source</INSDFeature_key>

      <INSDFeature_location>1..27</INSDFeature_location>
                              <INSDFeature_quals>
                                    <INSDQualifier>

      <INSDQualifier_name>mol_type</INSDQualifier_name>
                                          <INSDQualifier_value>other
DNA</INSDQualifier_value>
                                    </INSDQualifier>
                                    <INSDQualifier id="q2">

      <INSDQualifier_name>organism</INSDQualifier_name>
                                          <INSDQualifier_value>synthetic
construct</INSDQualifier_value>
                                    </INSDQualifier>
                              </INSDFeature_quals>
                        </INSDFeature>
                  </INSDSeq_feature-table>

      <INSDSeq_sequence>aatgcggggtggagaatggttgccgca</INSDSeq_sequence>
            </INSDSeq>
      </SequenceData>
      <SequenceData sequenceIDNumber="3">
            <INSDSeq>
                  <INSDSeq_length>66</INSDSeq_length>
                  <INSDSeq_moltype>DNA</INSDSeq_moltype>
                  <INSDSeq_division>PAT</INSDSeq_division>
                  <INSDSeq_feature-table>
                        <INSDFeature>
                              <INSDFeature_key>source</INSDFeature_key>

      <INSDFeature_location>1..66</INSDFeature_location>
                              <INSDFeature_quals>
                                    <INSDQualifier>

      <INSDQualifier_name>mol_type</INSDQualifier_name>
                                          <INSDQualifier_value>other
DNA</INSDQualifier_value>
                                    </INSDQualifier>
                                    <INSDQualifier id="q3">

      <INSDQualifier_name>organism</INSDQualifier_name>
```

```
                                        <INSDQualifier_value>synthetic
construct</INSDQualifier_value>
                                    </INSDQualifier>
                               </INSDFeature_quals>
                          </INSDFeature>
                     </INSDSeq_feature-table>

     <INSDSeq_sequence>ctctcgggacgaccgagggtaccgcaatagtacttattgttcgccta
ttgtgggtcgggtcgtccc</INSDSeq_sequence>
          </INSDSeq>
     </SequenceData>
     <SequenceData sequenceIDNumber="4">
          <INSDSeq>
               <INSDSeq_length>26</INSDSeq_length>
               <INSDSeq_moltype>DNA</INSDSeq_moltype>
               <INSDSeq_division>PAT</INSDSeq_division>
               <INSDSeq_feature-table>
                    <INSDFeature>
                         <INSDFeature_key>source</INSDFeature_key>

     <INSDFeature_location>1..26</INSDFeature_location>
                         <INSDFeature_quals>
                              <INSDQualifier>

     <INSDQualifier_name>mol_type</INSDQualifier_name>
                                        <INSDQualifier_value>other
DNA</INSDQualifier_value>
                                    </INSDQualifier>
                                    <INSDQualifier id="q4">

     <INSDQualifier_name>organism</INSDQualifier_name>
                                        <INSDQualifier_value>synthetic
construct</INSDQualifier_value>
                                    </INSDQualifier>
                               </INSDFeature_quals>
                          </INSDFeature>
                     </INSDSeq_feature-table>

     <INSDSeq_sequence>gggacttggtttaggtaatgagtccc</INSDSeq_sequence>
          </INSDSeq>
     </SequenceData>
     <SequenceData sequenceIDNumber="5">
          <INSDSeq>
               <INSDSeq_length>51</INSDSeq_length>
               <INSDSeq_moltype>DNA</INSDSeq_moltype>
               <INSDSeq_division>PAT</INSDSeq_division>
               <INSDSeq_feature-table>
                    <INSDFeature>
                         <INSDFeature_key>source</INSDFeature_key>

     <INSDFeature_location>1..51</INSDFeature_location>
                         <INSDFeature_quals>
```

```
                                    <INSDQualifier>

      <INSDQualifier_name>mol_type</INSDQualifier_name>
                                          <INSDQualifier_value>other
DNA</INSDQualifier_value>
                                    </INSDQualifier>
                                    <INSDQualifier id="q5">

      <INSDQualifier_name>organism</INSDQualifier_name>
                                          <INSDQualifier_value>synthetic
construct</INSDQualifier_value>
                                    </INSDQualifier>
                               </INSDFeature_quals>
                          </INSDFeature>
                     </INSDSeq_feature-table>

      <INSDSeq_sequence>ctctcgggacgaccgtgtgtgttgctctgtaacagtgtccattgtcg
tccc</INSDSeq_sequence>
            </INSDSeq>
      </SequenceData>
      <SequenceData sequenceIDNumber="6">
            <INSDSeq>
                  <INSDSeq_length>27</INSDSeq_length>
                  <INSDSeq_moltype>DNA</INSDSeq_moltype>
                  <INSDSeq_division>PAT</INSDSeq_division>
                  <INSDSeq_feature-table>
                        <INSDFeature>
                              <INSDFeature_key>source</INSDFeature_key>

      <INSDFeature_location>1..27</INSDFeature_location>
                              <INSDFeature_quals>
                                    <INSDQualifier>

      <INSDQualifier_name>mol_type</INSDQualifier_name>
                                          <INSDQualifier_value>other
DNA</INSDQualifier_value>
                                    </INSDQualifier>
                                    <INSDQualifier id="q6">

      <INSDQualifier_name>organism</INSDQualifier_name>
                                          <INSDQualifier_value>synthetic
construct</INSDQualifier_value>
                                    </INSDQualifier>
                               </INSDFeature_quals>
                          </INSDFeature>
                     </INSDSeq_feature-table>

