## Curriculum vitae.

Name: Lumír Ondřej HANUŠ Date of Birth: November 20, 1947

Place of Birth: Olomouc, Czechoslovakia

Work Address (I am already retired from both of them):

Chief Scientist

Lumir Lab, Asana Bio Group Ltd.

Minray

Jerusalem Bio Park

The Hadassah Medical Center

Hebrew University Biotechnology Park

Ein Kerem Campus, Jerusalem telephone: +972-73-7330300 E-mail: lumir@lumirlab.com

The Institute for Drug Research

School of Pharmacy, Faculty of Medicine

Hebrew University, Ein Kerem

Jerusalem 91120

telephone: +972-2-6758042 (office) E-mail: lumirh@ekmd.huji.ac.il

# Academic Education:

1966 - 1972 **M.Sc.** in analytical chemistry

Faculty of Natural Sciences,

Palacký University,

Olomouc, Czechoslovakia

Calcitonines. Synthesis of a partial sequences of N- and C-terminal parts of  $\alpha$ -thyrocalcitonine with the help of new protective groups for the hydroxyl function of serine and the amidic moiety of asparagine.

Thesis, Palacký University Olomouc, 1972, 79 pp.

1974 Doctor of Natural Sciences (**RNDr.**)

Palacký University,

Olomouc, Czechoslovakia

Contribution to the identification of cannabinoid compounds in

Cannabis sativa L.

Thesis, Palacký University Olomouc, 1974, 146 pp.

1977 Institute of analytical chemistry,

Czechoslovak Academy of Sciences,

Brno, Czechoslovakia (Cannabis research)

1976 - 1978 Postgraduate studies

Modern instrumental chemistry Faculty of Natural Sciences, J. E. Purkyně University, Brno, Czechoslovakia

Gas chromatography of natural compounds from marihuana.

Thesis, Jan Evangelista Purkyně University Brno, June 1981, 102 pp.

1978 - 1979 Research Associate

Research Institute of Pharmaceutical Sciences, School of Pharmacy, University of Mississippi,

University, MS, U.S.A.

(Cannabis research and Coca leaves research)

Report of Activities. RIPS, School of Pharmacy, University of

Mississippi, University, U.S.A., April 1979, 32 pp.

1984 Candidate of Chemical Sciences in analytical chemistry

(CSc.)

Palacký University,

Olomouc, Czechoslovakia

Chromatographic analysis of natural compounds.

January 1983, 54 pp. + 72 appendices.

Contribution to the analytical chemistry of cannabinoid compounds from marihuana.

Thesis, Palacký University Olomouc, 1983, 210 pp.

1990 - 1994 Postdoctoral Fellow

Department of Natural Products,

Hebrew University, Jerusalem, Israel

(Natural ligands for cannabinoid receptor research)

1994 **Associate Professor** in organic chemistry

Palacký University,

Olomouc, Czech Republic

Anandamides - endogenous ligands for cannabinoid receptors in brain. Habilitation, PF UP Olomouc, 1994, 105 pp.

1995 **Doctor of Sciences** in pharmaceutical chemistry

Charles University, Prague, Czech Republic

From marihuana to the natural ligand from the brain.

Doctor dissertation, Pharmaceutical Faculty, Charles University, Hradec

Králové, 1995; collection of papers 303 pp., connecting text 93 pp.

January 2001 – February 2003 Kamea Gimel

(academic – marce)

