* Trace elements are 4th cell
* Some did create amino acids; some created nucleic acid but no living things
* Ancient cells had RNA
* Condensation is the opposite of hydrolysis
* Seclusion – breaking and making things at the same time and different places – keep them independent – no wasting
* Many molecules associate without non-covalent bonds
* Dimerise?
* Growth hormone stimulates cell growth and differentiation – without forming chemical bonds
* Hormone is protein – receptor is also protein
* Among all compounds that have H; HX – Only water is liquid – unique – the shape of water and the two lone pairs – very electronegative – like to form bonds with other hydrocarbons – on one side wants to donate – another side wants to gain; liquid molecules that require highest energy to heat up by 1 degree – requires a lot of energy to boil water
* Lipids are hydrophobic – hate water – clathrate – cage structure – nonpolar surface areas get surrounded
* 1 armstrong is the length of hydrogen