      <INSDSeq_sequence>cacctgggggagtattgcggaggaagg</INSDSeq_sequence>
            </INSDSeq>
      </SequenceData>
      <SequenceData sequenceIDNumber="7">
            <INSDSeq>
```

```
                <INSDSeq_length>37</INSDSeq_length>
                <INSDSeq_moltype>DNA</INSDSeq_moltype>
                <INSDSeq_division>PAT</INSDSeq_division>
                <INSDSeq_feature-table>
                     <INSDFeature>
                          <INSDFeature_key>source</INSDFeature_key>

     <INSDFeature_location>1..37</INSDFeature_location>
                          <INSDFeature_quals>
                               <INSDQualifier>

     <INSDQualifier_name>mol_type</INSDQualifier_name>
                                    <INSDQualifier_value>other
DNA</INSDQualifier_value>
                               </INSDQualifier>
                               <INSDQualifier id="q7">

     <INSDQualifier_name>organism</INSDQualifier_name>
                                    <INSDQualifier_value>synthetic
construct</INSDQualifier_value>
                               </INSDQualifier>
                          </INSDFeature_quals>
                     </INSDFeature>
                </INSDSeq_feature-table>

     <INSDSeq_sequence>ggagcttggattgatgtggtgtgtgagtgcggtgccc</INSDSeq_
sequence>
           </INSDSeq>
     </SequenceData>
     <SequenceData sequenceIDNumber="8">
           <INSDSeq>
                <INSDSeq_length>15</INSDSeq_length>
                <INSDSeq_moltype>DNA</INSDSeq_moltype>
                <INSDSeq_division>PAT</INSDSeq_division>
                <INSDSeq_feature-table>
                     <INSDFeature>
                          <INSDFeature_key>source</INSDFeature_key>

     <INSDFeature_location>1..15</INSDFeature_location>
                          <INSDFeature_quals>
                               <INSDQualifier>

     <INSDQualifier_name>mol_type</INSDQualifier_name>
                                    <INSDQualifier_value>other
DNA</INSDQualifier_value>
                               </INSDQualifier>
                               <INSDQualifier id="q8">

     <INSDQualifier_name>organism</INSDQualifier_name>
                                    <INSDQualifier_value>synthetic
construct</INSDQualifier_value>
                               </INSDQualifier>
```

```
                              </INSDFeature_quals>
                         </INSDFeature>
                    </INSDSeq_feature-table>
                    <INSDSeq_sequence>ggttggtgtggttgg</INSDSeq_sequence>
               </INSDSeq>
          </SequenceData>
          <SequenceData sequenceIDNumber="9">
               <INSDSeq>
                    <INSDSeq_length>42</INSDSeq_length>
                    <INSDSeq_moltype>DNA</INSDSeq_moltype>
                    <INSDSeq_division>PAT</INSDSeq_division>
                    <INSDSeq_feature-table>
                         <INSDFeature>
                              <INSDFeature_key>source</INSDFeature_key>

          <INSDFeature_location>1..42</INSDFeature_location>
                              <INSDFeature_quals>
                                   <INSDQualifier>

          <INSDQualifier_name>mol_type</INSDQualifier_name>
                                        <INSDQualifier_value>other
DNA</INSDQualifier_value>
                                   </INSDQualifier>
                                   <INSDQualifier id="q9">

          <INSDQualifier_name>organism</INSDQualifier_name>
                                        <INSDQualifier_value>synthetic
construct</INSDQualifier_value>
                                   </INSDQualifier>
                              </INSDFeature_quals>
                         </INSDFeature>
                    </INSDSeq_feature-table>

          <INSDSeq_sequence>gactggtaggcagataggggaagctgattcgatgcgtgggtc</INS
DSeq_sequence>
               </INSDSeq>
          </SequenceData>
          <SequenceData sequenceIDNumber="10">
               <INSDSeq>
                    <INSDSeq_length>46</INSDSeq_length>
                    <INSDSeq_moltype>DNA</INSDSeq_moltype>
                    <INSDSeq_division>PAT</INSDSeq_division>
                    <INSDSeq_feature-table>
                         <INSDFeature>
                              <INSDFeature_key>source</INSDFeature_key>

          <INSDFeature_location>1..46</INSDFeature_location>
                              <INSDFeature_quals>
                                   <INSDQualifier>

          <INSDQualifier_name>mol_type</INSDQualifier_name>
```

<INSDQualifier_value>other DNA</INSDQualifier_value>
</INSDQualifier>
<INSDQualifier id="q10">

<INSDQualifier_name>organism</INSDQualifier_name>
<INSDQualifier_value>synthetic construct</INSDQualifier_value>
</INSDQualifier>
</INSDFeature_quals>
</INSDFeature>
</INSDSeq_feature-table>

<INSDSeq_sequence>ctctcgacgacattacgggaccttgctaaaggtggaattatgtcgt</INSDSeq_sequence>
</INSDSeq>
</SequenceData>
<SequenceData sequenceIDNumber="11">
<INSDSeq>
<INSDSeq_length>22</INSDSeq_length>
<INSDSeq_moltype>DNA</INSDSeq_moltype>
<INSDSeq_division>PAT</INSDSeq_division>
<INSDSeq_feature-table>
<INSDFeature>
<INSDFeature_key>source</INSDFeature_key>

<INSDFeature_location>1..22</INSDFeature_location>
<INSDFeature_quals>
<INSDQualifier>

<INSDQualifier_name>mol_type</INSDQualifier_name>
<INSDQualifier_value>other DNA</INSDQualifier_value>
</INSDQualifier>
<INSDQualifier id="q11">

<INSDQualifier_name>organism</INSDQualifier_name>
<INSDQualifier_value>synthetic construct</INSDQualifier_value>
</INSDQualifier>
</INSDFeature_quals>
</INSDFeature>
<INSDFeature>

<INSDFeature_key>misc_feature</INSDFeature_key>

<INSDFeature_location>1</INSDFeature_location>
<INSDFeature_quals>
<INSDQualifier id="q71">

<INSDQualifier_name>note</INSDQualifier_name>

