**6.2.1 Search activity** **– Finding patents relating to a genetically modified bacterium**

Pseudomonas bacterium is an oil metabolizing bacterium which when introduced into an oil spill, degrades the oil and hence enables the spill to be cleaned up. In this search activity, you are required to search for a US patent covering genetically modified Pseudomonas bacterium issued to Ananda Mohan Chakrabarty.

The patent abstract reads:

*Unique microorganisms have been developed by the application of genetic engineering techniques. These microorganisms contain at least two stable (compatible) energy-generating plasmids, these plasmids specifying separate degradative pathways. The techniques for preparing such multi-plasmid strains from bacteria of the genus Pseudomonas are described. Living cultures of two strains of Pseudomonas (P. aeruginosa [NRRL B-5472] and P. putida [NRRL B-5473]) have been deposited with the United States Department of Agriculture, Agricultural Research Service, Northern Marketing and Nutrient Research Division, Peoria, Ill. The P. aeruginosa NRRL B-5472 was derived from Pseudomonas aeruginosa strain 1c by the genetic transfer thereto, and containment therein, of camphor, octane, salicylate and naphthalene degradative pathways in the form of plasmids. The P. putida NRRL B-5473 was derived from Pseudomonas putida strain PpG1 by genetic transfer thereto, and containment therein, of camphor, salicylate and naphthalene degradative pathways and drug resistance factor RP-1, all in the form of plasmids*

You have to find the original patent number; the date of issue; the assignee; and if there are any patent family members.

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| **Step** | **Description of step** | **Model answer** |
| 1 | What clues do you have? | You know you are going to look for the *pseudomonas* patent.  You also know that it is a US patent granted to *Ananda Mohan Chakrabarty.*  Let’s visit the USPTO website’s Patent Quick search page at *http://patft.uspto.gov/netahtml/PTO/search-bool.html*. |
| **2** | Use your clues to do the search | Search for *pseudomonas* in the *Abstract* field and *Chakrabarty* in the *Inventor’s Name* field. We get 10 results |
| **3** | What are the results? | A quick look shows that all except the last two results relate to compositions and/or methods of use. Checking out the last two titles and their abstracts, we see that the inventor for both US4535061 and US4259444 was *Chakrabarty,* but that US4259444 has the abstract that we are looking for.  This patent was issued on March 31 1981; and the assignee was General Electric Company (Schenectady, NY). |
| **4** | Are there any patent family members? | Go to Espacenet, enter the patent number, click on the title and select INPADOC patent family. We see that there are six patent family members.    You may be interested to know that this was the first ever patent issued in the US for a living organism, initially denied by the USPTO. |