

## BIOGRAPHICAL SKETCH

NAME Richard Franka	POSITION TITLE Senior Service Fellow, Poxvirus and Rabies Branch, CDC
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### EDUCATION/TRAINING

INSTITUTION	DEGREE	YEAR(s)	FIELD OF STUDY
University of Veterinary Medicine, Slovak Republic	DVM	1993 - 1999	Veterinary medicine
University of Veterinary Medicine, Slovak Republic/Institute Pasteur, France	PhD	1999 - 2003	Infectious diseases/virology
CDC, Rabies team	Post-doctoral training	2003 - 2006	Lyssavirus pathogenesis
University of South Florida	MPH	2010 – 2015	Epidemiology

### Professional Experience

- 2015 - present** Director, OIE Reference Laboratory for Rabies, Senior service fellow, Ecology and Epidemiology teams, Poxvirus and Rabies Branch, Division of High-Consequence Pathogens and Pathology, NCEZID, Centers for Disease Control and Prevention, Atlanta, USA,
- February-April 2015** Ebola outbreak response, President of The United States (POTUS) dashboard manager, Guinea Data manager
- October-November 2014** Ebola outbreak response, Lead for Contact tracing in Epi team, Kaloum, Conakry, Guinea,
- 2013 - 2014** Senior service fellow, Head of the Immunology, pathogenesis and animal studies unit, Rabies team, Poxvirus and Rabies Branch, Division of High-Consequence Pathogens and Pathology, NCEZID, Centers for Disease Control and Prevention, Atlanta, USA,
- 01 2013 – 06 2013** Acting rabies team lead, Centers for Disease Control and Prevention, Atlanta, USA, NCEZID, Division of High-Consequence Pathogens and Pathology, Poxvirus and Rabies Branch, Rabies team
- 2005 – 2013** Regular and Associate service fellow, Centers for Disease Control and Prevention, Atlanta, USA, NCEZID, Division of High-Consequence Pathogens and Pathology, Poxvirus and Rabies Branch, Rabies team,
- 2003 – 2005** ASM/CDC post-doctoral fellow, Centers for Disease Control and Prevention, Atlanta, USA, NCEZID, Division of High-Consequence Pathogens and Pathology, Poxvirus and Rabies Branch, Rabies team
- 2002 – 2003** Researcher, State Veterinary Institute in Zvolen, Slovak National Reference Laboratory for Rabies Diagnosis, Zvolen, Slovak Republic

<b>2001 – 2002</b>	Institute Pasteur, Department of Rabies, WHO Collaborating Centre for Reference and Research on Rabies, Paris, France, studying phylogeny of lyssaviruses, part of PhD. study
<b>1999 – 2002</b>	Research Institute of Veterinary Medicine and University of Veterinary Medicine, Department of epizootiology, infectology and tropical veterinary medicine, Central National Reference Laboratory for Rabies, Košice, Slovakia, PhD. study

### **Honors/Recognition**

- NCEZID 2015 award for exemplary leadership in rabies prevention efforts in Haiti
- CDC 2014 nomination for Shepard award for outstanding scientific investigation and article in JAMA: “Raccoon rabies virus variant transmission through solid organ transplantation.”
- NCEZID 2014 Nakano citation for outstanding scientific article in JAMA: “Raccoon rabies virus variant transmission through solid organ transplantation.”
- National Center for Emerging and Zoonotic Infectious Diseases (NCEZID) Director’s Recognition Award for excellence in cross division collaboration to investigate and provide evidence-based response to an unusual case of rabies associated with organ transplantation - 2013
- National Center for Emerging and Zoonotic Infectious Diseases Honor Award for exemplary commitment to protecting public health through the use of oral rabies vaccination to control raccoon rabies – 2013
- Member of Rabies Vaccine/Immune Globulin Emergency (RaVaGES) Expert Advisory Committee for Task Force for Global Health - 2013
- OIE Designated expert for rabies - 2013
- CDC Institutional Animal Care and Use Committee (IACUC) alternative member – since 2013
- Member of the International Encephalitis Consortium – 2012
- Member of CDC working group on Neglected Tropical Diseases - 2012
- Member of the Advisory Group on Use of Recombinant Human Adenovirus as an Oral Vaccine for Wildlife in the United States - 2011
- Member of the Advisory Committee on Immunization Practices (ACIP), Human Rabies Vaccine Working Group – 2009
- American Society for Microbiology and National Center for Infectious Diseases (ASM/NCID) post-doctoral fellowship- US CDC 2002-2003
- French government fellowship- Institute Pasteur, Paris, France - 2001
- *Summa cum laude*, University of Veterinary Medicine, Kosice - 1999