```
                                        <INSDQualifier_value>Cyanine 3
modification</INSDQualifier_value>
                                    </INSDQualifier>
                               </INSDFeature_quals>
                          </INSDFeature>
                          <INSDFeature>

     <INSDFeature_key>misc_feature</INSDFeature_key>

     <INSDFeature_location>22</INSDFeature_location>
                               <INSDFeature_quals>
                                    <INSDQualifier id="q72">

     <INSDQualifier_name>note</INSDQualifier_name>
                                        <INSDQualifier_value>Amino
Modifier-modification</INSDQualifier_value>
                                    </INSDQualifier>
                               </INSDFeature_quals>
                          </INSDFeature>
                    </INSDSeq_feature-table>

     <INSDSeq_sequence>tcagccgctgtcacacgcacag</INSDSeq_sequence>
          </INSDSeq>
     </SequenceData>
     <SequenceData sequenceIDNumber="12">
          <INSDSeq>
               <INSDSeq_length>22</INSDSeq_length>
               <INSDSeq_moltype>DNA</INSDSeq_moltype>
               <INSDSeq_division>PAT</INSDSeq_division>
               <INSDSeq_feature-table>
                    <INSDFeature>
                         <INSDFeature_key>source</INSDFeature_key>

     <INSDFeature_location>1..22</INSDFeature_location>
                               <INSDFeature_quals>
                                    <INSDQualifier>

     <INSDQualifier_name>mol_type</INSDQualifier_name>
                                        <INSDQualifier_value>other
DNA</INSDQualifier_value>
                                    </INSDQualifier>
                                    <INSDQualifier id="q12">

     <INSDQualifier_name>organism</INSDQualifier_name>
                                        <INSDQualifier_value>synthetic
construct</INSDQualifier_value>
                                    </INSDQualifier>
                               </INSDFeature_quals>
                          </INSDFeature>
                          <INSDFeature>

     <INSDFeature_key>misc_feature</INSDFeature_key>
```

```
      <INSDFeature_location>1</INSDFeature_location>
                              <INSDFeature_quals>
                                    <INSDQualifier id="q73">

      <INSDQualifier_name>note</INSDQualifier_name>
                                          <INSDQualifier_value>Cyanine 3
modification</INSDQualifier_value>
                                    </INSDQualifier>
                              </INSDFeature_quals>
                        </INSDFeature>
                        <INSDFeature>

      <INSDFeature_key>misc_feature</INSDFeature_key>

      <INSDFeature_location>22</INSDFeature_location>
                              <INSDFeature_quals>
                                    <INSDQualifier id="q74">

      <INSDQualifier_name>note</INSDQualifier_name>
                                          <INSDQualifier_value>Amino
Modifier-modification</INSDQualifier_value>
                                    </INSDQualifier>
                              </INSDFeature_quals>
                        </INSDFeature>
                  </INSDSeq_feature-table>

      <INSDSeq_sequence>tcaacatcagtctgataagcta</INSDSeq_sequence>
            </INSDSeq>
      </SequenceData>
      <SequenceData sequenceIDNumber="13">
            <INSDSeq>
                  <INSDSeq_length>51</INSDSeq_length>
                  <INSDSeq_moltype>DNA</INSDSeq_moltype>
                  <INSDSeq_division>PAT</INSDSeq_division>
                  <INSDSeq_feature-table>
                        <INSDFeature>
                              <INSDFeature_key>source</INSDFeature_key>

      <INSDFeature_location>1..51</INSDFeature_location>
                              <INSDFeature_quals>
                                    <INSDQualifier>

      <INSDQualifier_name>mol_type</INSDQualifier_name>
                                          <INSDQualifier_value>other
DNA</INSDQualifier_value>
                                    </INSDQualifier>
                                    <INSDQualifier id="q13">

      <INSDQualifier_name>organism</INSDQualifier_name>
                                          <INSDQualifier_value>synthetic
construct</INSDQualifier_value>
```

```
                                    </INSDQualifier>
                               </INSDFeature_quals>
                          </INSDFeature>
                          <INSDFeature>

     <INSDFeature_key>misc_feature</INSDFeature_key>

     <INSDFeature_location>1</INSDFeature_location>
                               <INSDFeature_quals>
                                    <INSDQualifier id="q40">

     <INSDQualifier_name>note</INSDQualifier_name>
                                         <INSDQualifier_value>Acrydite
and Cyanine 3 modification</INSDQualifier_value>
                                    </INSDQualifier>
                               </INSDFeature_quals>
                          </INSDFeature>
                    </INSDSeq_feature-table>

     <INSDSeq_sequence>ctctcgggacgaccgtgtgtgttgctctgtaacagtgtccattgtcg
tccc</INSDSeq_sequence>
          </INSDSeq>
     </SequenceData>
     <SequenceData sequenceIDNumber="14">
          <INSDSeq>
               <INSDSeq_length>14</INSDSeq_length>
               <INSDSeq_moltype>DNA</INSDSeq_moltype>
               <INSDSeq_division>PAT</INSDSeq_division>
               <INSDSeq_feature-table>
                    <INSDFeature>
                         <INSDFeature_key>source</INSDFeature_key>

     <INSDFeature_location>1..14</INSDFeature_location>
                               <INSDFeature_quals>
                                    <INSDQualifier>

