



Program

Sunday 5 June

Registration and reception are at the Hyatt Regency Hotel, Bethesda

15.00– 19.00 Registration *Waterford Lalique Ballroom Foyer*
18.30 – 20.30 Reception *Waterford Lalique Ballroom*

Monday 6 June

Natcher Conference Center (NIH Campus, Building 45)

7.15 – 18.00 Registration Desk *Main Auditorium Foyer*

8.45 – 9.05 **Opening remarks/ Welcoming address** *Main Auditorium*

*Prof. Masao Ito, President, Human Frontier Science
Program Organization*

Dr. Norka Ruiz Bravo, Deputy Director for Extramural Research, NIH

*Dr. Kathie L. Olsen, Associate Director for Science, Office of Science
and Technology Policy, Executive Office of the President*

Oral session 1 (Chair: Angela Gronenborn)

9.05 – 9.25 **Proteorhodopsins: ecological diversity, structure/ function, and adaptation**
*Spudich, J.L., Spudich, E.N., Partha, R., Wang, W.W.,
Sineshchekov, O.A., Man-Aharonovich, D., Sabehi, G., Bèjà, O.*

9.25 – 9.45 **The origin of O₂ on earth: the innovation and evolution of photosynthetic
water oxidation**
*Ananyev, G.M., Nguyen, T., Dasgupta, J., Dismukes, G.C.,
Wydrzynski, T., Klimov, V.V.*

9.45 – 10.05 **Elucidating the role of aqueous environments in biological function
with a nano-mechanical probe**
*Uchihashi, T., Higgins, M.J., Polcik, M., Jarvis, S.P., Riener, C.,
Watari, M., McKendry, R.A., Katan, A., Klein, D., Oosterkamp, T.H.*

10.05 – 10.25 **Structural and functional studies of the yeast ribosome and
elongation factors**
*Nissen, P., Nilsson, J., Jürgensen, R., Andersen, C., Boesen, T.,
Andersen, G.R., Goldman, Y., Ortiz, P., Anand, M., Balar, B.,
Ulloque, R., Kinzy, T.G.*

10.25 – 11.00 *Coffee* *Main Auditorium Foyer*



Oral session 2 (Chair: Piergiorgio Strata)

Main Auditorium

- 11.00 – 11.20 **Shallow and deep: a framework for better understanding plasticity in first and second language acquisition**
Werker J. F., Marcus, G.
- 11.20 – 11.40 **Dual modification of excitatory and inhibitory synapses on single developing Zebrafish tectal neurons by visual stimulation**
Gong, L.Q., Zhang, X.H., Poo, M.M.
- 11.40 – 12.00 **Arc expression in new born granule cells is evidence of their integration into hippocampal networks**
Ramirez-Amaya, V., Letts, P., Gage, F.H., Worley, P.F., Barnes, C.A.
- 12.00 – 12.20 **Specification and refinement of visual pathways by novel homeoprotein signaling**
Hensch, T.K., Sugiyama, S., Brunet, I., Ruiz i Altaba, A., Holt, C.E., Harris, W.A., Prochiantz, A.
- 12.20 – 12.40 ***In vivo* imaging of newborn neurons in the mouse olfactory bulb**
Mizrahi, A., Feng, G., Katz, L.C.
- 12.40 – 14.00 *Lunch* *Main Auditorium Foyer*
- 14.00 – 16.30 Poster session I *Atrium Level*
- 16.30 – 18.00 Poster session I teardown
- 17.00 – 18.00 **Plenary Lecture (Chair: Torsten Wiesel)** *Main Auditorium*

Unraveling the sense of smell

Dr. Linda Buck, Fred Hutchison Cancer Research Center, Seattle, WA



Tuesday 7 June

Natcher Conference Center (NIH Campus, Building 45)

- 7.15 – 18.00 Registration Desk *Main Auditorium Foyer*
- Oral session 3 (Chair: Dan Kiehart)** *Main Auditorium*
- 8.45 – 9.05 **Regulatory mechanisms in ubiquitin-dependent endocytosis**
Chen, H., Collesi, C., Cremona, O., De Camilli, P.
- 9.05 – 9.25 **Compartmentalization of the plasma membrane in T-cells**
Lillemeier, B.F., Pfeiffer, J.R., Zhang, J., Wilson, B.S., Davis, M.M.
- 9.25 – 9.45 **The kinesin Klp2 mediates polarization of interphase microtubules in fission yeast**
Carazo Salas, R.E., Antony C., Nurse, P.M.
- 9.45 – 10.05 **Tea4p links microtubule plus ends with the formin for3p in the establishment of cell polarity in fission yeast**
Martin, S.G., McDonald, W.H., Yates III, J.R., Chang, F.
- 10.05 – 10.25 **Can skin stem cells give rise to blood?**
Greco, V., Guasch, G., Polak, L., Fuchs, E.
- 10.25 – 10.55 *Coffee* *Main Auditorium Foyer*
- Oral session 4 (Chair: Marco Bianchi)** *Main Auditorium*
- 10.55 – 11.15 **The let-7 MicroRNA has important roles in development and disease**
Grosshans, H., Johnson, S.M., Johnson, T., Gerstein, M., Brown, D., Slack, F.J.
- 11.15 – 11.35 **Integration of transcriptional networks during development and their effects on *Drosophila* progenitors**
Orian, A., Bianchi-Frais, D., Delrow, J., Vazquez, J., Eisenman, R.N., Parkhurst, S.M.
- 11.35 – 11.55 **A family of negative regulators of the E3 ligase and notch signaling component, neuralized**
Bardin, A.J., Schweisguth, F.
- 11.55 – 12.15 **Chaperone activity of protein O-fucosyltransferase 1 promotes notch receptor folding**
Okajima, T., Xu, A., Lei, L., Irvine, K.D.



