EDITORIAL

OUR LINK WITH NOBEL'S WILL

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On 27th November 1895, *Alfred Nobel* signed his last will and testament, giving the largest share of his fortune to a series of prizes, the Nobel Prizes. As described in Nobel's will, one part was dedicated to *"...the person who shall have made the most important discovery within the domain of physiology or medicine"*.[1] There have been numerous 'non conclusive' discussions about many points related to this will, like: Why Nobel specifically picked up Physiology? Why Physiology and Medicine were bracketed together? Why no other field in medicine was nominated? What was the domain of Physiology in Nobel's era? … and so on. The fact is this that a Physiologist takes pride in mentioning that there is a specified prize for Physiology. It makes us think that we Physiologists are linked to a great subject that has an enormous contribution in human history.

When we look at the list of the Nobel Laureates[2] we find ourselves very much at home. We know most if not all of them. Even a novice in Medical Physiology can pick up at least Pavlov (1904), Golgi and Cajal (1906), Ehrlich (1908), Kocher (1909), Meyerhof (1922), Einthoven (1924), Landsteiner (1930), Krebs (1953), Crick (1962) and many more, as these names are part of curriculum in any Physiology syllabus.

When we see the country-wise distribution of the Nobel Laureates in Physiology and Medicine (Table-1), we see a strange trend. In the first 25 years scientists from 13 countries received Nobel prizes in Physiology and Medicine. In the second 25 years the number reduced to 11 countries. In the third 25 years this number came down to 9 countries. In the fourth 25 years period this number further reduced to 7 countries. In the next 10 years the trend is same so far as only 5 countries have received this prestigious award.

The number of Nobel laureates in the US increased after 2nd world war and the trend is maintained till now. This aspect has been discussed time and again and the credit is given to ability of the US to attract the best brains of the world. When we see the names and places of birth of the Nobel Laureates in Physiology & Medicine from US we note that most of them were born and trained in the US or mostly in the countries mentioned in the following paragraph.

A few countries have somehow maintained their share of Nobel laureates. The top most amongst them is Germany that has maintained its share in Nobel prizes of Physiology and Medicine throughout the 110 years of this prize. This is followed closely by the UK that has maintained the number of laureates and the trend of 2001–2010 indicates an increase in the coming years. As reflected in the Table-1, France, Sweden and Switzerland appear to have maintained their constant significant visibility in this list.

Table-1: Country-wise distribution of Nobel Laureates in Physiology & Medicine

Country	1901–1925	1926–1950	1951–1975	1976–2000	2001–2010 (10 years)
USA	---	4	12	16	3
Germany	3	3	3	3	1
UK	1	6	6	4	6
France	3	---	3	1	2
Sweden	1	---	3	3	---
Switzerland	1	3	---	3	---
Italy	1	---	1	1	---
Austria	1	2	1	---	---
Belgium	1	1	1	---	
Australia	---	---	2	---	1
Portugal	---	1	---	---	---
Argentina	---	1	---	---	---
Hungary	---	1	---	---	---
Denmark	2	2	---	---	---
The Netherlands	1	1	---	---	---
Canada	2	---	---	---	---
Spain	1	---	---	---	---
Russia	1	---	---	---	---
Total*	19	25	32	31	13

Table prepared with help from http://nobelprize.org/nobel_prizes/lists/all/create.html[3]

The disparity between total years and total prizes is due to the fact that in some years prize was given to more than one scientist.

If we agree to the notion that *'the number of Nobel laureates from a country reflects the magnitude of genuine research in that country'* then this brings us to a discussion about what is so special about a handful of these countries. It is very easy to hide behind the popular comment *'Nobel Prize committee is biased towards some countries'*, but this notion fails when we go to the other categories of prize, where many countries from Indonesia to Turkey are clearly visible. The second commonest comment is '*We do not have resources'*, but this also looks very unrealistic when we look at the resources of countries from Indonesia to Turkey, that include Japan, Malaysia, India, China, Korea, and GCC countries.

Where is the problem then? It is high time to bring our head out of sand and look around us to find what is wrong with us. Do we have an inferior brain make up? Is there a 'Physiology & Medicine Research gene' missing in us? Are we not properly trained? Are we not motivated? Are we not interested in research that is for contribution to knowledge only? Do we just want to complete our papers required for promotions or tenure tracking by replicating or so called 'verifying' others' work? Do we have our own laboratory or corner in a laboratory? Are we afraid of computer based laboratories? How often do we read latest articles? How many postgraduate students have we trained? Have we properly motivated our undergraduate and postgraduate students for research? Are we encouraging our juniors to take lead? Are topics in research finished? Have we found cure for hypertension and diabetes? Are we depressed that we cannot bring up new ideas for research? Are we really empty-handed after departure of biochemistry, pharmacology, genetics, immunology, haematology and neurology from our folds? Or have we surrendered completely that research in Physiology & Medicine is to be done by the scientists in a handful of countries only and we have to just *'apply'*, *'replicate in our settings'* or *'verify'* their work? Are we the proud Physiologists that Nobel mentioned in his will? Are we really linked to the Nobel's will?

REFERENCES

1. Facts on the Nobel Prize in Physiology or Medicine. Nobelprize.org http://nobelprize.org/nobel_prizes/medicine/shortfacts.html
2. The Nobel Prize in Physiology or Medicine, 1901–2000". Nobelprize.org. http://nobelprize.org/nobel_prizes/medicine/articles/lindsten-ringertz-rev/index.html
3. Create a list at http://nobelprize.org/nobel_prizes/lists/all/create.html

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