     <INSDQualifier_name>mol_type</INSDQualifier_name>
                                         <INSDQualifier_value>other
DNA</INSDQualifier_value>
                                    </INSDQualifier>
                                    <INSDQualifier id="q14">

     <INSDQualifier_name>organism</INSDQualifier_name>
                                         <INSDQualifier_value>synthetic
construct</INSDQualifier_value>
                                    </INSDQualifier>
                               </INSDFeature_quals>
                          </INSDFeature>
                          <INSDFeature>

     <INSDFeature_key>misc_feature</INSDFeature_key>
```

```
      <INSDFeature_location>14</INSDFeature_location>
                              <INSDFeature_quals>
                                    <INSDQualifier id="q41">

      <INSDQualifier_name>note</INSDQualifier_name>
                                          <INSDQualifier_value>Dabcyl
modification</INSDQualifier_value>
                                    </INSDQualifier>
                              </INSDFeature_quals>
                        </INSDFeature>
                  </INSDSeq_feature-table>
                  <INSDSeq_sequence>ggtcgtcccgagag</INSDSeq_sequence>
            </INSDSeq>
      </SequenceData>
      <SequenceData sequenceIDNumber="15">
            <INSDSeq>
                  <INSDSeq_length>27</INSDSeq_length>
                  <INSDSeq_moltype>DNA</INSDSeq_moltype>
                  <INSDSeq_division>PAT</INSDSeq_division>
                  <INSDSeq_feature-table>
                        <INSDFeature>
                              <INSDFeature_key>source</INSDFeature_key>

      <INSDFeature_location>1..27</INSDFeature_location>
                              <INSDFeature_quals>
                                    <INSDQualifier>

      <INSDQualifier_name>mol_type</INSDQualifier_name>
                                          <INSDQualifier_value>other
DNA</INSDQualifier_value>
                                    </INSDQualifier>
                                    <INSDQualifier id="q15">

      <INSDQualifier_name>organism</INSDQualifier_name>
                                          <INSDQualifier_value>synthetic
construct</INSDQualifier_value>
                                    </INSDQualifier>
                              </INSDFeature_quals>
                        </INSDFeature>
                        <INSDFeature>

      <INSDFeature_key>misc_feature</INSDFeature_key>

      <INSDFeature_location>1</INSDFeature_location>
                              <INSDFeature_quals>
                                    <INSDQualifier id="q42">

      <INSDQualifier_name>note</INSDQualifier_name>
                                          <INSDQualifier_value>Acrydite
and Cyanine 3 modification</INSDQualifier_value>
                                    </INSDQualifier>
```

```
                              </INSDFeature_quals>
                         </INSDFeature>
                    </INSDSeq_feature-table>

     <INSDSeq_sequence>cacctgggggagtattgcggaggaagg</INSDSeq_sequence>
          </INSDSeq>
     </SequenceData>
     <SequenceData sequenceIDNumber="16">
          <INSDSeq>
               <INSDSeq_length>11</INSDSeq_length>
               <INSDSeq_moltype>DNA</INSDSeq_moltype>
               <INSDSeq_division>PAT</INSDSeq_division>
               <INSDSeq_feature-table>
                    <INSDFeature>
                         <INSDFeature_key>source</INSDFeature_key>

     <INSDFeature_location>1..11</INSDFeature_location>
                         <INSDFeature_quals>
                              <INSDQualifier>

     <INSDQualifier_name>mol_type</INSDQualifier_name>
                                   <INSDQualifier_value>other
DNA</INSDQualifier_value>
                              </INSDQualifier>
                              <INSDQualifier id="q16">

     <INSDQualifier_name>organism</INSDQualifier_name>
                                   <INSDQualifier_value>synthetic
construct</INSDQualifier_value>
                              </INSDQualifier>
                         </INSDFeature_quals>
                    </INSDFeature>
                    <INSDFeature>

     <INSDFeature_key>misc_feature</INSDFeature_key>

     <INSDFeature_location>11</INSDFeature_location>
                         <INSDFeature_quals>
                              <INSDQualifier id="q43">

     <INSDQualifier_name>note</INSDQualifier_name>
                                   <INSDQualifier_value>Dabcyl
modification</INSDQualifier_value>
                              </INSDQualifier>
                         </INSDFeature_quals>
                    </INSDFeature>
               </INSDSeq_feature-table>
               <INSDSeq_sequence>ttttccaggtg</INSDSeq_sequence>
          </INSDSeq>
     </SequenceData>
     <SequenceData sequenceIDNumber="17">
          <INSDSeq>
```

```
                <INSDSeq_length>37</INSDSeq_length>
                <INSDSeq_moltype>DNA</INSDSeq_moltype>
                <INSDSeq_division>PAT</INSDSeq_division>
                <INSDSeq_feature-table>
                     <INSDFeature>
                          <INSDFeature_key>source</INSDFeature_key>

     <INSDFeature_location>1..37</INSDFeature_location>
                          <INSDFeature_quals>
                               <INSDQualifier>

     <INSDQualifier_name>mol_type</INSDQualifier_name>
                                    <INSDQualifier_value>other
DNA</INSDQualifier_value>
                               </INSDQualifier>
                               <INSDQualifier id="q31">

     <INSDQualifier_name>organism</INSDQualifier_name>
                                    <INSDQualifier_value>synthetic
construct</INSDQualifier_value>
                               </INSDQualifier>
                          </INSDFeature_quals>
                     </INSDFeature>
                     <INSDFeature>

     <INSDFeature_key>misc_feature</INSDFeature_key>

     <INSDFeature_location>1</INSDFeature_location>
                          <INSDFeature_quals>
                               <INSDQualifier id="q70">

