HEIDELBERG, 22 May 2012 – The impact and influence of thirty years of **research** into the **Wnt/beta-catenin** signaling **pathway** are **highlighted** in a special issue of The **EMBO Journal**. "Three decades of Wnt signalling" summarizes many of the crucial scientific developments that have taken place since the discovery of the first mammalian Wnt gene in 1982. The reviews also describe many of the crucial research findings that have established the pathway as one of the fundamental signal transduction mechanisms in development and disease.

Eric Wieschaus, Professor of Molecular Biology at the University of Princeton, remarked: "30 years ago, in the early days of Wnt research, no one anticipated how broadly the pathway would be utilized during development. We now know that Wnt signalling and the components of the Wnt pathway play a central role in patterning and cell fate in organisms from sea urchins to humans and operate in processes as diverse as stem cell maintenance, tissue polarity and neuronal development. We should not be surprised therefore by the parallel importance of the Wnt pathway in cancer and human disease."

Wnt-components and the signals they elicit have roles in many biological processes that range from cell behavior to the determination of cell fate. The discovery of the close relationship between the first mammalian Wnt gene, the int1 proto-oncogene, and the wingless gene in Drosophila provided an important early link between cancer biology and developmental genetics. Multidisciplinary research involving Drosophila geneticists, cancer biologists and molecular biologists, has facilitated the molecular dissection of Wnt pathways, establishing them as one of the first and best understood evolutionary conserved signaling mechanisms.

Today, the Wnt research community is bigger than ever, providing new insight into how cells interact to form a developing organism. This research is leading to the emergence of therapeutic approaches for the treatment of cancer.

Articles included in The EMBO Journal special issue include:

- Three decades of Wnts: A personal perspective on how a scientific field developed by Roel Nusse, Harold Varmus

- Adult mammalian stem cells: The role of Wnt, Lgr5 and R-spondins by Hans Clevers, Jurian Schuijers

- Wnts in synapse formation and neuronal circuitry by Mikyoung Park, Kang Shen

- Mitotic and mitogenic Wnt signaling by Christof Niehrs, Sergio P Acebrón

- The many faces and functions of β-catenin by Konrad Basler, Tomas Valenta, George Hausmann

- Drugging Wnt signaling in cancer by Paul Polakis

Bernd Pulverer, Head of Scientific Publications at EMBO and Chief Editor of The EMBO Journal, commented: “We are particularly pleased to present this collection of high-impact reviews to mark the occasion of the 30th anniversary of the discovery of the int1 proto-oncogene in the 30th anniversary year of The EMBO Journal. Both the journal and the Wnt research community have witnessed the emergence of a remarkable multidisciplinarity in molecular cell biology research. This notable progress has brought together previously disparate disciplines, including genetics, developmental biology, biochemistry, molecular biology, biophysics and systems biology, to form a vibrant integrative approach to biological research.”

EMBO will support a special commemorative meeting entitled “30 Years of Wnt Signalling” which takes place on 27 June to 1 July 2012. This conference will celebrate thirty years of Wnt-research by connecting the scientists who founded the field with the many younger scientists who will be responsible for its future. Further details are available at http://events.embo.org/12-wntsignalling/index.html

The special issue of the EMBO Journal entitled “Three decades of Wnt signaling” is available on-line at www.nature.com/emboj