```
In [1]: # import relevant libraries
                                  from keras.models import load model
                                   from PIL import Image
                                  import numpy as np
                                 import matplotlib.pyplot as plt
import cv2
                                  from hublib.ui import FileUpload, Download
                                  import shutil, os
                                 import warnings
warnings.filterwarnings(action='ignore') # Remove warnings from output
                               Using TensorFlow backend.

/apps/share64/debian//anaconda/anaconda-6/lib/python3.7/site-packages/tensorflow/python/framework/dtypes.py:526: FutureWarning: Passing (type, 1) or '1type' as a synonym of type is deprecated; in a future version of numpy, it will be understood as (type, (1,)) / '(1,)type'.

_np_qint8 = np.dtype([("qint8", np.int8, 1)])

/apps/share64/debian//anaconda/anaconda-6/lib/python3.7/site-packages/tensorflow/python/framework/dtypes.py:527: FutureWarning: Passing (type, 1) or '1type' as a synonym of type is deprecated; in a future version of numpy, it will be understood as (type, (1,)) / '(1,)type'.

_np_quint8 = np.dtype([("quint8", np.uint8, 1)])

/apps/share64/debian//anaconda/anaconda-6/lib/python3.7/site-packages/tensorflow/python/framework/dtypes.py:528: FutureWarning: Passing (type, 1) or '1type' as a synonym of type is deprecated; in a future version of numpy, it will be understood as (type, (1,)) / '(1,)type'.

_np_qint16 = np.dtype([("qint16", np.int16, 1)])

/apps/share64/debian//anaconda/anaconda-6/lib/python3.7/site-packages/tensorflow/python/framework/dtypes.py:529: FutureWarning: Passing (type, 1) or '1type' as a synonym of type is deprecated; in a future version of numpy, it will be understood as (type, (1,)) / '(1,)type'.

_np_quint16 = np.dtype(["quint16", np.uint16, 1)])

/apps/share64/debian//anaconda/anaconda-6/lib/python3.7/site-packages/tensorflow/python/framework/dtypes.py:530: FutureWarning: Passing (type, 1) or '1type' as a synonym of type is deprecated; in a future version of numpy, it will be understood as (type, (1,)) / '(1,)type'.
                                 /apps/sinter/deutain//anactional/anactional/pitchins.//site-packages/tensoritow/pytion/framework/dtypes.py.538. FutureWarning. Passing (type, 1) or 'type as a synonym of type is a pp. dtype([("qint32", np.int32, 1)])

/apps/share64/debian7/anaconda/anaconda-6/lib/python3.7/site-packages/tensorflow/python/framework/dtypes.py:535: FutureWarning: Passing (type, 1) or '1type' as a synonym of type is deprecated; in a future version of numpy, it will be understood as (type, (1,)) / '(1,)type'.

np_resource = np.dtype([("resource", np.ubyte, 1)])
```

Import the model and image

Now, we load the model and import the image as a numpy n-dimensional array and display the image

In [2]: modelp = '/data/tools/imagesegment/models/model_E99_0.974.hdf5'
imagep = '../data/test_kmeans2.tif'

In [3]: model = load_model(modelp) # load the model
img_in = Image.open(imagep) # load the image

plt.imshow(img_in, cmap='gray') # display the image to be segmented

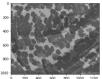
WANDING, temporftow.From /pops/share64/debian7/anaconda/anaconda-6/lib/python3.7/site-packages/temsorflow/python/framework/op_def_library.py:263: colocate_with (from temsorflow.python.framework.ops) is deprecated and will be removed in a future version. Tactivections for updating:

Glocations handled automatically by placer.

WANDING.fices.profus.From /apps/share64/debian7/anaconda/anaconda-6/lib/python3.7/site-packages/keras/backend/temsorflow_backend.py:3445: calling dropout (from temsorflow.python.ops.nn_ops) with keep_prob is deprecated and will be removed in a future version. Tactivections for updating:

Tactivec

<matplotlib.image.AxesImage at 0x7fa4dbf99e10;</pre>



Pre-process the image

We make changes to the image to be able to run the method effectively.

In [4]: origiste = img_in.size # record the size of the original image
img = img_in.resize(255,256)) # resize the image to match the imput required for the model
img = no.rray(img_dtype='uint8') # change the encoding of the image
img = img[no.newaxis_...,no.newaxis] # increase the dimensions of the image

Run the model

We run the model and predict an output

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Run the model

We run the model and predict an output

Out[6]: Text(0.5, 1.0, 'Input Image')