     <INSDQualifier_name>note</INSDQualifier_name>
                                    <INSDQualifier_value>Acrydite
and Cyanine 3[illegible]</INSDQualifier_value>
                               </INSDQualifier>
                          </INSDFeature_quals>
                     </INSDFeature>
                </INSDSeq_feature-table>

     <INSDSeq_sequence>ggagcttggattgatgtggtgtgtgagtgcggtgccc</INSDSeq_
sequence>
           </INSDSeq>
     </SequenceData>
     <SequenceData sequenceIDNumber="18">
           <INSDSeq>
                <INSDSeq_length>10</INSDSeq_length>
                <INSDSeq_moltype>DNA</INSDSeq_moltype>
                <INSDSeq_division>PAT</INSDSeq_division>
                <INSDSeq_feature-table>
                     <INSDFeature>

     <INSDFeature_key>misc_feature</INSDFeature_key>
```

<INSDFeature_location>10</INSDFeature_location>
<INSDFeature_quals>
<INSDQualifier id="q34">

<INSDQualifier_name>note</INSDQualifier_name>
<INSDQualifier_value>Dabcyl modification</INSDQualifier_value>
</INSDQualifier>
</INSDFeature_quals>
</INSDFeature>
<INSDFeature>
<INSDFeature_key>source</INSDFeature_key>

<INSDFeature_location>1..10</INSDFeature_location>
<INSDFeature_quals>
<INSDQualifier>

<INSDQualifier_name>mol_type</INSDQualifier_name>
<INSDQualifier_value>other DNA</INSDQualifier_value>
</INSDQualifier>
<INSDQualifier id="q33">

<INSDQualifier_name>organism</INSDQualifier_name>
<INSDQualifier_value>synthetic construct</INSDQualifier_value>
</INSDQualifier>
</INSDFeature_quals>
</INSDFeature>
</INSDSeq_feature-table>
<INSDSeq_sequence>tcacatcaat</INSDSeq_sequence>
</INSDSeq>
</SequenceData>
<SequenceData sequenceIDNumber="19">
<INSDSeq>
<INSDSeq_length>1520</INSDSeq_length>
<INSDSeq_moltype>DNA</INSDSeq_moltype>
<INSDSeq_division>PAT</INSDSeq_division>
<INSDSeq_feature-table>
<INSDFeature>
<INSDFeature_key>source</INSDFeature_key>

<INSDFeature_location>1..1520</INSDFeature_location>
<INSDFeature_quals>
<INSDQualifier>

<INSDQualifier_name>mol_type</INSDQualifier_name>
<INSDQualifier_value>other DNA</INSDQualifier_value>
</INSDQualifier>
<INSDQualifier id="q35">

<INSDQualifier_name>organism</INSDQualifier_name>
<INSDQualifier_value>synthetic construct</INSDQualifier_value>
</INSDQualifier>
</INSDFeature_quals>
</INSDFeature>
<INSDFeature>

<INSDFeature_key>misc_feature</INSDFeature_key>

<INSDFeature_location>1</INSDFeature_location>
<INSDFeature_quals>
<INSDQualifier id="q38">

<INSDQualifier_name>note</INSDQualifier_name>
<INSDQualifier_value>Acrydite and Cyanine 3 modification</INSDQualifier_value>
</INSDQualifier>
</INSDFeature_quals>
</INSDFeature>
<INSDFeature>

<INSDFeature_key>misc_feature</INSDFeature_key>

<INSDFeature_location>15</INSDFeature_location>
<INSDFeature_quals>
<INSDQualifier id="q39">

<INSDQualifier_name>note</INSDQualifier_name>
<INSDQualifier_value>Dabcyl modification</INSDQualifier_value>
</INSDQualifier>
</INSDFeature_quals>
</INSDFeature>
<INSDFeature>

<INSDFeature_key>misc_feature</INSDFeature_key>

<INSDFeature_location>5^6</INSDFeature_location>
<INSDFeature_quals>
<INSDQualifier id="q69">

<INSDQualifier_name>note</INSDQualifier_name>
<INSDQualifier_value>Internal Spacer 18 modification - (CH2CH2O)30</INSDQualifier_value>
</INSDQualifier>
</INSDFeature_quals>
</INSDFeature>
</INSDSeq_feature-table>

```
      <INSDSeq_sequence>ggttggtgtggttggccaacggttggtgtggttgg</INSDSeq_se
quence>
            </INSDSeq>
      </SequenceData>
      <SequenceData sequenceIDNumber="20">
            <INSDSeq>
                  <INSDSeq_length>15</INSDSeq_length>
                  <INSDSeq_moltype>DNA</INSDSeq_moltype>
                  <INSDSeq_division>PAT</INSDSeq_division>
                  <INSDSeq_feature-table>
                        <INSDFeature>
                              <INSDFeature_key>source</INSDFeature_key>

      <INSDFeature_location>1..15</INSDFeature_location>
                              <INSDFeature_quals>
                                    <INSDQualifier>

      <INSDQualifier_name>mol_type</INSDQualifier_name>
                                          <INSDQualifier_value>other
DNA</INSDQualifier_value>
                                    </INSDQualifier>
                                    <INSDQualifier id="q44">

      <INSDQualifier_name>organism</INSDQualifier_name>
                                          <INSDQualifier_value>synthetic
construct</INSDQualifier_value>
                                    </INSDQualifier>
                              </INSDFeature_quals>
                        </INSDFeature>
                        <INSDFeature>

      <INSDFeature_key>misc_feature</INSDFeature_key>

      <INSDFeature_location>1</INSDFeature_location>
                              <INSDFeature_quals>
                                    <INSDQualifier id="q45">