12.15 – 12.35	Synthetic glycosaminoglycan molecules for elucidating molecular mechanisms of neuronal growth and survival <i>Hsieh-Wilson, L.C., Nishi, A., Seeberger, P.H.</i>	
12.35 – 14.00	<i>Lunch</i>	<i>Main Auditorium Foyer</i>
14.00 – 16.30	Poster session II	<i>Atrium Level</i>
16.30 – 18.00	Poster session II teardown	
17.00 – 18.00	Open discussion with HFSP staff	<i>Main Auditorium</i>

Wednesday 8 June

Natcher Conference Center (NIH Campus, Building 45)

7.15 – 18.00	Registration Desk	<i>Main Auditorium Foyer</i>
	Oral session 5 (Chair: Yoo-Hun Suh)	<i>Main Auditorium</i>
8.45 – 9.05	Genes, neurons and circuits: unraveling the neural networks that control how animals walk <i>Goulding, M., Gosgnach, S., Lanuza, G., Butt, S., Narayan, S., Geiman, E., Zhang, Y., Glover, J., Pearson, K., Kiehn, O.</i>	
9.05 – 9.25	Hippocampal cells activity modified by microstimulation during spatial learning in the rat <i>Ego-Stengel, V., Wilson, M.A.</i>	
9.25 – 9.45	Spike phase precession persists after transient intrahippocampal perturbation <i>Zugaro, M.B., Monconduit, L., Buzsáki, G.</i>	
9.45 – 10.05	A combined physiological, genetic and viral approach to understand the structure and function of neural circuits <i>Roska, B., Meister, M., Cepko, C.L.</i>	
10.05 – 10.25	A novel role for the microRNA pathway in the control of local protein synthesis in neuronal dendrites <i>Schratt, G.M., Nigh, E.A., Greenberg, M.E.</i>	
10.25 – 10.55	<i>Coffee</i>	<i>Main Auditorium Foyer</i>
	Oral session 6 (Chair: John Mattick)	
10.55 – 11.15	Probing regulation of gene transcription by single molecule analysis <i>Finzi, L., Lia, G., Dunlap, D., Nelson, P., Lewis, D.A.E., Adhya, S.</i>	



- 11.15 – 11.35 **Dissecting the role of RNAi in heterochromatin assembly in fission yeast**
Verdel, A., Colmenares, C., Motamedi, R.M., Gerber, A.G., Gygi, P.G., Moazed, D.
- 11.35 – 11.55 **Requirements for the *de novo* induction and propagation of a yeast prion**
Tyedmers, J., Lindquist, S.
- 11.55 – 12.15 **CDK-dependent phosphorylation of BRCA2 as a regulatory mechanism for recombinational repair**
Esashi, F., Christ, N., Gannon, J., Liu, Y., Hunt, T., Jasin, M., West, S.C.
- 12.15 – 12.35 **Stochastic control of transcriptional regulatory networks**
Becskei, A., Kaufmann, B.B., van Oudenaarden, A.
- 12.35 – 14.00 *Lunch* *Main Auditorium Foyer*
- 14.00 – 16.30 *Poster session III* *Atrium Level*
- 16.30 – 18.00 *Poster session III teardown*
- 17.00 – 18.00 **Plenary Lecture (Chair: Reiko Kuroda)** *Main Auditorium*

A mechanistic view of the ribosome
Dr. Steven Chu, Director, Lawrence Berkeley National Laboratory, CA

Closing Remarks
Dr. Torsten Wiesel, Secretary General, Human Frontier Science Program Organization
Dr. John H. Marburger, III, Director, Office of Science and Technology Policy, Executive Office of the President
- 19.30 – 22.30 **Farewell dinner** *Hyatt Regency Hotel, Bethesda – Capitol Ballroom*

Opening Remarks
Dr. Torsten Wiesel, Secretary General, Human Frontier Science Program Organization
Dr. Sharon Hrynkow, Acting Director, Fogarty International Center, NIH

After Dinner Remarks
Dr. Kathie L. Olsen, Associate Director for Science, Office of Science and Technology Policy, Executive Office of the President