### **Reviewer for the following scientific publications**

- Emerging Infectious Disease, Virus Research, Journal of Wildlife Diseases, Journal of Medical Virology, Veterinary Microbiology, Zoonoses and Public Health, PLoS Neglected Tropical Diseases and Vaccine, Journal of General Virology.

### **More details:**

[https://www.researchgate.net/profile/Richard\\_Franka](https://www.researchgate.net/profile/Richard_Franka)

<http://scholar.google.com/citations?user=iOtDGKoAAAAJ&hl=en>

## Book Chapters

1. Orciari, L.A., Hanlon, C.A. and Franka, R. (2015). Rabies Virus. In: *Manual of Clinical Microbiology*, edited by Jorgensen, J.H. and Pfaller, M., 11th Edition, 1633-1643.
2. Vora, N.M., Recuenco, S. and Franka, R. et all (2015). Rabies. In: *Red Book 2015: Report of the Committee on Infectious Diseases*. Edited by Kimberlin, D.W., Brady, M.T., Jackson, M.A., Long, S.S., 30th Edition, American Academy of Pediatrics, 658-666.
3. Franka, R (2014). Rabies. In: *Control of Communicable Diseases Manual*. Edited by Heymann, D.L., 20<sup>th</sup> Edition, Amer Public Health Assn., 497-508.

## PUBLICATIONS:

### 2015

1. Vora, N.M., Orciari, L., Niezgoda, M., Selvaggi, G., Stosor, V., Lyon, G.M. 3rd, Wallace, R.M., Gabel, J., Stanek, D.R., Jenkins, P., Shiferaw, M., Yager, P., Jackson, F., Hanlon, C.A., Damon, I., Blanton, J., Recuenco, S., Franka, R. (2015). Clinical management and humoral immune responses to rabies post-exposure prophylaxis among three patients who received solid organs from a donor with rabies. *Transpl Infect Dis*. 17(3):389-95.
2. Caicedo, Y., Paez, A., Kuzmin, I., Niezgoda, M., Orciari, L.A., Yager, P.A., Recuenco, S., Franka, R., Velasco-Villa, A., Willoughby, R.E. Jr. (2015). Virology, Immunology and Pathology of Human Rabies during Treatment. *Pediatr Infect Dis J*. 34(5):520-8.

### 2014

3. Wu, X., Smith, T.G., Franka, R., Wang, M., Carson, W.C., Rupprecht, C.E. (2014). The feasibility of rabies virus-vectored immunocontraception in a mouse model. *Trials in Vaccinology* 3, 11-18
4. Wallace, R.M., Bhavnani, D., Russell, J., Zaki, S., Muehlenbachs, A., Hayden-Pinneri, K., Aplicano, R.M., Peruski, L., Vora, N.M., Balter, S., Elson, D., Lederman, E., Leeson, B., McLaughlin, T., Waterman, S., Fonseca-Ford, M., Blanton, J., Franka, R., Velasco-Villa, A., Niezgoda, M., Orciari, L., Recuenco, S., Damon, I., Hanlon, C., Jackson, F., Dyer, J., Wadhwa, A., Robinson, L. (2014). Rabies death attributed to exposure in Central America with symptom onset in a u.s. Detention facility - Texas, 2013. *MMWR Morb Mortal Wkly Rep*;63(20):446-9.
5. Brown, L.J., Rosatte, R.C., Fehlner-Gardiner, C., Ellison, J.A., Jackson, F.R., Bachmann, P., Taylor, J.S., Franka, R., Donovan, D. (2014). Oral vaccination and protection of striped skunks (*Mephitis mephitis*) against rabies using ONRAB®. *Vaccine*. 2014, 32(29):3675-9.
6. Wallace, R.M., Stanek, D., Griese, S., Krulak, D., Vora, N.M., Pacha, L., Kan, V., Said, M., Williams, C., Burgess, T.H., Clausen, S.S., Austin, C., Gabel, J., Lehman, M., Finelli, L.N., Selvaggi, G., Joyce, P., Gordin, F., Benator, D., Bettano, A., Cersovsky, S., Blackmore, C., Jones,