      <INSDQualifier_name>note</INSDQualifier_name>
                                          <INSDQualifier_value>Acrydite
and Cyanine 3 modification</INSDQualifier_value>
                                    </INSDQualifier>
                              </INSDFeature_quals>
                        </INSDFeature>
                  </INSDSeq_feature-table>
                  <INSDSeq_sequence>ggttggtgtggttgg</INSDSeq_sequence>
            </INSDSeq>
      </SequenceData>
      <SequenceData sequenceIDNumber="21">
            <INSDSeq>
                  <INSDSeq_length>10</INSDSeq_length>
                  <INSDSeq_moltype>DNA</INSDSeq_moltype>
```

```
                <INSDSeq_division>PAT</INSDSeq_division>
                <INSDSeq_feature-table>
                     <INSDFeature>
                          <INSDFeature_key>source</INSDFeature_key>

     <INSDFeature_location>1..10</INSDFeature_location>
                          <INSDFeature_quals>
                               <INSDQualifier>

     <INSDQualifier_name>mol_type</INSDQualifier_name>
                                    <INSDQualifier_value>other
DNA</INSDQualifier_value>
                               </INSDQualifier>
                               <INSDQualifier id="q46">

     <INSDQualifier_name>organism</INSDQualifier_name>
                                    <INSDQualifier_value>synthetic
construct</INSDQualifier_value>
                               </INSDQualifier>
                          </INSDFeature_quals>
                     </INSDFeature>
                     <INSDFeature>

     <INSDFeature_key>misc_feature</INSDFeature_key>

     <INSDFeature_location>10</INSDFeature_location>
                          <INSDFeature_quals>
                               <INSDQualifier id="q47">

     <INSDQualifier_name>note</INSDQualifier_name>
                                    <INSDQualifier_value>Dabcyl
modification</INSDQualifier_value>
                               </INSDQualifier>
                          </INSDFeature_quals>
                     </INSDFeature>
                </INSDSeq_feature-table>
                <INSDSeq_sequence>tttttcaacc</INSDSeq_sequence>
           </INSDSeq>
     </SequenceData>
     <SequenceData sequenceIDNumber="22">
           <INSDSeq>
                <INSDSeq_length>46</INSDSeq_length>
                <INSDSeq_moltype>DNA</INSDSeq_moltype>
                <INSDSeq_division>PAT</INSDSeq_division>
                <INSDSeq_feature-table>
                     <INSDFeature>
                          <INSDFeature_key>source</INSDFeature_key>

     <INSDFeature_location>1..46</INSDFeature_location>
                          <INSDFeature_quals>
                               <INSDQualifier>
```

```
      <INSDQualifier_name>mol_type</INSDQualifier_name>
                                          <INSDQualifier_value>other
DNA</INSDQualifier_value>
                                    </INSDQualifier>
                                    <INSDQualifier id="q48">

      <INSDQualifier_name>organism</INSDQualifier_name>
                                          <INSDQualifier_value>synthetic
construct</INSDQualifier_value>
                                    </INSDQualifier>
                               </INSDFeature_quals>
                          </INSDFeature>
                          <INSDFeature>

      <INSDFeature_key>misc_feature</INSDFeature_key>

      <INSDFeature_location>1</INSDFeature_location>
                               <INSDFeature_quals>
                                    <INSDQualifier id="q54">

      <INSDQualifier_name>note</INSDQualifier_name>
                                          <INSDQualifier_value>Cyanine 3
modification</INSDQualifier_value>
                                    </INSDQualifier>
                               </INSDFeature_quals>
                          </INSDFeature>
                          <INSDFeature>

      <INSDFeature_key>misc_feature</INSDFeature_key>

      <INSDFeature_location>46</INSDFeature_location>
                               <INSDFeature_quals>
                                    <INSDQualifier id="q55">

      <INSDQualifier_name>note</INSDQualifier_name>
                                          <INSDQualifier_value>Amino
Modifier-modification</INSDQualifier_value>
                                    </INSDQualifier>
                               </INSDFeature_quals>
                          </INSDFeature>
                    </INSDSeq_feature-table>

      <INSDSeq_sequence>ctctcgacgacattacgggaccttgctaaaggtggaattatgtcgt<
/INSDSeq_sequence>
            </INSDSeq>
      </SequenceData>
      <SequenceData sequenceIDNumber="23">
            <INSDSeq>
                  <INSDSeq_length>51</INSDSeq_length>
                  <INSDSeq_moltype>DNA</INSDSeq_moltype>
                  <INSDSeq_division>PAT</INSDSeq_division>
```

```
                <INSDSeq_feature-table>
                     <INSDFeature>
                          <INSDFeature_key>source</INSDFeature_key>

     <INSDFeature_location>1..51</INSDFeature_location>
                          <INSDFeature_quals>
                               <INSDQualifier>

     <INSDQualifier_name>mol_type</INSDQualifier_name>
                                    <INSDQualifier_value>other
DNA</INSDQualifier_value>
                               </INSDQualifier>
                               <INSDQualifier id="q49">

     <INSDQualifier_name>organism</INSDQualifier_name>
                                    <INSDQualifier_value>synthetic
construct</INSDQualifier_value>
                               </INSDQualifier>
                          </INSDFeature_quals>
                     </INSDFeature>
                     <INSDFeature>

     <INSDFeature_key>misc_feature</INSDFeature_key>

     <INSDFeature_location>1</INSDFeature_location>
                          <INSDFeature_quals>
                               <INSDQualifier id="q50">

