



प्रमाणपत्र सं. / Certificate No.:
SW-2025022036



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आवेदन सं. / Application No.: SW-34269/2025-CO दाखिल करने की तिथि / Date of Filing: 25/08/2025

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रचयिता / Authors:

सं. / SNO.	नाम / Name	पता / Address
1	SONA CHARLES	ICAR-INDIAN INSTITUTE OF SPICES RESEARCH, MARIKKUNNU PO, KOZHIKODE, KERALA, INDIA-673012
2	SHEEJA TE	ICAR-INDIAN INSTITUTE OF SPICES RESEARCH, MARIKKUNNU PO, KOZHIKODE, KERALA, INDIA-673012
3	SHAHANA ARIF	ICAR-INDIAN INSTITUTE OF SPICES RESEARCH, MARIKKUNNU PO, KOZHIKODE, KERALA, INDIA-673012
4	SAJEEV RAJ S	ICAR-INDIAN INSTITUTE OF SPICES RESEARCH, MARIKKUNNU PO, KOZHIKODE, KERALA, INDIA-673012

स्वामी / Owners:

सं. / SNO.	नाम / Name	पता / Address
1	ICAR-INDIAN INSTITUTE OF SPICES RESEARCH	MARIKKUNNU PO, KOZHIKODE, KERALA, INDIA-673012

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BPncDB: A comprehensive database of non-coding RNAs in Black Pepper (*Piper nigrum* L.) and their interactions with mRNAs

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Author(s):

- 1.Sona Charles**
- 2.Sheeja TE**
- 3.Shahana Arif**



Dev Raj S
अज्ञाना पीतुं भिक्षुः

```
def makelink(link, num, text = ""):
    if text == "":text = num
    return '<a href="'+link+'/'+str(num)+'">'+str(text)+'</a>'
```

```
def makepagelinks(link, currentindex, totalpagecount):
    output = ""
    output += makelink(link, 1, "<<")
    if currentindex >= 2:
        output += makelink(link, currentindex-1, "<")
    for i in range(currentindex-3, currentindex+4):
        if i < 1:
```

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```
        if i > totalpagecount:
```

```
            pass
```

```
        else:
```

```
            if i == currentindex:
```

```
                output += str(currentindex)
```

```
            else:
```

```
                output += makelink(link, i, str(i))
```

```
if currentindex < totalpagecount:
```

```
    output += makelink(link, currentindex+1, ">")
```

```
output += makelink(link, totalpagecount, ">>")
```

```
return output
```

```
def makesubtable(data):
```

```
    output = "<table>"
```

```
    for row in data:
```

```
        output += "<tr>"
```

```
        for cindex, character in enumerate(row):
```

```
            if cindex%2==1):
```



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```

        output += "<td>"

        output += str(character)

        output += "</td>"

    output += "</tr>"

output += "</table>"

return output

```

```
def makesubtable1(data):
```

```

    output = "<table>"

    for row in data:

        output += "<tr>"

        for cindex, character in enumerate(row):

            if cindex % 4 == 0:

                output += "<td>"

                output += str(character)

                output += "</td>"

        output += "</tr>"

    output += "</table>"

    return output

```

```
def index(request):
```

```

    return render(request, "lncrna/index.html", {})

```

```
def description(request):
```

```

    return render(request, "lncrna/description.html", {})

```

```
def statistics(request):
```

```

    return render(request, "lncrna/statistics.html", {})

```

```
def lnc(request):
```

```

    3PNCDB()

```



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```

DBDATA.loaddata()

(pagecount, pagenumber, table) = DBDATA.display(1)

tablecontent = "<tr><th>SR_No</th><th>lncRNA_ID</th><th>CHR
NO.</th><th>START</th><th>END</th><th>STRAND</th><th>EXON</th></tr>"

for row in table:

    tablecontent += "<tr>"

    for column in row:

        tablecontent += "<td>"

        tablecontent += str(column)

        tablecontent += "</td>"

    tablecontent += "</tr>"

```

```

linkcontent = makepagelinks("http://127.0.0.1:8000/lnc", 1, pagecount)
return render(request, "lncrna/lnc.html", {'tabledata':format_html(tablecontent),
'pagelinks':format_html(linkcontent)})

```

```

def lncnum(request, pageindex):

    DBDATA = BPNCDB()

    DBDATA.loaddata()