Hebrew University, Jerusalem

March 2003 – May 2008 Kamea Alef

(academic – professor chaver) Hebrew University, Jerusalem

June 2008 – October 2008 Kamea Alef

November 2008 – September 2016 Kamea Alef (research – amit –

Research Fellow), Hebrew University, Jerusalem

### **Short stays and/or visits:**

- 1976 Faculty of Medicine, Volgograd State Medical Institute, Volgograd, USSR
- 1976 Faculty of Medicine, University of Szeged, Szeged, Hungary
- 1976 Faculty of Medicine, Higher Medical Institute, Plovdiv, Bulgaria
- 1977 Faculty of Medicine, Higher Medical Institute, Plovdiv, Bulgaria
- 1978 Faculty of Medicine, Lvov State Medical University, Lvov, USSR
- 1978 Faculty of Medicine, University of Szeged, Szeged, Hungary
- 1979 Faculty of Medicine, Lvov State Medical University, Lvov, USSR
- 1980 Faculty of Medicine, Volgograd State Medical Institute, Volgograd, USSR
- 1983 Medizinische Fakultät, Universität Leipzig, Leipzig, DDR
- 1985 Faculty of Medicine, Higher Institute of Medicine, Varna, Bulgaria
- 1985 Faculty of Medicine, Medical University of Silesia, Katowice, Poland
- 1986 Faculty of Medicine, Higher Medical Institute, Plovdiv, Bulgaria
- 1986 Faculty of Medicine, Jagiellonian University, Krakow, Poland
- 1986 Medizinische Fakultät, Universität Leipzig, Leipzig, DDR
- 1987 Faculty of Medicine, Semmelweis University, Budapest, Hungary
- 1987 Medizinische Fakultät, Universität Leipzig, Leipzig, DDR
- 1988 Medizinische Fakultät, Universität Leipzig, Leipzig, DDR
- 1990 Université Paul Valéry, Montpellier, France French course taught by language specialists. Stipend from French Government.

2002 - DICBR/LPS, NIAAA, NIH, Bethesda, USA (July – August)

2005 - DICBR/LPS, NIAAA, NIH, Bethesda, USA (July)

## Major research interest:

chemistry of natural products (isolation and identification from plants, animal brain, plasma, cerebrospinal fluid), thin-layer chromatography, preparative chromatography, column chromatography, gas chromatography, HPLC, GC/MS, LC/MSD, bioassay for receptor-ligand binding, CB<sub>1</sub> preparation from the brain, CHO cells stably transfected with CB<sub>2</sub> preparation

## **Employment:**

1971 - 1990	Department of Hygiene and epidemiology,
	Medical Faculty, Palacký University,
	Olomouc, Czechoslovakia
	pedagogical and scientific work as lecturer, researcher
	and senior lecturer
1990 - 1997	Department of Natural Products,
1,,,,,	School of Pharmacy, Faculty of Medicine
	Hebrew University, Ein Kerem
	Jerusalem, Israel
	researcher
1997 - 1998	Laboratory of Bioorganic Chemistry
1771 1770	National Institute of Diabetes and Digestive and
	Kidney Diseases,
	National Institutes of Health,
	Bethesda, MD, U.S.A.
	Visiting Associate
1998 - 2001	Department of Natural Products,
1990 – 2001	School of Pharmacy, Faculty of Medicine
	Hebrew University, Ein Kerem
	Jerusalem, Israel
2001 2002	researcher  Division of Introduced Clinical and Rielagical
2001 - 2002	Division of Intramural Clinical and Biological
	Research/Laboratory of Physiologic Studies
	Section of Neuroendocrinology
	National Institute on Alcohol Abuse and Alcoholism
	National Institutes of Health,
	Bethesda, MD, U.S.A.

	Research Fellow (VP)
2002 - 2003	Department of Natural Products,
	School of Pharmacy, Faculty of Medicine
	Hebrew University, Ein Kerem
	Jerusalem, Israel
	Researcher
2003 - 2016	Department of medicinal Chemistry and Natural
	Products,
	School of Pharmacy, Faculty of Medicine
	Hebrew University, Ein Kerem
2018 - 2022	Chief Scientist
	Lumir Lab, R&D Cannabinoid Laboratory
	The Hadassah Medical Center, Hebrew University
	Biotechnology Park, Ein Kerem, Jerusalem

Languages: Czech, Slovak, Russian, English, Hebrew

#### **Awards:**

September 14, 2005: Hanuš Medal (The Czech Chemical Society in Prague) for the furthering creditable work in the fields of chemistry