S.V., Buchanan, B.D., Fernandez, A.I., Dinelli, D., Agnes, K., Clark, A., Gill, J., Irmler, M., Blythe, D., Mitchell, K., Whitman, T.J., Zapor, M.J., Zorich, S., Witkop, C., Jenkins, P., Mora, P., Droller, D., Turner, S., Dunn, L., Williams, P., Richards, C., Ewing, G., Chapman, K., Corbitt, C., Girimont, T., Franka, R., Recuenco, S., Blanton, J.D., Feldman, K.A. (2014). A Large-scale, Rapid Public Health Response to Rabies in an Organ Recipient and the Previously Undiagnosed Organ Donor. Zoonoses Public Health. 61(8):560-70.

## 2013

- 7.** Franka, R., Smith, T.G., Dyer, J.L., Wu, X., Niezgoda, M., Rupprecht, C.E. (2013). Current and future tools for global canine rabies elimination. Antiviral research 100 (1), 220-225.
- 8.** Vora, N.M., Basavaraju, S.V., Feldman, K.A., Paddock, C.D., Orciari, L., Gitterman, S., Griese, S., Wallace, R.M., Said, M., D, Blau, D.M., Selvaggi, G., Velasco-Villa, A., Ritter, J., Yager, P., Kresch, A., Niezgoda, M., Blanton, J.D., Stosor, V., Falta, E.M., Lyon, G.M.III, Zembower, T., Kuzmina, N., Rohatgi, P.K., Recuenco, S., Zaki, S., Damon, I., Franka, R., Kuehnert, M.J. (2013). Raccoon Rabies Virus Variant Transmission Through Solid Organ Transplantation. *JAMA*. 2013;310(4):398-407
- 9.** Kellogg, F., Niehus, N., DiOrio, M., Smith, K., Chipman, R., Kirby, J., Blanton, J., Dyer, J., Franka, R., Hummel, K., Recuenco, S., Rupprecht, C., Wallace, R., Vora, N.M. (2013). Human Contacts with Oral Rabies Vaccine Baits Distributed for Wildlife Rabies Management-Ohio, 2012. MMWR-MORBIDITY AND MORTALITY WEEKLY REPORT 62 (14), 267-269
- 10.** Venkatesan, A., Tunkel, A.R., Bloch, K.C., Lauring, A.S., Sejvar, J., Bitnun, A., Stahl, J.P., Mailles, A., Drebot, M., Rupprecht, C.E., Yoder, J., Cope, J.R., Wilson, M.R., Whitley, R.J., Sullivan, J., Granerod, J., Jones, C., Eastwood, K., Ward, K.N., Durrheim, D.N., Solbrig, M.V., Guo-Dong, L., Glaser, C.A., Sheriff, H., Brown, D., Farnon, E., Messenger, S., Paterson, B., Soldatos, A., Roy, S., Visvesvara, G., Beach, M., Nasci, R., Pertowski, C., Schmid, S., Rascoe, L., Montgomery, J., Tong, S., Breiman, R., Franka, R., Keuhnert, M., Angulo, F., Cherry, J. (2013). Case definitions, diagnostic algorithms, and priorities in encephalitis: consensus statement of the international encephalitis consortium. Clinical Infectious Diseases 57 (8), 1114-1128
- 11.** Streicker, D.G., Franka, R., Jackson, F.R., Rupprecht, C.E. (2013). Anthropogenic Roost Switching and Rabies Virus Dynamics in House-Roosting Big Brown Bats. Vector Borne Zoonotic Dis. 13(7):498-504
- 12.** Jentes, E.S., Blanton, J.D., Johnson, K.J., Petersen, B.W., Lamias, M., Robertson, K., Franka, R., Briggs, D., Costa, P., Lai, I., Quarry, D., Nickolson, D., Rupprecht C., Marano, N., Brunette G. (2013). Evaluation of the Global Availability of Rabies Immune Globulin and Rabies Vaccine for Travelers. Journal of Travel Medicine; 20(3):148-58.