     <INSDQualifier_name>note</INSDQualifier_name>
                                    <INSDQualifier_value>Cyanine 3
modification</INSDQualifier_value>
                               </INSDQualifier>
                          </INSDFeature_quals>
                     </INSDFeature>
                </INSDSeq_feature-table>

     <INSDSeq_sequence>ctctcgggacgaccgtgtgtgttgctctgtaacagtgtccattgtcg
tccc</INSDSeq_sequence>
           </INSDSeq>
     </SequenceData>
     <SequenceData sequenceIDNumber="24">
           <INSDSeq>
                <INSDSeq_length>30</INSDSeq_length>
                <INSDSeq_moltype>DNA</INSDSeq_moltype>
                <INSDSeq_division>PAT</INSDSeq_division>
                <INSDSeq_feature-table>
                     <INSDFeature>
                          <INSDFeature_key>source</INSDFeature_key>

     <INSDFeature_location>1..30</INSDFeature_location>
                          <INSDFeature_quals>
                               <INSDQualifier>
```

```
      <INSDQualifier_name>mol_type</INSDQualifier_name>
                                          <INSDQualifier_value>other
DNA</INSDQualifier_value>
                                    </INSDQualifier>
                                    <INSDQualifier id="q51">

      <INSDQualifier_name>organism</INSDQualifier_name>
                                          <INSDQualifier_value>synthetic
construct</INSDQualifier_value>
                                    </INSDQualifier>
                               </INSDFeature_quals>
                          </INSDFeature>
                          <INSDFeature>

      <INSDFeature_key>misc_feature</INSDFeature_key>

      <INSDFeature_location>30</INSDFeature_location>
                               <INSDFeature_quals>
                                    <INSDQualifier id="q52">

      <INSDQualifier_name>note</INSDQualifier_name>
                                          <INSDQualifier_value>Cyanine 3
modification</INSDQualifier_value>
                                    </INSDQualifier>
                               </INSDFeature_quals>
                          </INSDFeature>
                          <INSDFeature>

      <INSDFeature_key>misc_feature</INSDFeature_key>

      <INSDFeature_location>1</INSDFeature_location>
                               <INSDFeature_quals>
                                    <INSDQualifier id="q53">

      <INSDQualifier_name>note</INSDQualifier_name>
                                          <INSDQualifier_value>Amino
Modifier C6-modification</INSDQualifier_value>
                                    </INSDQualifier>
                               </INSDFeature_quals>
                          </INSDFeature>
                    </INSDSeq_feature-table>

      <INSDSeq_sequence>ggtggtgggggggttggtagggtgtcttc</INSDSeq_sequenc
e>
            </INSDSeq>
      </SequenceData>
      <SequenceData sequenceIDNumber="25">
            <INSDSeq>
                  <INSDSeq_length>42</INSDSeq_length>
                  <INSDSeq_moltype>DNA</INSDSeq_moltype>
                  <INSDSeq_division>PAT</INSDSeq_division>
```

```
                <INSDSeq_feature-table>
                     <INSDFeature>
                          <INSDFeature_key>source</INSDFeature_key>

     <INSDFeature_location>1..42</INSDFeature_location>
                          <INSDFeature_quals>
                               <INSDQualifier>

     <INSDQualifier_name>mol_type</INSDQualifier_name>
                                    <INSDQualifier_value>other
DNA</INSDQualifier_value>
                               </INSDQualifier>
                               <INSDQualifier id="q57">

     <INSDQualifier_name>organism</INSDQualifier_name>
                                    <INSDQualifier_value>synthetic
construct</INSDQualifier_value>
                               </INSDQualifier>
                          </INSDFeature_quals>
                     </INSDFeature>
                     <INSDFeature>

     <INSDFeature_key>misc_feature</INSDFeature_key>

     <INSDFeature_location>28^29</INSDFeature_location>
                          <INSDFeature_quals>
                               <INSDQualifier id="q58">

     <INSDQualifier_name>note</INSDQualifier_name>

     <INSDQualifier_value>Internal Cyanine 3
modification</INSDQualifier_value>
                               </INSDQualifier>
                          </INSDFeature_quals>
                     </INSDFeature>
                     <INSDFeature>

     <INSDFeature_key>misc_feature</INSDFeature_key>

     <INSDFeature_location>1</INSDFeature_location>
                          <INSDFeature_quals>
                               <INSDQualifier id="q75">

     <INSDQualifier_name>note</INSDQualifier_name>
                                    <INSDQualifier_value>Amino
Modifier C6 modification</INSDQualifier_value>
                               </INSDQualifier>
                          </INSDFeature_quals>
                     </INSDFeature>
                </INSDSeq_feature-table>
```

```
      <INSDSeq_sequence>gactggtaggcagataggggaagctgattcgatgcgtgggtc</INS
DSeq_sequence>
           </INSDSeq>
      </SequenceData>
      <SequenceData sequenceIDNumber="26">
           <INSDSeq>
                <INSDSeq_length>27</INSDSeq_length>
                <INSDSeq_moltype>DNA</INSDSeq_moltype>
                <INSDSeq_division>PAT</INSDSeq_division>
                <INSDSeq_feature-table>
                     <INSDFeature>
                          <INSDFeature_key>source</INSDFeature_key>

      <INSDFeature_location>1..27</INSDFeature_location>
                          <INSDFeature_quals>
                               <INSDQualifier>

      <INSDQualifier_name>mol_type</INSDQualifier_name>
                                    <INSDQualifier_value>other
DNA</INSDQualifier_value>
                               </INSDQualifier>
                               <INSDQualifier id="q60">