    (pagecount, pagenumber, table) = DBDATA.display(pageindex)

    tablecontent = "<tr><th>SR_No</th><th>lncRNA_ID</th><th>CHR
NO.</th><th>START</th><th>END</th><th>STRAND</th><th>EXON</th></tr>"

    for row in table:

        tablecontent += "<tr>"

        for column in row:

            tablecontent += "<td>"

            tablecontent += str(column)

            tablecontent += "</td>"

        tablecontent += "</tr>"

    linkcontent = makepagelinks("http://127.0.0.1:8000/lnc", pageindex, pagecount)

    return render(request, "lncrna/lnc.html", {'tabledata':format_html(tablecontent),
'pagelinks':format_html(linkcontent)})

```



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आशा म्हा. ५/१८

```
def lncRNAmiRNA(request):
```

```
    DBDATA = BPNCDB()
```

```
    DBDATA.loaddata()
```

```
    (pagecount, pagenumber, table) = DBDATA.display_1(1)
```

```
    tablecontent =
```

```
    "<tr><th>SR_No</th><th>miRNA_ID</th><th>lncRNA_ID</th><th>Length</th><th>lnc_Start</th><th>lnc_End</th><th>Alignment_block</th></tr>"
```

```
    for row in table:
```

```
        tablecontent += "<tr>"
```

```
        for cindex, column in enumerate(row):
```

```
            if cindex==6:
```

```
                tablecontent += '<td>'
```

```
                tablecontent += makesubtable(column)
```

```
                tablecontent += "</td>"
```

```
            else:
```

```
                tablecontent += "<td>"
```

```
                tablecontent += str(column)
```

```
                tablecontent += "</td>"
```

```
        tablecontent += "</tr>"
```

```
    linkcontent = makepagelinks("http://127.0.0.1:8000/lncRNAmiRNA", 1, pagecount)
```

```
    return render(request, "lncrna/lncRNAmiRNA.html", {'tabledata':format_html(tablecontent),  
'pagelinks':format_html(linkcontent)})
```

```
def lncRNAmiRNAum(request, pageindex):
```

```
    DBDATA = BPNCDB()
```

```
    DBDATA.loaddata()
```

```
    (pagecount, pagenumber, table) = DBDATA.display_1(pageindex)
```

```
    tablecontent =
```

```
    "<tr><th>SR_No</th><th>miRNA_ID</th><th>lncRNA_ID</th><th>Length</th><th>lnc_Start</th><th>lnc_End</th><th>Alignment_block</th></tr>"
```

```
    for row in table:
```

```
        tablecontent += "<tr>"
```

```
        for cindex, column in enumerate(row):
```



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```

if cindex==6:
    tablecontent += '<td>'
    tablecontent += makesubtable(column)
    tablecontent += "</td>"
else:
    tablecontent += "<td>"
    tablecontent += str(column)
    tablecontent += "</td>"
tablecontent += "</tr>"
linkcontent = makepagelinks("http://127.0.0.1:8000/lncRNAmiRNA", pageindex, pagecount)
return render(request, "lncrna/lncRNAmiRNA.html", {'tabledata':format_html(tablecontent),
'pageindex':format_html(linkcontent)})

```

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```

def miRNAmRNA(request):
    DBDATA = BPNCDB()
    DBDATA.loaddata()
    (pagecount, pagenumber, table) = DBDATA.display_2(1)
    tablecontent =
    "<tr><th>SR_No</th><th>miRNA_ID</th><th>mRNA_ID</th><th>Length</th><th>mRNA_Start</th><th>mRNA_End</th><th>Alignment_block</th></tr>"

```

for row in table:

```
tablecontent += "<tr>"
```

```
for cindex, column in enumerate(row):
```

```
if cindex==6:
```

```
tablecontent += '<td>'
```

```
tablecontent += makesubtable1(column)
```

```
tablecontent += "</td>"
```

```
else:
```

```
tablecontent += "<td>"
```

```
tablecontent += str(column)
```

```
tablecontent += "</td>"
```

```
ent += "</tr>"
```



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```

linkcontent = makepagelinks("http://127.0.0.1:8000/miRNAmRNA", 1, pagecount)

return render(request, "lncrna/miRNAmRNA.html", {'tabledata':format_html(tablecontent),
'pagelinks':format_html(linkcontent)})

def miRNAmRNAum(request, pageindex):

    DBDATA = BPNCDB()

    DBDATA.loaddata()

    (pagecount, pagenumber, table) = DBDATA.display_2(pageindex)

    tablecontent =
    "<tr><th>SR_No</th><th>miRNA_ID</th><th>mRNA_ID</th><th>Length</th><th>mRNA_Start
    </th><th>mRNA_End</th><th>Alignment_block</th></tr>"

    for row in table:
        tablecontent += "<tr>"
        for index, column in enumerate(row):
            if index==6:
                tablecontent += '<td>'

                tablecontent += makesubtable1(column)

                tablecontent += "</td>"
            else:
                tablecontent += "<td>"

                tablecontent += str(column)

                tablecontent += "</td>"

    linkcontent = makepagelinks("http://127.0.0.1:8000/miRNAmRNA", pageindex, pagecount)

    return render(request, "lncrna/miRNAmRNA.html", {'tabledata':format_html(tablecontent),
'pagelinks':format_html(linkcontent)})