## 2012

- 13.** O'Sullivan, A., Willoughby, R.E., Mishchuk, D., Alcarraz, B., Cabezas-Sanchez, C., Condori, R.E., David, D., Encarnacion, R., Fatteh, N., Fernandez, J., Franka, R., Hedderwick, S., McCaughey,

C., Ondrush, J., Paez-Martinez, A., Rupprecht, C., Velasco-Villa, A., Slupsky, CM. (2012). Metabolomics of cerebrospinal fluid from humans treated for rabies. *J Proteome Res.* 12(1):481-90.

- 14.** Farley, S., Zarate, S., Jenssen, E., Fritz, C., Bachli, E.B., Zimmermann, H.P., Blanton, J., Franka, R., Rupprecht, C., Hummel, K., Dykewicz, C.A., Christian, K., Wallace, R.W., Vora, N., Lankau, E. (2012). U. S-Acquired Human Rabies with Symptom Onset and Diagnosis Abroad, 2012. *Morbidity and Mortality Weekly Report* 61 (39).

## 2011

- 15.** Franka, R., Rupprecht, C.E. (2011). Treatment of Rabies in the 21<sup>st</sup> Century: Curing the Incurable? *Future Microbiology*. Future Microbiol. 6:1135-40

- 16.** Wu, X., Franka, R., Henderson, H., Rupprecht, C.E. (2011). Live attenuated rabies virus co-infected with street rabies virus protects animals against rabies. *Vaccine*. 29(25):4195-201.

- 17.** Robertson K., Lumlertdacha, B., Franka, R., Petersen, B., Bhengsri, S., Henchaichon, S., Peruski, L.F., Baggett, H.C., Maloney, S.A., Rupprecht, C.E. (2011). Rabies-Related Knowledge and Practices Among Persons At Risk of Bat Exposures in Thailand. *PLoS Negl Trop Dis.* 5(6):e1054

- 18.** Smith, T.G., Wu, X., Franka, R., Rupprecht, C.E. (2011). Design of Future Rabies Biologics and Antiviral Drugs. *Adv Virus Res* 79: 345-363.

## 2010

- 19.** Kosoy, M., Bai, Y., Lynch, T., Kuzmin, I.V., Niezgoda, M., Franka, R., Agwanda, B., Breiman, R.F., Rupprecht, C.E. (2010). Bartonella spp. in Bats, Kenya. *Emerg Infect Dis.*, 16(12):1875-81.

- 20.** Rupprecht, C.E., Briggs, D., Brown, C.M., Franka, R., Katz, S.L., Kerr, H.D., Lett, S., Levis, R., Meltzer, M.I., Schaffner, W., Cieslak, P.R. (2010). Use of a Reduced (4-Dose) Vaccine Schedule for Postexposure Prophylaxis to Prevent Human Rabies. Recommendations of the Advisory Committee on Immunization Practices. *MMWR Morb Mortal Wkly Rep.*, 59(RR-2):1-9.

- 21.** Kuzmin, I.V., Niezgoda, M., Franka, R., Agwanda, B., Markotter, W., Breiman, R.F., Shieh, W., Zaki, S., Rupprecht, C.E. (2010). Marburg virus in fruit bat, Kenya. *Emerg Infect Dis.*, 16(2):352-4.

## 2009

- 22.** Franka, R., Wu, X., Jackson, F.R., Velasco-Villa, A., Palmer, D.P., Henderson, H., Hayat, W., Green, D.B., Blanton, J.D., Greenberg, L. and Rupprecht, C.E. (2009). Rabies virus pathogenesis in relationship to intervention with inactivated and attenuated rabies vaccines. *Vaccine*, 27(51):7149-7155.