      <INSDQualifier_name>organism</INSDQualifier_name>
                                    <INSDQualifier_value>synthetic
construct</INSDQualifier_value>
                               </INSDQualifier>
                          </INSDFeature_quals>
                     </INSDFeature>
                     <INSDFeature>

      <INSDFeature_key>misc_feature</INSDFeature_key>

      <INSDFeature_location>1</INSDFeature_location>
                          <INSDFeature_quals>
                               <INSDQualifier id="q61">

      <INSDQualifier_name>note</INSDQualifier_name>
                                    <INSDQualifier_value>Cyanine 3
modification</INSDQualifier_value>
                               </INSDQualifier>
                          </INSDFeature_quals>
                     </INSDFeature>
                     <INSDFeature>

      <INSDFeature_key>misc_feature</INSDFeature_key>

      <INSDFeature_location>27</INSDFeature_location>
                          <INSDFeature_quals>
                               <INSDQualifier id="q62">
```

```
      <INSDQualifier_name>note</INSDQualifier_name>
                                          <INSDQualifier_value>Amino
Modifier-modification</INSDQualifier_value>
                                    </INSDQualifier>
                               </INSDFeature_quals>
                          </INSDFeature>
                     </INSDSeq_feature-table>

      <INSDSeq_sequence>cacctgggggagtattgcggaggaagg</INSDSeq_sequence>
            </INSDSeq>
      </SequenceData>
      <SequenceData sequenceIDNumber="27">
            <INSDSeq>
                  <INSDSeq_length>22</INSDSeq_length>
                  <INSDSeq_moltype>DNA</INSDSeq_moltype>
                  <INSDSeq_division>PAT</INSDSeq_division>
                  <INSDSeq_feature-table>
                        <INSDFeature>
                              <INSDFeature_key>source</INSDFeature_key>

      <INSDFeature_location>1..22</INSDFeature_location>
                              <INSDFeature_quals>
                                    <INSDQualifier>

      <INSDQualifier_name>mol_type</INSDQualifier_name>
                                          <INSDQualifier_value>other
DNA</INSDQualifier_value>
                                    </INSDQualifier>
                                    <INSDQualifier id="q63">

      <INSDQualifier_name>organism</INSDQualifier_name>
                                          <INSDQualifier_value>synthetic
construct</INSDQualifier_value>
                                    </INSDQualifier>
                               </INSDFeature_quals>
                         </INSDFeature>
                         <INSDFeature>

      <INSDFeature_key>misc_feature</INSDFeature_key>

      <INSDFeature_location>1</INSDFeature_location>
                              <INSDFeature_quals>
                                    <INSDQualifier id="q64">

      <INSDQualifier_name>note</INSDQualifier_name>
                                          <INSDQualifier_value>Cyanine 3
modification</INSDQualifier_value>
                                    </INSDQualifier>
                               </INSDFeature_quals>
                         </INSDFeature>
                         <INSDFeature>
```

```
      <INSDFeature_key>misc_feature</INSDFeature_key>

      <INSDFeature_location>22</INSDFeature_location>
                              <INSDFeature_quals>
                                    <INSDQualifier id="q65">

      <INSDQualifier_name>note</INSDQualifier_name>
                                          <INSDQualifier_value>Amino
Modifier-modification</INSDQualifier_value>
                                    </INSDQualifier>
                              </INSDFeature_quals>
                        </INSDFeature>
                  </INSDSeq_feature-table>

      <INSDSeq_sequence>tcagccgctgtcacacgcacag</INSDSeq_sequence>
            </INSDSeq>
      </SequenceData>
      <SequenceData sequenceIDNumber="28">
            <INSDSeq>
                  <INSDSeq_length>22</INSDSeq_length>
                  <INSDSeq_moltype>DNA</INSDSeq_moltype>
                  <INSDSeq_division>PAT</INSDSeq_division>
                  <INSDSeq_feature-table>
                        <INSDFeature>
                              <INSDFeature_key>source</INSDFeature_key>

      <INSDFeature_location>1..22</INSDFeature_location>
                              <INSDFeature_quals>
                                    <INSDQualifier>

      <INSDQualifier_name>mol_type</INSDQualifier_name>
                                          <INSDQualifier_value>other
DNA</INSDQualifier_value>
                                    </INSDQualifier>
                                    <INSDQualifier id="q66">

      <INSDQualifier_name>organism</INSDQualifier_name>
                                          <INSDQualifier_value>synthetic
construct</INSDQualifier_value>
                                    </INSDQualifier>
                              </INSDFeature_quals>
                        </INSDFeature>
                        <INSDFeature>

      <INSDFeature_key>misc_feature</INSDFeature_key>

      <INSDFeature_location>1</INSDFeature_location>
                              <INSDFeature_quals>
                                    <INSDQualifier id="q67">

      <INSDQualifier_name>note</INSDQualifier_name>
```

```
                                        <INSDQualifier_value>Cyanine 3
modification</INSDQualifier_value>
                                    </INSDQualifier>
                                </INSDFeature_quals>
                            </INSDFeature>
                            <INSDFeature>

      <INSDFeature_key>misc_feature</INSDFeature_key>

      <INSDFeature_location>22</INSDFeature_location>
                                <INSDFeature_quals>
                                    <INSDQualifier id="q68">

      <INSDQualifier_name>note</INSDQualifier_name>
                                        <INSDQualifier_value>Amino
Modifier-modification</INSDQualifier_value>
                                    </INSDQualifier>
                                </INSDFeature_quals>
                            </INSDFeature>
                    </INSDSeq_feature-table>

      <INSDSeq_sequence>tcaacatcagtctgataagcta</INSDSeq_sequence>
            </INSDSeq>
      </SequenceData>
</ST26SequenceListing>
```