```

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```

def circrna(request):

    DBDATA = BPNCDB()

    DBDATA.loaddata()

    (pagecount, pagenumber, table) = DBDATA.display_4(1)

    tablecontent = "<tr><th>SR_No</th><th>circRNA_ID</th><th>CHR
    START</th><th>END</th><th>JUNCTION</th><th>TYPE</th><th>STRAND</th></tr>"

```



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for row in table:

```
tablecontent += "<tr>"
```

for column in row:

```
tablecontent += "<td>"
```

```
tablecontent += str(column)
```

```
tablecontent += "</td>"
```

```
tablecontent += "</tr>"
```

```
linkcontent = makepagelinks("http://127.0.0.1:8000/circrna", 1, pagecount)
```

```
return render(request, "lncrna/circrna.html",  
{ 'tabledata': format_html(tablecontent), 'pagelinks': format_html(linkcontent) })
```

```
def circRNA(request, pageindex):
```

```
    DBDATA = BPNCDB()
```

```
    DBDATA.loaddata()
```

```
    (pagecount, pagenumber, table) = DBDATA.display_4(pageindex)
```

```
    tablecontent = "<tr><th>SR_No</th><th>circRNA_ID</th><th>CHR  
NO.</th><th>START</th><th>END</th><th>JUNCTION</th><th>TYPE</th><th>STRAND</th></tr>"
```

for row in table:

```
tablecontent += "<tr>"
```

for column in row:

```
tablecontent += "<td>"
```

```
tablecontent += str(column)
```

```
tablecontent += "</td>"
```

```
tablecontent += "</tr>"
```

```
linkcontent = makepagelinks("http://127.0.0.1:8000/circrna", pageindex, pagecount)
```

```
return render(request, "lncrna/circrna.html",  
{ 'tabledata': format_html(tablecontent), 'pagelinks': format_html(linkcontent) })
```

```
def circRNAmiRNA(request):
```

```
    DBDATA = BPNCDB()
```

```
    DBDATA.loaddata()
```



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```
(pagecount, pagenumber, table) = DBDATA.display_5(1)
```

```
tablecontent =
```

```
"<tr><th>SR_No</th><th>miRNA_ID</th><th>circRNA_ID</th><th>Length</th><th>circ_Start</th><th>circ_End</th><th>Alignment_block</th></tr>"
```

```
for row in table:
```

```
tablecontent += "<tr>"
```

```
for cindex, column in enumerate(row):
```

```
if cindex==6:
```

```
tablecontent += '<td>'
```

```
tablecontent += makesubtable1(column)
```

```
tablecontent += "</td>"
```

```
else:
```

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```
tablecontent += "<td>"
```

```
tablecontent += str(column)
```

```
tablecontent += "</td>"
```

```
tablecontent += "</tr>"
```

```
linkcontent = makepagelinks("http://127.0.0.1:8000/circRNAmiRNA", 1, pagecount)
```

```
return render(request, "lncrna/circRNAmiRNA.html", {'tabledata':format_html(tablecontent),  
'pagelinks':format_html(linkcontent)})
```

```
def circRNAmiRNAum(request, pageindex):
```

```
DBDATA = BPNCDB()
```

```
DBDATA.loaddata()
```

```
(pagecount, pagenumber, table) = DBDATA.display_5(pageindex)
```

```
tablecontent =
```

```
"<tr><th>SR_No</th><th>miRNA_ID</th><th>circRNA_ID</th><th>Length</th><th>circ_Start</th><th>circ_End</th><th>Alignment_block</th></tr>"
```

```
for row in table:
```

```
tablecontent += "<tr>"
```

```
for cindex, column in enumerate(row):
```

```
if cindex==6:
```

```
tablecontent += '<td>'
```

```
tablecontent += makesubtable1(column)
```



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```

        tablecontent += "</td>"

    else:

        tablecontent += "<td>"

        tablecontent += str(column)

        tablecontent += "</td>"

    tablecontent += "</tr>"

    linkcontent = makepagelinks("http://127.0.0.1:8000/circRNAmiRNA", pageindex, pagecount)

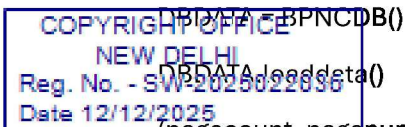
    return render(request, "lncrna/circRNAmiRNA.html", {'tabledata':format_html(tablecontent),
    'pagelinks':format_html(linkcontent)})

