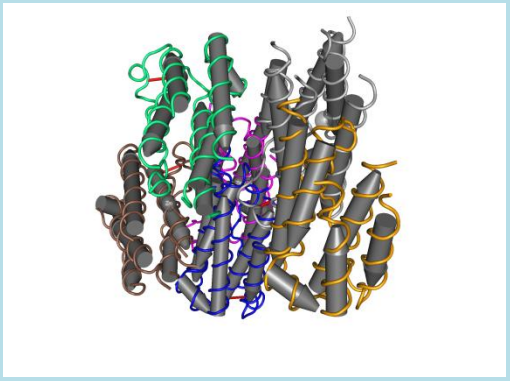
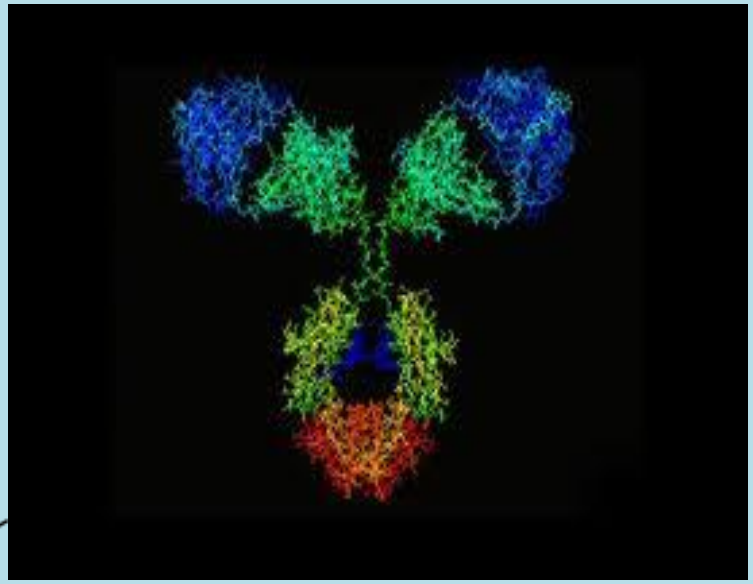
Biologicals used in Rheumatology: How to assure the quality of these drugs

http:/www.nclbmoh.gov.pk

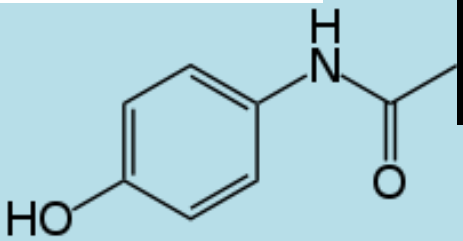
Is Safety an Issue for Biological Drugs?

- Yes – because these drugs are composed of larger molecules; Monoclonal Antibody
- Interferon:





- Paracetamol



Is Safety an Issue for Biological Drugs?

- These molecules originate from living cells
- They are inherently variable in small details of their final structure
- Therefore, the safety profile of one batch is different from the next, this difference has to be kept within limits
- What lesson the world has learnt from the clinical trial of TGN 1412, an anti-CD28 antibody?

The improvement in Legislations

- European, FDA and W.H.O. have consensus over the main safety requirements,
- Many developing countries have now enacted laws to control the development and use of these Biological Drugs.
- Question:
  - What is the situation in our country?
  - Do we have any regulation?

Regulations for Biologicals Quality

- In year 2000 through S.R.O. 782(I)2000 Dated November 02, 2000 biologicals were defined as:
- '**biological drugs**' means medicinal products produced by biological systems and which require standardization by biological assays and includes.
- Monoclonal antibodies are considered as Biologicals drugs in Pakistan but do not require any special quality control after registration.

Special Situation of Biosimilarity

- Many new Biological drugs are being introduced in the markets world over under the claim that these new drugs are biologically similar to existing and proven safe drugs.
- But is it?
- Mostly data of similarity is restricted to the biologicals activity and safety data in human is usually lacking.

Improvement in new legislation

- The definition of Biosimilar has now been introduced in a Draft Bill that shall form a part of the:
  - **Drug Regularity of Pakistan Bill, 2012**
- This Bill was introduced in National Assembly on Friday, 12th October 2012 and is expected to be enacted within next week

New Definitions added in the Law

- **Originator Biological Drugs** means a biological drug which has been licensed by the national regulatory authorities on the basis of a full registration dossier; i.e. the approved indication(s) for use were granted on the basis of full quality, efficacy and safety data;
- **Reference biotherapeutic product (RBP)** means an originator biological drug product that was licensed on the basis of a full registration dossier. It does not refer to measurement standards such as international, pharmacopoeial, or national standards or reference standards;
- **Biosimilar biological drugs** mean **Similar Biotherapeutic Product** (SBP) which is similar in terms of quality, safety and efficacy to an already licensed reference biotherapeutic product;
- **Similarity** means absence of a relevant difference in the parameter of interest.

Pharmaceutical Dossier - Defined

- Pharmaceutical dossier includes a set of documents submitted by a Person for the registration of a therapeutic good, containing complete information about:
- master formula;
- all ingredients both active pharmaceutical ingredients and inactive excipients added with their safety profile data;
- complete manufacturing procedure of the drug, biological or medical device;
- quality control steps and procedures at each level of raw material selection, in-process testing, finished drug testing, and stability testing;
- clinical trial data and published reports about the safety and efficacy of the drug;
- complete details of manufacturing plant and equipment, quality control laboratories and equipment,
- ware-houses capacities and facilities; details of human resources available and the latest cGMP report shall also be part of this document set;
- any other information required by the registration board for establishing the safety, efficacy, bioavailability, bioequivalence, or biosimilarity of the drug.

Benefit to the New Law

- Benefit to the Patient:
  - Safe drugs shall be available
- Benefit to the Specialists:
  - The confidence of quality in drugs shall be in mind while prescribing
- The availability of drugs from unproven sources shall be minimised through legal channels

Thank You