- 23.** Rupprecht, C.E., Briggs, D., Brown, C.M., Franka, R., Katz, S.L., Kerr, H.D., Lett, S., Robin Levis, Meltzer, M.I., Schaffner, W., Paul R. Cieslak, P.R. (2009). Evidence for a 4-dose vaccine schedule for human rabies post-exposure prophylaxis in previously non-vaccinated individuals. *Vaccine*, 27(51):7141-7148.

- 24.** Osinubi, M.O.V., X. Wu, X., Franka, R., Niezgoda, M., Nok, A.J., Ogunkoya, A.B. and Rupprecht, C.E. (2009). Enhancing comparative rabies DNA vaccine effectiveness through glycoprotein gene modification. *Vaccine*, 27(51):7214-7218.
- 25.** Wu, X., Franka, R., Svoboda, P., Pohl, J., Rupprecht, C.E. (2009). Development of combined vaccines for rabies and immunocontraception. *Vaccine*, 27(51):7202-7209.
- 26.** Müller, T., Dietzschold, B., Ertl, H., Fooks, A.R., Freuling, C., Fehlner-Gardiner, C., Kliemt, J., Meslin, F.X., Franka, R., Rupprecht, C.E., Tordo, N., Wanderler, A.I., Kieny, M.P. (2009). Development of a mouse monoclonal antibody cocktail for post-exposure rabies prophylaxis in humans. *PLoS Negl Trop Dis.*, 3(11):e542.
- 27.** Fooks, A.R., Johnson, N., Müller, T., Vos, A., Mansfield, K., Hicks, D., Nunez, A., Freuling, C., Neubert, L., Kaipf, I., Denzinger, A., Franka, R. and Rupprecht, C.E. (2009). Detection of high levels of European Bat Lyssavirus type -1 viral RNA in the thyroid gland of experimentally-infected *Eptesicus fuscus* bats. *Zoonoses Public Health*, 56(6-7):270-7.

## 2008

- 28.** Franka, R., Johnson, N., Müller, T., Vos, A., Neubert, L., Freuling, C., Rupprecht, C.E. and Fooks, A.R. (2008). Susceptibility of North American big brown bats (*Eptesicus fuscus*) to infection with European bat lyssavirus type 1. *J Gen Virol*. 89(Pt 8):1998-2010.
- 29.** Jackson, F.R., Turmelle, A.S., Farino, D.M., Franka, R., McCracken, G.F. and Rupprecht, C.E. (2008). Experimental rabies virus infection of big brown bats (*Eptesicus fuscus*). *J Wildl Dis*. 44(3):612-21.
- 30.** Johnson, N., Vos, A., Neubert, L., Freuling, C., Mansfield, K.L., Kaipf, I., Denzinger, A., Hicks, D., Núñez, A., Franka, R., Rupprecht, C.E., Müller, T., Fooks, A.R. (2008). Experimental study of European bat lyssavirus type-2 infection in Daubenton's bats (*Myotis daubentonii*). *J Gen Virol*. 89(Pt 11):2662-72.
- 31.** Johnstone, J., Saxinger, L., McDermid, R., Lee, B., Bagshaw, S., Johnson, M., Benade, G., Johnson, D., Joffe, A.M., Nadin-Davis, S., Cheung, E., Resch, L., Willoughby, R.Jr., Franka, R. (2008). Human Rabies – Alberta, Canada, 2007. *MMWR Morb Mortal Wkly Rep*. 57(8):197-200
- 32.** Kuzmin, I.V., Niezgoda, M., Franka, R., Agwanda, B., Markotter, W., Beagley, J.C., Urazova, O.Y., Breiman, R.F., Rupprecht, C.E. (2008). Possible emergence of West Caucasian bat virus in Africa. *Emerg Infect Dis*. 14(12):1887-9.
- 33.** Kuzmin, I.V., Niezgoda, M., Franka, R., Agvanda, B., Markotter, W., Beagley, J.C., Urazova, O.Y., Breiman, R.F. and Rupprecht, C.E. (2008). *Lagos bat virus* in Kenya. *J Clin Microbiol*. 46(4):1451-61.
- 34.** Kuzmin, I.V., Franka, R. and Rupprecht, C.E. (2008). Experimental infection of Big Brown Bat (*Eptesicus fuscus*) with West Caucasian Bat Virus (WCBV). *Dev Biol (Basel)*. 131:327-37