```

```

def cmiRNAmRNA(request):

```



```

    DBDATA = BPNCDB()
    DBDATA.loaddata()
    (pagecount, page number, table) = DBDATA.display_6(1)

    tablecontent =
    "<tr><th>SR_No</th><th>miRNA_ID</th><th>mRNA_ID</th><th>Length</th><th>mRNA_Start
    </th><th>mRNA_End</th><th>Alignment_block</th></tr>"

```

```

    for row in table:

```

```

        tablecontent += "<tr>"

```

```

        for cindex, column in enumerate(row):

```

```

            if cindex==6:

```

```

                tablecontent += '<td>'

```

```

                tablecontent += makesubtable1(column)

```

```

                tablecontent += "</td>"

```

```

            else:

```

```

                tablecontent += "<td>"

```

```

                tablecontent += str(column)

```

```

                tablecontent += "</td>"

```

```

        tablecontent += "</tr>"

```

```

    linkcontent = makepagelinks("http://127.0.0.1:8000/cmiRNAmRNA", 1, pagecount)

```

```

    return render(request, "lncrna/cmiRNAmRNA.html", {'tabledata':format_html(tablecontent),
    'pagelinks':format_html(linkcontent)})

```



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```

def cmiRNAmRNAum(request, pageindex):

    DBDATA = BPNCDB()

    DBDATA.loaddata()

    (pagecount, pagenumber, table) = DBDATA.display_6(pageindex)

    tablecontent =
"<tr><th>SR_No</th><th>miRNA_ID</th><th>mRNA_ID</th><th>Length</th><th>mRNA_Start
</th><th>mRNA_End</th><th>Alignment_block</th></tr>"

    for row in table:

        tablecontent += "<tr>"

        for cindex, column in enumerate(row):

            if cindex==6:

                tablecontent += '<td>'
                tablecontent += makesubtable1(column)
                tablecontent += "</td>"

            else:

                tablecontent += "<td>"

                tablecontent += str(column)

                tablecontent += "</td>"

            tablecontent += "</tr>"

    linkcontent = makepagelinks("http://127.0.0.1:8000/cmiRNAmRNA", pageindex, pagecount)

    return render(request, "lncrna/cmiRNAmRNA.html", {'tabledata':format_html(tablecontent),
'pagelinks':format_html(linkcontent)})

```

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```

def rna(request):

    DBDATA = BPNCDB()

    DBDATA.loaddata()

    (pagecount, pagenumber, table) = DBDATA.display_3(1)

    tablecontent = "<tr><th>SR_No</th><th>SRA_ID</th><th>BIOSAMPLE_ID</th><th>LIBRARY
LAYOUT</th><th>BIOPROJECT_ID</th><th>TISSUE</th></tr>"

    for row in table:

```

```

        tablecontent += "<tr>"

```



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```

for column in row:

    tablecontent += "<td>"

    tablecontent += str(column)

    tablecontent += "</td>"

tablecontent += "</tr>"

linkcontent = makepagelinks("http://127.0.0.1:8000/rna", 1, pagecount)

return render(request, "lncrna/rna.html", {'tabledata':format_html(tablecontent),
'pagelinks':format_html(linkcontent)})

def rnanum(request, pageindex):

    DBDATA = BPNCDB()

    DBDATA.loaddata()

    (pagecount, pageindex, table) = DBDATA.display_3(pageindex)

    tablecontent = "<tr><th>SR_No</th><th>SRA_ID</th><th>BIOSAMPLE_ID</th><th>LIBRARY
LAYOUT</th><th>ORGANISM</th><th>BIOPROJECT_ID</th><th>TISSUE</th></tr>"

    for row in table:

        tablecontent += "<tr>"

        for column in row:

            tablecontent += "<td>"

            tablecontent += str(column)

            tablecontent += "</td>"

        tablecontent += "</tr>"

    linkcontent = makepagelinks("http://127.0.0.1:8000/rna", pageindex, pagecount)

    return render(request, "lncrna/rna.html", {'tabledata':format_html(tablecontent),
'pagelinks':format_html(linkcontent)})

def about(request):

    return render(request, "lncrna/about.html", {})

def feedback(request):

    return render(request, "lncrna/feedback.html", {})

```



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