November 6, 2006: Memorial Medal (Rector of the Palacky University in Olomouc) to 50. anniversary of revival and reopening of the University in Olomouc at the occasion of delivering 13<sup>th</sup> annual lecture to the honour of J. L. Fischer

April 12, 2007: Doctor Chemiae Honoris Causa (Masaryk University, Brno)

2009: nominated for the National Award of the Czech Government "Czech Mind" ("Česká hlava")

2010: nominated for the Patria Award of the Czech Government "Czech Mind" ("Česká hlava")

2010: nominated for The 2010 Jack Herer Award Outstanding Hemp Awareness in the field of Medicine

April 26, 2010: Outstanding Immigrant Scientist in Life Sciences and Medicine, Israel

May 4, 2011: Medicinae Doctor Honoris Causa (Palacký University, Olomouc)

2011: Honorary Scientific Fellow of the Czech Neuropsychopharmacological Society

2011: nominated for the Addictology award to best achievement in the year 2011

October 22, 2012: Addictology Award (Charles University, Prague) for significant contribution in the field of addictology in the last year

June 13, 2013: Olomouc City Award for the year 2012, Olomouc, Czech Republic

March 29, 2014: Recognition (ONEJ), Ljubljana, Slovenia

2014: nominated for the position of The International Cannabinoid Research Society President

March 22, 2016: 2015 Lifetime Award Winner (Americans for Safe Access), Washington D.C., USA

September 10, 2016: Commemorative Medal of the Palacky University in Olomouc for extraordinary representation of Palacky University in the Czech Republic and abroad (Pamětní medaile Univerzity Palackého v Olomouci za mimořádnou reprezentaci Univerzity Palackého v České republice a v zahraničí)

September 27, 2018: Lifetime Achievement Award, CanEx Jamaica, Montego Bay, Jamaica

## **Membership:**

International Cannabinoid Research Society Society for the Protection of Nature in Israel Slovak Mountaineering Union JAMES Czech Mountaineering Association

#### Israel Climbers' Club

### **Other:**

- 1. Adiktologie (journal) Editorial Board Member (see <a href="http://casopis.adiktologie.cz/en">http://casopis.adiktologie.cz/en</a>)
- 2. International cannabis and cannabinoids institute, Prague, Czech Republic scientific board member (see <a href="https://www.icci.science/en/">https://www.icci.science/en/</a>)
- 3. Center for Medical Cannabis Education & Research (CMCER), Institute of Emerging Health Professions, Thomas Jefferson University, Philadelphia, Pennsylvania, U.S.A. Steering Committee member (see <a href="https://www.jefferson.edu/university/emerging-health-professions/lambert-center/steering-committee.html">https://www.jefferson.edu/university/emerging-health-professions/lambert-center/steering-committee.html</a>)
- 4. KOPAC Patients' association for treatment with cannabis Board member (pacientský spolek pro léčbu konopím člen správní rady) (see <a href="https://kopac.cz/en/">https://kopac.cz/en/</a>)
- 5. Senior Fellow in the Jefferson Institute of Emerging Health Professions, Thomas Jefferson University, Philadelphia, Pennsylvania, U.S.A. from July 1<sup>st</sup>, 2017 to June 30, 2019
- 6. Medical Cannabis and Cannabinoids (journal) Associate Editor (see <a href="https://www.karger.com/Journal/Home/275986">https://www.karger.com/Journal/Home/275986</a>)
- 7. Journal of Cannabis Research member of Editorial Board (see <a href="https://jcannabisresearch.biomedcentral.com/">https://jcannabisresearch.biomedcentral.com/</a>)
- 8. Appointed as members of the Honorary Academic Committee of the Diploma of Advanced Studies in Endocannabinology, Cannabis and Cannabinoids, Centro de Estudios Interdisciplinarios, Universidad Nacional de Rosario, Rosario, Argentina, 2021
- 9. Visiting professor, Centro de Estudios Interdisciplinarios, Universidad Nacional de Rosario, Rosario, Argentina, 2021