**35.** Velasco-Villa, A., Reeder, S.A., Orciari, L.A., Yager, P.A., Franka, R., Blanton, J.D., Zuckero, L., Hunt, P., Oertli, E.H., Robinson, L.E., Rupprecht, C.E. (2008). Enzootic rabies elimination from dogs and reemergence in wild terrestrial carnivores, United States. *Emerg Infect Dis.* 14(12):1849-54.

## 2007

**36.** Wu, X., Franka, R., Velasco-Villa, A. and Rupprecht, C.E. (2007). Are all lyssavirus genes equal for phylogenetic analyses? *Virus Research.* 129(2):91-103.

## 2006

**37.** Franka, R., Constantine, D.G., Kuzmin, I., Velasco-Villa, A., Reeder, S.A., Streicker, D., Orciari, L.A., Wong, A.G., Blanton, J.D. and Rupprecht, C.E. (2006). A new phylogenetic lineage of rabies virus associated with western pipistrelle bats (*Pipistrellus hesperus*). *Journal of General Virology*, 87:2309-2322.

**38.** Franka, R., Svrcek, S., Suli, J., Benisek, Z., Madar, M., Hipikova, V., Levkutova, M., Zavadova, J., Ondrejkova, A., Ondrejka, R., Levkut, M., Revajova, V. (2006). Influence of *Encephalitozoon cunicli* experimental infection on antrirabies immunity in a mouse model. *Bulletin of the Veterinary Institute in Pulawy*, 50: 309-313.

**39.** Velasco-Villa, A., Orciari, L.A., Juárez-Islas, V., Gómez-Sierra, M., Padilla-Medina, I., Flisser, A., Souza, V., Castillo, A., Franka, R., Escalante-Mañe, M., Sauri-González, I., Rupprecht, C.E. (2006). Molecular diversity of rabies viruses associated with bats in Mexico and other countries of the Americas. *J Clin Microbiol*, 44 (5):1697-1710.

## 2004

**40.** Franka, R., Svrcek, S., Madar, M., Kolesarova, M., Ondrejkova, A., Ondrejka, R., Benisek, Z., Suli, J., Vilcek, S. (2004) Quantification of the effectiveness of laboratory diagnostics of rabies using classical and molecular-genetic methods. *Vet. Med. – Czech.*, 49 (7): 259-267.

**41.** Ondrejkova, A., Franka, R., Ondrejka, R., Svrcek, S., Suli, J., Benisek, Z., Zubricky, P., Bajova, V., Bugarsky, A., Bourhy, H. (2004). Identification of a lyssavirus isolate from a bat (*Eptesicus serotinus*). *Bulletin of the Veterinary Institute in Pulawy*, 48 (1): 11-13.

## 2002

**42.** Ondrejková, A., Sülli, J., Ondrejka, R., Beníšek, Z., Franka, R., Švrček, Š., Maďar, M., Bugarský, A. (2002): Comparison of the detection and quantification of rabies antibodies in canine sera. *Vet. Med. – Czech*, 47, (8), 218 – 221.

## 2000

**43.** Ondrejková, A., Ondrejka, R., Švrček, Š., Sülli, J., Beníšek, Z., Franka, R. (2000): The oral antirabies vaccines. *Slov. vet. čas.* 25, (6), 358-360.

**44.** Švrček, Š., Závadová, J., Maďar, M., Ondrejka, R., Süliová, J., Beníšek, Z., Ondrejková, A., Franka, R. (2000): Recent results of research and development achieved at the Joint Rabbiologic Laboratory of the Research Institute of Veterinary Medicine and the University of Veterinary Medicine in Košice. Slov. vet. čas. 25, (5), 294-296.